Stormwater Pollution Prevention Plan

HB Construction, Inc.
3010 Monte Vista Blvd, NW
Albuquerque, NM 87106

merit
professional
services

Albuquerque School of Excellence
Albuquerque, NM

Preparation Date:

07/02/25

PO Box 271712 – Flower Mound, Texas 75027– (972) 874-1545

Stormwater Pollution Prevention Plan
For:

Albuquerque School of Excellence
Coors Blvd & Sequoia Rd. NW
Albuquerque, NM 87120
505-373-7892

Operator(s):

Building Hope Sequoia Road NW, LLC
Lance Helming
1730 Pennsylvania Ave NW Ste. 250
Washington , DC 20006
208-562-7819

HB Construction, Inc.
Zachary Gruen
3010 Monte Vista Blvd, NW
Albuquerque, NM 87106
505-373-7892

SWPPP Contact(s):
HB Construction, Inc.
Jesse Duarte
3010 Monte Vista Blvd, NW
Albuquerque, NM 87106
575-915-7217

SWPPP Preparation Date:
07/02/25

Merit Professional
P.O. Box 271712
Flower Mound, Texas 75027

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OPERATOR CERTIFICATION

Stormwater Pollution Prevention Plan
For Stormwater Discharges Associated with Construction Activity

Project:	Albuquerque School of Excellence
Name of Operator:	Building Hope Sequoia Road NW, LLC
Address:	1730 Pennsylvania Ave NW Ste. 250
	Washington , DC 20006
Telephone No.:	208-562-7819

Certification Statement:
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

This certification is hereby signed in reference to construction at the above-referenced project.

By: _____
Signature

Lance Helming
Name

CFO
Title

12-2-25
Date

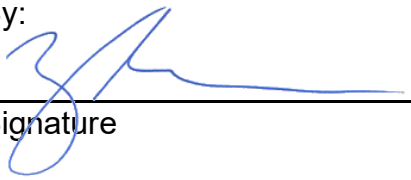
OPERATOR CERTIFICATION

Stormwater Pollution Prevention Plan
For Stormwater Discharges Associated with Construction Activity

Project:	Albuquerque School of Excellence
Name of Operator:	HB Construction, Inc.
Address:	3010 Monte Vista Blvd, NW
	Albuquerque, NM 87106
Telephone No.:	505-373-7892

Certification Statement:
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

This certification is hereby signed in reference to construction at the above-referenced project.

By: 

Signature

Zachary Gruen
Name

Executive VP
Title

7/10/2025
Date

STORMWATER POLLUTION PREVENTION PLAN
PREPARER STATEMENT

Albuquerque School of Excellence
Albuquerque, NM 87120
07/02/25

This Stormwater Pollution Prevention Plan was developed under the following guidelines:

i. Be site specific;
ii. Identify potential sources of stormwater pollution to stormwater discharges associated with construction site activities.
iii. Identify and describe procedures and BMPs that will be implemented in order to minimize pollution from the construction site.
iv. Incorporate the inspection frequency and routine maintenance deadlines to comply with the terms and conditions of the Applicable permit.
v. Develop a clear, concise strategy for construction activities in order to comply with requirements of the Applicable Permit, and to guide those responsible for overseeing implementation of the SWPPP at each stage of construction.

Prepared by Sarah Alexander 7/17/25
Sarah Alexander CPESC #9826, Merit Professional Services, LLC Date

Merit Professional
P.O. Box 271712
Flower Mound, Texas 75027

SUBCONTRACTOR CERTIFICATION

Stormwater Pollution Prevention Plan
For Stormwater Discharges Associated with Construction Activity

Each subcontractor engaged in activities under this SWPPP that disturb surface soil must be identified and must sign the following certification statement.

Project: Albuquerque School of Excellence

Name of Operator:

Address:

Telephone No.:

Type of Construction Service to be provided: _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to construction at the above-referenced project.

By:

_____
Signature

_____
Name

_____
Title

_____
Date

SUBCONTRACTOR CERTIFICATION

Stormwater Pollution Prevention Plan
For Stormwater Discharges Associated with Construction Activity

Each subcontractor engaged in activities under this SWPPP that disturb surface soil must be identified and must sign the following certification statement.

Project: Albuquerque School of Excellence

Name of Operator:

Address:

Telephone No.:

Type of Construction Service to be provided: _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to construction at the above-referenced project.

By:

_____
Signature

_____
Name

_____
Title

_____
Date

Please Insert Copy of NOI Here

Date NOI (contractor) was submitted to the NPDES: 07/02/25
Date NOI (owner) was submitted to the NPDES: 10/8/25

Date NOI Change was submitted to the NPDES: 12/16/25

A SWPPP must be created before submitting your NOI to the State.

The NOI must be done electronically using EPA's NPDES eReporting Tool (NeT)
An NOI must be submitted at least 14 calendar days before commencing construction activities. You are considered provisionally covered under the terms and conditions of the permit immediately and fully covered 14 calendar days after the EPA has notified you that it has received a completed NOI unless the EPA delays or denies the NOI.
https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting

Send a copy of the signed NOI to Merit Professional so that we can make sure it is inserted in your SWPPP and a copy is in our files for future use.

Merit Professional
P.O. Box 271712
Flower Mound, Texas 75027

NPDES FORM 3510-9	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NOTICE OF INTENT (NOI) FOR THE 2022 NPDES CONSTRUCTION PERMIT	FORM Approved OMB No. 2040-0305 Expires on 02/28/2025

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0305). Responses to this collection of information are mandatory in accordance with this permit and EPA NPDES regulations (40 CFR 122.28(b)(2)). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information are estimated to average 1.1 to 19.6 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Permit Information

NPDES ID: NMR1007HZ

State/Territory to which your project/site is discharging: NM

Is your project/site located on federally recognized Indian Country lands? No

Is your project/site located on Lands of Exclusive Federal Jurisdiction? No

Are you requesting coverage under this NOI as a *"Federal Operator"* or a *"Federal Facility"* as defined in Appendix A (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-a-definitions.pdf)?

No

Have stormwater discharges from your current construction site been covered previously under an NPDES permit? No

Will you use polymers, flocculants, or other treatment chemicals at your construction site? No

Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared in advance of filling this NOI, as required? Yes

Are you able to demonstrate that you meet one of the criteria listed in Appendix D (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-d-endangered-species-protection.pdf) with respect to protection of threatened or endangered species listed under the Endangered Species Act (ESA) and federally designated critical habitat?

Yes

Have you completed the screening process in Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf) relating to the protection of historic properties?

Yes

Indicating "Yes" below, I confirm that I understand that CGP only authorized the allowable stormwater discharges in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an Inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must be covered under another NPDES permit.

Yes

Operator Information

Operator Information

Operator Name: Building Hope Sequoia Road NW, LLC

Operator Mailing Address:

Address Line 1: 1730 Pennsylvania Ave NW Ste. 250

Address Line 2:

City: Washington

ZIP/Postal Code: 20006

State/Province: DC

County or Similar Division: District of Columbia

Country: US

Operator Point of Contact Information

First Name Middle Initial Last Name: Lance Helming

Title: CFO

Phone: 202-457-1999 **Ext.:**

Email: lhelming@bhope.org

NOI Preparer Information

☑ **This NOI is being prepared by someone other than the certifier.**

First Name Middle Initial Last Name: Melissa Singer

Organization: Merit Professional

Phone: 972-415-7363 **Ext.:**

Email: msinger@meritprofessional.com

Project/Site Information

Project/Site Name: Albuquerque School of Excellence

Project/Site Address

Address Line 1: Coors Blvd & Sequoia Rd. NW

Address Line 2:

City: Albuquerque

ZIP/Postal Code: 87120

State: NM

County or Similar Division: Bernalillo

Latitude/Longitude: 35.121128°N, 106.6992°W

Latitude/Longitude Data Source: GPS

Horizontal Reference Datum: WGS 84

Project Start Date: 10/15/2025

Project End Date: 10/15/2026

Estimated Area to be Disturbed: 2.5

Types of Construction Sites:

- Commercial

Will there be demolition of any structure built or renovated before January 1, 1980? Yes

➔ **Do any of the structures being demolished have at least 10,000 square feet of floor space?** Yes

Will you be discharging dewatering water from your site? No

Was the pre-development land use used for agriculture? No

Are there other operators that are covered under this permit for the same project site? Yes

➔ **NPDES permits**

NPDES Permit Number
NMR1007AW

Have earth-disturbing activities commenced on your project/site? No

Is your project/site located on federally recognized Indian Country lands? No

Is your project/site located on a property of religious or cultural significance to an Indian tribe? No

Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? Yes

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? No

Are any of the waters of the U.S. to which you discharge designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? See Resources, Tools and Templates (https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates)

No

ID: 001 **Name:** Rio Grande (Tijeras Arroyo to Alameda Bridge) **Description:**

Latitude/Longitude: 35.120998°N, 106.69996°W

Tier Designation: N/A

Is this receiving water impaired (on the CWA 303(d) list)? Yes

Impaired Pollutants:

- Oxygen
- E. coli
- Mercury
- PCB in fish tissue
- Temperature, water deg. centigrade

Has a TMDL been completed for this receiving waterbody? Yes

TMDL ID: 2105 **Name:** RIO GRANDE RIVER 2105_50 E. COLI TMDL

TMDL Pollutants:

- E. coli

Stormwater Pollution Prevention Plan (SWPPP)

Will all required personnel, including those conducting inspections at your site, meet the training requirements in Part 6 of this permit? Yes

First Name **Middle Initial** **Last Name:** Jesse Duarte

Title: Sr. Project Super.

Phone: 575-915-7217 **Ext.:**

Email: jessed@hbconstruction.com

Endangered Species Protection Worksheet: Criterion A

Determine ESA Eligibility Criterion

Are your discharges and discharge-related activities already addressed in another operator's valid certification of eligibility for your "action area" under the current 2022 CGP? No

Has consultation between you, a Federal Agency, and the USFWS and/or the NMFS under section 7 of the Endangered Species Act (ESA) concluded? No

Are your construction activities the subject of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of your site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat?

No

You must determine whether species listed as either threatened or endangered, or their critical habitat(s) are located in your site's action area (i.e., all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action, including areas beyond the footprint of the site that are likely to be affected by stormwater discharges, discharge-related activities, and authorized non-stormwater discharges).

Determine your Action Area

You must consider the following in determining the action area for your site, and **confirm that all the following are true**:

- **In determining my "action area", I have considered that discharges of pollutants into downstream areas can expand the action area well beyond the footprint of my site and the discharge point(s). I have taken into account the controls I will be implementing to minimize pollutants and the receiving waterbody characteristics (e.g., perennial, intermittent, ephemeral) in determining the extent of physical, chemical, and/or biotic effects of the discharges. I confirm that all receiving waterbodies that could receive pollutants from my site are included in my action area.**

  True

- **In determining my "action area", I have considered that discharge-related activities must also be accounted for in determining my action area. I understand that discharge-related activities are any activities that cause, contribute to, or result in stormwater and authorized non-stormwater point source discharges, and measures such as the siting, construction timing, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged. I understand that any new or modified stormwater controls that will have noise or other similar effects, and any disturbances associated with construction of controls, are part of my action area.**

  True

Determine is ESA-listed species and/or critical habitat are in your site action area.

ESA-listed species and designated critical habitat are under the purview of the NMFS and the USFWS, and in many cases, you will need to acquire species and critical habitat lists from both federal agencies.

National Marine Fisheries Service (NMFS)

For NMFS species and designated critical habitat information, use the following webpage:

- https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility (https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility)

I have checked the webpage listed above and confirmed that:

- (●) There are no NMFS-protected species and/or designated critical habitat in my action area.
- ( ) There are NMFS-protected species and/or designated critical habitat in my action area.

U.S. Fish and Wildlife Service (USFWS)

For USFWS species and critical habitat information, use the following webpage:

- https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility (https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility)

I have checked the webpage listed above and confirmed that:

- (●) There are no FWS-protected species and/or designated critical habitat in my action area.
- ( ) There are FWS-protected species and/or designated critical habitat in my action area.

You are eligible under **Criterion A**.

Identify the USFWS information sources used (Note: state resources are not acceptable):

U.S. Fish and Wildlife Service (USFWS)

Identify the NMFS information sources used (Note: state resources are not acceptable):

U.S. Fish and Wildlife Service (USFWS)

You must attach:

- Aerial image(s) of the site.
- A printout of the species' list(s) showing no ESA-listed species or designated critical habitat in my action area.

Name	Uploaded Date	Size
Species List_ New Mexico Ecological Services Field Office.pdf (attachment/2119584)	10/28/2025	1.29 MB
Location Map Aerial- Albuquerque School of Excellence (7-25).pdf (attachment/2119585)	10/28/2025	181.42 KB

Have you attached aerial image(s) of the site? Yes

Have you attached a printout of the species' list(s) showing no ESA-listed species or designated critical habitat in my action area? Yes

Have you provided documentation in your SWPPP supporting your eligibility under Criterion A? Yes

Historic Preservation

Are you installing any stormwater controls as described in Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf) that require subsurface earth disturbances? (Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf), Step 1)

No

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

Certified By: Lance Helming

Certifier Title: CFO

Certifier Email: lhelming@bhope.org

Certified On: 12/02/2025 1:40 PM ET

NPDES FORM 3510-9	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NOTICE OF INTENT (NOI) FOR THE 2022 NPDES CONSTRUCTION PERMIT	FORM Approved OMB No. 2040-0305 Expires on 02/28/2025

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0305). Responses to this collection of information are mandatory in accordance with this permit and EPA NPDES regulations (40 CFR 122.28(b)(2)). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information are estimated to average 1.1 to 19.6 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Permit Information

NPDES ID: NMR1007AW

State/Territory to which your project/site is discharging: NM

Is your project/site located on federally recognized Indian Country lands? No

Is your project/site located on Lands of Exclusive Federal Jurisdiction? No

Are you requesting coverage under this NOI as a *"Federal Operator"* or a *"Federal Facility"* as defined in Appendix A (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-a-definitions.pdf)?

No

Have stormwater discharges from your current construction site been covered previously under an NPDES permit? No

Will you use polymers, flocculants, or other treatment chemicals at your construction site? No

Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared in advance of filling this NOI, as required? Yes

Are you able to demonstrate that you meet one of the criteria listed in Appendix D (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-d-endangered-species-protection.pdf) with respect to protection of threatened or endangered species listed under the Endangered Species Act (ESA) and federally designated critical habitat?

Yes

Have you completed the screening process in Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf) relating to the protection of historic properties?

Yes

Indicating "Yes" below, I confirm that I understand that CGP only authorized the allowable stormwater discharges in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an Inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must be covered under another NPDES permit.

Yes

Operator Information

Operator Information

Operator Name: HB Construction, Inc.

Operator Mailing Address:

Address Line 1: 3010 Monte Vista Blvd, NW

Address Line 2:

City: Albuquerque

ZIP/Postal Code: 87106

State/Province: NM

County or Similar Division: Bernalillo

Country: US

Operator Point of Contact Information

First Name Middle Initial Last Name: Zachary . Gruen

Title: Executive VP

Phone: 505-373-7892 **Ext.:**

Email: zachg@hbconstruction.com

NOI Preparer Information

☑ **This NOI is being prepared by someone other than the certifier.**

First Name Middle Initial Last Name: Melissa . Singer

Organization: Merit Professional

Phone: 972-415-7363 **Ext.:**

Email: msinger@meritprofessional.com

Project/Site Information

Project/Site Name: Albuquerque School of Excellence

Project/Site Address

Address Line 1: 5310 & 5200 Sequoia Rd. NW

Address Line 2:

City: Albuquerque

ZIP/Postal Code: 87120

State: NM

County or Similar Division: Bernalillo

Latitude/Longitude: 35.121128°N, 106.6992°W

Latitude/Longitude Data Source: GPS

Horizontal Reference Datum: WGS 84

Project Start Date: 10/01/2025

Project End Date: 03/01/2027

Estimated Area to be Disturbed: 2.5

Types of Construction Sites:

- Commercial

Will there be demolition of any structure built or renovated before January 1, 1980? No

Will you be discharging dewatering water from your site? No

Was the pre-development land use used for agriculture? No

Are there other operators that are covered under this permit for the same project site? No

Have earth-disturbing activities commenced on your project/site? No

Is your project/site located on federally recognized Indian Country lands? No

Is your project/site located on a property of religious or cultural significance to an Indian tribe? No

Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? Yes

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? No

Are any of the waters of the U.S. to which you discharge designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? See Resources, Tools and Templates (https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates)

No

ID: 001 **Name:** Rio Grande (Tijeras Arroyo to Alameda Bridge) **Description:**

Latitude/Longitude: 35.120998°N, 106.69996°W

Tier Designation: N/A

Is this receiving water impaired (on the CWA 303(d) list)? Yes

Impaired Pollutants:

- Oxygen
- E. coli
- Mercury
- PCB in fish tissue
- Temperature, water deg. centigrade

Has a TMDL been completed for this receiving waterbody? Yes

TMDL ID: 2105 **Name:** RIO GRANDE RIVER 2105_50 E. COLI TMDL

TMDL Pollutants:

- E. coli

Stormwater Pollution Prevention Plan (SWPPP)

Will all required personnel, including those conducting inspections at your site, meet the training requirements in Part 6 of this permit? Yes

First Name **Middle Initial** **Last Name:** Jessetendent Duarte

Title: Sr. Project Superin

Phone: 575-915-7217 **Ext.:**

Email: jessed@hbconstruction.com

Endangered Species Protection Worksheet: Criterion A

Determine ESA Eligibility Criterion

Are your discharges and discharge-related activities already addressed in another operator's valid certification of eligibility for your "action area" under the current 2022 CGP? No

Has consultation between you, a Federal Agency, and the USFWS and/or the NMFS under section 7 of the Endangered Species Act (ESA) concluded? No

Are your construction activities the subject of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of your site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat?

No

You must determine whether species listed as either threatened or endangered, or their critical habitat(s) are located in your site's action area (i.e., all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action, including areas beyond the footprint of the site that are likely to be affected by stormwater discharges, discharge-related activities, and authorized non-stormwater discharges).

Determine your Action Area

You must consider the following in determining the action area for your site, and **confirm that all the following are true**:

- **In determining my "action area", I have considered that discharges of pollutants into downstream areas can expand the action area well beyond the footprint of my site and the discharge point(s). I have taken into account the controls I will be implementing to minimize pollutants and the receiving waterbody characteristics (e.g., perennial, intermittent, ephemeral) in determining the extent of physical, chemical, and/or biotic effects of the discharges. I confirm that all receiving waterbodies that could receive pollutants from my site are included in my action area.**

  True

- **In determining my "action area", I have considered that discharge-related activities must also be accounted for in determining my action area. I understand that discharge-related activities are any activities that cause, contribute to, or result in stormwater and authorized non-stormwater point source discharges, and measures such as the siting, construction timing, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged. I understand that any new or modified stormwater controls that will have noise or other similar effects, and any disturbances associated with construction of controls, are part of my action area.**

  True

Determine is ESA-listed species and/or critical habitat are in your site action area.

ESA-listed species and designated critical habitat are under the purview of the NMFS and the USFWS, and in many cases, you will need to acquire species and critical habitat lists from both federal agencies.

National Marine Fisheries Service (NMFS)

For NMFS species and designated critical habitat information, use the following webpage:

- https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility (https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility)

I have checked the webpage listed above and confirmed that:

- (●) There are no NMFS-protected species and/or designated critical habitat in my action area.
- ( ) There are NMFS-protected species and/or designated critical habitat in my action area.

U.S. Fish and Wildlife Service (USFWS)

For USFWS species and critical habitat information, use the following webpage:

- https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility (https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility)

I have checked the webpage listed above and confirmed that:

- (●) There are no FWS-protected species and/or designated critical habitat in my action area.
- ( ) There are FWS-protected species and/or designated critical habitat in my action area.

You are eligible under **Criterion A**.

Identify the USFWS information sources used (Note: state resources are not acceptable):

U.S. Fish and Wildlife Service (USFWS)

Identify the NMFS information sources used (Note: state resources are not acceptable):

National Marine Fisheries Service (NMFS)

You must attach:

- Aerial image(s) of the site.
- A printout of the species' list(s) showing no ESA-listed species or designated critical habitat in my action area.

Name	Uploaded Date	Size
Species List_ New Mexico Ecological Services Field Office.pdf (attachment/2059829)	07/02/2025	1.29 MB

Name	Uploaded Date	Size
Location Map Aerial- Albuquerque School of Excellence (7-25).pdf (attachment/2059842)	07/02/2025	181.42 KB

Have you attached aerial image(s) of the site? Yes

Have you attached a printout of the species' list(s) showing no ESA-listed species or designated critical habitat in my action area? Yes

Have you provided documentation in your SWPPP supporting your eligibility under Criterion A? Yes

Historic Preservation

Are you installing any stormwater controls as described in Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf) that require subsurface earth disturbances? (Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf), Step 1)

No

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

Certified By: Zach Gruen

Certifier Title: Vice President of Operations

Certifier Email: zachg@hbconstruction.com

Certified On: 07/02/2025 1:49 PM ET

NPDES FORM 3510-9	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NOTICE OF INTENT (NOI) FOR THE 2022 NPDES CONSTRUCTION PERMIT	FORM Approved OMB No. 2040-0305 Expires on 02/28/2025

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0305). Responses to this collection of information are mandatory in accordance with this permit and EPA NPDES regulations (40 CFR 122.28(b)(2)). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information are estimated to average 1.1 to 19.6 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Permit Information

NPDES ID: NMR1007HZ

State/Territory to which your project/site is discharging: NM

Is your project/site located on federally recognized Indian Country lands? No

Is your project/site located on Lands of Exclusive Federal Jurisdiction? No

Are you requesting coverage under this NOI as a *"Federal Operator"* or a *"Federal Facility"* as defined in Appendix A (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-a-definitions.pdf)?

No

Have stormwater discharges from your current construction site been covered previously under an NPDES permit? No

Will you use polymers, flocculants, or other treatment chemicals at your construction site? No

Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared in advance of filling this NOI, as required? Yes

Are you able to demonstrate that you meet one of the criteria listed in Appendix D (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-d-endangered-species-protection.pdf) with respect to protection of threatened or endangered species listed under the Endangered Species Act (ESA) and federally designated critical habitat?

Yes

Have you completed the screening process in Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf) relating to the protection of historic properties?

Yes

Indicating "Yes" below, I confirm that I understand that CGP only authorized the allowable stormwater discharges in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an Inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must be covered under another NPDES permit.

Yes

Operator Information

Operator Information

Operator Name: Building Hope Sequoia Road NW, LLC

Operator Mailing Address:

Address Line 1: 1730 Pennsylvania Ave NW Ste. 250

Address Line 2:

City: Washington

ZIP/Postal Code: 20006

State/Province: DC

County or Similar Division: District of Columbia

Country: US

Operator Point of Contact Information

First Name Middle Initial Last Name: Brady Hutchins

Title: Director of Real Estate

Phone: 208-562-7819 **Ext.:**

Email: bhutchins@bhope.org

NOI Preparer Information

☑ **This NOI is being prepared by someone other than the certifier.**

First Name Middle Initial Last Name: Melissa Singer

Organization: Merit Professional

Phone: 972-415-7363 **Ext.:**

Email: msinger@meritprofessional.com

Project/Site Information

Project/Site Name: Albuquerque School of Excellence

Project/Site Address

Address Line 1: Coors Blvd & Sequoia Rd. NW

Address Line 2:

City: Albuquerque

ZIP/Postal Code: 87120

State: NM

County or Similar Division: Bernalillo

Latitude/Longitude: 35.121128°N, 106.6992°W

Latitude/Longitude Data Source: GPS

Horizontal Reference Datum: WGS 84

Project Start Date: 10/15/2025

Project End Date: 10/15/2026

Estimated Area to be Disturbed: 2.5

Types of Construction Sites:

- Commercial

Will there be demolition of any structure built or renovated before January 1, 1980? No

Will you be discharging dewatering water from your site? No

Was the pre-development land use used for agriculture? No

Are there other operators that are covered under this permit for the same project site? Yes

NPDES permits

NPDES Permit Number
NMR1007AW

Have earth-disturbing activities commenced on your project/site? No

Is your project/site located on federally recognized Indian Country lands? No

Is your project/site located on a property of religious or cultural significance to an Indian tribe? No

Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? Yes

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? No

Are any of the waters of the U.S. to which you discharge designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? See Resources, Tools and Templates (https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates)

No

ID: 001 Name: Rio Grande (Tijeras Arroyo to Alameda Bridge) Description:

Latitude/Longitude: 35.120998°N, 106.69996°W

Tier Designation: N/A

Is this receiving water impaired (on the CWA 303(d) list)? Yes

Impaired Pollutants:

- Oxygen
- E. coli
- Mercury
- PCB in fish tissue
- Temperature, water deg. centigrade

Has a TMDL been completed for this receiving waterbody? Yes

TMDL ID: 2105 **Name:** RIO GRANDE RIVER 2105_50 E. COLI TMDL

TMDL Pollutants:

- E. coli

Stormwater Pollution Prevention Plan (SWPPP)

Will all required personnel, including those conducting inspections at your site, meet the training requirements in Part 6 of this permit? Yes

First Name **Middle Initial** **Last Name:** Jesse Duarte

Title: Sr. Project Super.

Phone: 575-915-7217 **Ext.:**

Email: jessed@hbconstruction.com

Endangered Species Protection Worksheet: Criterion A

Determine ESA Eligibility Criterion

Are your discharges and discharge-related activities already addressed in another operator's valid certification of eligibility for your "action area" under the current 2022 CGP? No

Has consultation between you, a Federal Agency, and the USFWS and/or the NMFS under section 7 of the Endangered Species Act (ESA) concluded? No

Are your construction activities the subject of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of your site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat?

No

You must determine whether species listed as either threatened or endangered, or their critical habitat(s) are located in your site's action area (i.e., all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action, including areas beyond the footprint of the site that are likely to be affected by stormwater discharges, discharge-related activities, and authorized non-stormwater discharges).

Determine your Action Area

You must consider the following in determining the action area for your site, and **confirm that all the following are true**:

- **In determining my "action area", I have considered that discharges of pollutants into downstream areas can expand the action area well beyond the footprint of my site and the discharge point(s). I have taken into account the controls I will be implementing to minimize pollutants and the receiving waterbody characteristics (e.g., perennial, intermittent, ephemeral) in determining the extent of physical, chemical, and/or biotic effects of the discharges. I confirm that all receiving waterbodies that could receive pollutants from my site are included in my action area.**

  True

- **In determining my "action area", I have considered that discharge-related activities must also be accounted for in determining my action area. I understand that discharge-related activities are any activities that cause, contribute to, or result in stormwater and authorized non-stormwater point source discharges, and measures such as the siting, construction timing, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged. I understand that any new or modified stormwater controls that will have noise or other similar effects, and any disturbances associated with construction of controls, are part of my action area.**

  True

Determine is ESA-listed species and/or critical habitat are in your site action area.

ESA-listed species and designated critical habitat are under the purview of the NMFS and the USFWS, and in many cases, you will need to acquire species and critical habitat lists from both federal agencies.

National Marine Fisheries Service (NMFS)

For NMFS species and designated critical habitat information, use the following webpage:

- https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility (https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility)

I have checked the webpage listed above and confirmed that:

- (●) There are no NMFS-protected species and/or designated critical habitat in my action area.
- ( ) There are NMFS-protected species and/or designated critical habitat in my action area.

U.S. Fish and Wildlife Service (USFWS)

For USFWS species and critical habitat information, use the following webpage:

- https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility (https://www.epa.gov/npdes/construction-general-permit-cgp-threatened-and-endangered-species-eligibility)

I have checked the webpage listed above and confirmed that:

- (●) There are no FWS-protected species and/or designated critical habitat in my action area.
- ( ) There are FWS-protected species and/or designated critical habitat in my action area.

You are eligible under **Criterion A**.

Identify the USFWS information sources used (Note: state resources are not acceptable):

U.S. Fish and Wildlife Service (USFWS)

Identify the NMFS information sources used (Note: state resources are not acceptable):

U.S. Fish and Wildlife Service (USFWS)

You must attach:

- Aerial image(s) of the site.
- A printout of the species' list(s) showing no ESA-listed species or designated critical habitat in my action area.

Name	Uploaded Date	Size
Species List_ New Mexico Ecological Services Field Office.pdf (attachment/2105232)	10/01/2025	1.29 MB
Location Map Aerial- Albuquerque School of Excellence (7-25).pdf (attachment/2105233)	10/01/2025	181.42 KB

Have you attached aerial image(s) of the site? Yes

Have you attached a printout of the species' list(s) showing no ESA-listed species or designated critical habitat in my action area? Yes

Have you provided documentation in your SWPPP supporting your eligibility under Criterion A? Yes

Historic Preservation

Are you installing any stormwater controls as described in Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf) that require subsurface earth disturbances? (Appendix E (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-appendix-e-historic-properties.pdf), Step 1)

No

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

Certified By: Brady Hutchins

Certifier Title: Director

Certifier Email: bhutchins@bhope.org

Certified On: 10/08/2025 3:33 PM ET

07/02/25

U.S. Environmental Protection Agency
National Pollutant Discharge Elimination System Program
Office of Water, Office of Wastewater Management
1200 Pennsylvania Avenue, NW (Mail code 4203M)
Washington, DC 20460

Dear Director:

This letter serves to designate either a person or specifically described position as an authorized person for signing reports, documents, certification or other information as required to implement the Stormwater Pollution Prevention Plan. The following person or position is hereby authorized to sign reports, documents or certifications other than a NOI application.

A Qualified Stormwater Inspector employed by HB Construction, Inc.

This letter is in reference to:

Albuquerque School of Excellence

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator Name:	HB Construction, Inc.
Officer Name:	Zachary Gruen
Title:	Executive VP
Signature:	
Date:	7/10/2025

07/02/25

U.S. Environmental Protection Agency
National Pollutant Discharge Elimination System Program
Office of Water, Office of Wastewater Management
1200 Pennsylvania Avenue, NW (Mail code 4203M)
Washington, DC 20460

Dear Director:

This letter serves to designate either a person or specifically described position as an authorized person for signing reports, documents, certification or other information as required to implement the Stormwater Pollution Prevention Plan. The following person or position is hereby authorized to sign reports, documents or certifications other than a NOI application.

Brady Hutchins, Director of Real Estate, Building Hope

This letter is in reference to:

Albuquerque School of Excellence

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator Name:	Building Hope Sequoia Road NW, LLC
Officer Name:	Lance Helming
Title:	CFO
Signature:	
Date:	12-8-25

07/02/25

U.S. Environmental Protection Agency
National Pollutant Discharge Elimination System Program
Office of Water, Office of Wastewater Management
1200 Pennsylvania Avenue, NW (Mail code 4203M)
Washington, DC 20460

Dear Director:

This letter serves to designate either a person or specifically described position as an authorized person for signing reports, documents, certification or other information as required to implement the Stormwater Pollution Prevention Plan. The following person or position is hereby authorized to sign reports, documents or certifications other than a NOI application.

A Qualified Stormwater Inspector employed by HB Construction, Inc.

This letter is in reference to:

Albuquerque School of Excellence

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator Name:	Building Hope Sequoia Road NW, LLC
Officer Name:	Brady Hutchins
Title:	Director of Real Estate
Signature:	
Date:	7.8.25

LARGE CONSTRUCTION SITE NOTICE
FOR THE
National Pollutant Discharge Elimination System (NPDES)
Stormwater Program EPA 2022 Construction GENERAL PERMIT

This notice applies to construction sites operating under Part 1.5. of the 2022 NPDES General Permit for discharges of stormwater runoff from construction sites equal to or greater than five acres, including the larger common plan of development. The information on this notice is required in Part III.D.2. of the General Permit. A copy of the NOI can be found at: https://permitsearch.epa.gov/epermit-search/ui/search If you would like to obtain a copy of the Stormwater Pollution Prevention Plan (SWPPP) for this site, contact the EPA Regional Office at

EPA Region 6 Main Office
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202
800-887-6063

Site-Specific NPDES Authorization Number & Project Name:	NMR1007HZ Albuquerque School of Excellence
Operator Name:	Building Hope Sequoia Road NW, LLC
Contact Name and Phone Number:	Jesse Duarte 575-915-7217
Project Description: Physical address or description of the site's location, and estimated start date and projected end date, or date that disturbed soils will be stabilized.	Coors Blvd & Sequoia Rd. NW Albuquerque, NM 87120 Commercial Development Start: 10/01/25 Stop: 03/01/27
Location of Stormwater Pollution Prevention Plan:	Construction Trailer

If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, contact the EPA through the following website: https://www.epa.gov/enforcement/report-environmental-violations

LARGE CONSTRUCTION SITE NOTICE
FOR THE
National Pollutant Discharge Elimination System (NPDES)
Stormwater Program EPA 2022 Construction GENERAL PERMIT

This notice applies to construction sites operating under Part 1.5. of the 2022 NPDES General Permit for discharges of stormwater runoff from construction sites equal to or greater than five acres, including the larger common plan of development. The information on this notice is required in Part III.D.2. of the General Permit. A copy of the NOI can be found at: https://permitsearch.epa.gov/epermit-search/ui/search If you would like to obtain a copy of the Stormwater Pollution Prevention Plan (SWPPP) for this site, contact the EPA Regional Office at

EPA Region 6 Main Office
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202
800-887-6063

Site-Specific NPDES Authorization Number & Project Name:	NMR1007AW Albuquerque School of Excellence
Operator Name:	HB Construction, Inc.
Contact Name and Phone Number:	Jesse Duarte 575-915-7217
Project Description: Physical address or description of the site's location, and estimated start date and projected end date, or date that disturbed soils will be stabilized.	Coors Blvd & Sequoia Rd. NW Albuquerque, NM 87120 Commercial Development Start: 10/01/25 Stop: 03/01/27
Location of Stormwater Pollution Prevention Plan:	Construction Trailer

If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, contact the EPA through the following website: https://www.epa.gov/enforcement/report-environmental-violations

SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES

1.1 Operator(s) / Subcontractor(s)

Operator(s):

Operator with Control over Construction Plans and Specifications:

Building Hope Sequoia Road NW, LLC
Lance Helming
1730 Pennsylvania Ave NW Ste. 250
Washington , DC 20006
208-562-7819

Operator with Day-to-Day Operational Control:

HB Construction, Inc.
Zachary Gruen
3010 Monte Vista Blvd, NW
Albuquerque, NM 87106
505-373-7892

Emergency 24-Hour Contact:
HB Construction, Inc.
Jesse Duarte
575-915-7217

This SWPPP was Prepared by:
Merit Professional Services, LLC.
PO Box 271712
Flower Mound, Texas 75027
972-874-1545

1.2 Stormwater Team

Project Manager(s) or Site Supervisor(s):
HB Construction, Inc.
Jesse Duarte
3010 Monte Vista Blvd, NW
Albuquerque, NM 87106
575-915-7217

SWPPP Contact(s):
HB Construction, Inc.
Jesse Duarte
3010 Monte Vista Blvd, NW
Albuquerque, NM 87106
575-915-7217

Stormwater Team

Name and/or Position, and Contact	Responsibilities	I Have Completed Training Required by CGP Part 6.2	I Have Read the CGP and Understand the Applicable Requirements
Building Hope Sequoia Road NW, LLC Lance Helming 1730 Pennsylvania Ave NW Ste. 250 Washington , DC 20006 312-802-0497	Operator with Control & Design Over Construction Plans and Specifications	X YES	X YES
HB Construction, Inc. Jesse Duarte 3010 Monte Vista Blvd, NW Albuquerque, NM 87106 575-915-7217 jessed@hbconstruction.com	Operator with Day-to-Day Operational Control (maintaining, revising, amending, managing practices and implementation of the SWPPP)	X YES	X YES

HB Construction, Inc. Jesse Duarte 3010 Monte Vista Blvd, NW Albuquerque, NM 87106 575-915-7217 jessed@hbconstruction.com	Responsible for the design, installation, maintenance and repair of stormwater controls.	X YES	X YES
HB Construction, Inc.	File Notice of Intent (NOI) with the EPA	N/A	X YES
HB Construction, Inc. Jesse Duarte 3010 Monte Vista Blvd, NW Albuquerque, NM 87106 575-915-7217 jessed@hbconstruction.com	Responsible for taking Corrective Actions	N/A	X YES

Stormwater Team Members Who Conduct Inspections

Name and/or Position and Contact	Training(s) Received	Date Training(s) Completed	If Training is a Non-EPA Training, Confirm that it Satisfies the Minimum Elements of CGP Part 6.3.b
HB Construction, Inc. will hire a local inspector to do inspection at the time the project starts. Name of responsible person: TBD Position: TBD Number: TBD Email: TBD			☐ Principles and practices of erosion and sediment control and pollution prevention practices at construction sites ☐ Proper installation and maintenance of erosion and sediment controls and pollution prevention practices used at construction sites ☐ Performance of inspections, including the proper completion of required reports and documentation, consistent with the requirements of Part 4

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SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING

2.1 Project/Site Information

Project/Site Name:	Albuquerque School of Excellence (herein referred to as the "site")
Project Street/Location:	Coors Blvd & Sequoia Rd. NW
City:	Albuquerque
State:	NM
ZIP Code:	87120
County or Similar Subdivision:	Bernalillo

Latitude:	Longitude:
35.121128	-106.699230

Method for determining latitude/longitude:

☐ USGS topographic map (specify scale: _____)

☐ EPA Web site

☐ GPS

☒ Other (please specify): Arc GIS

Additional Project Information

Is this permit coverage as a "federal operator" as defined in Appendix A for the 2017 Construction General Permit? ☐ Yes ☒ No

Is the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe? ☐ Yes ☒ No

If yes, provide the name of the Indian tribe associated with the area of Indian country (including the name of Indian reservation if applicable), or if not in Indian country, provide the name of the Indian tribe associated with the property: Not Applicable

If this SWPPP is in response to a public emergency document the cause and description of the construction necessary to reestablish effective public service here: Not Applicable

2.2 Discharge Information/ Receiving Waters

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☒ YES ☐ NO

MS4 Operator:
City of Albuquerque
Stormwater Dept./Environmental Agency
2400 Broadway Blvd. SE
Albuquerque, NM 87102
505-768-3830

Are there any surface waters that are located within 50 feet of your construction disturbances? ☐ YES ☒ NO

Point of Discharge ID	Name of receiving water that receives stormwater discharge:	Is the receiving water impaired (on the CWA 303(d) list)?	If yes, list the pollutants that are causing the impairment:	Has a TMDL been completed for this receiving waterbody?	If yes, list TMDL Name and ID:	Pollutant(s) for which there is a TMDL:	Is this receiving water designated as a Tier 2, Tier 2.5, or Tier 3 water?	If yes, specify which Tier (2, 2.5, or 3)?
[001]	Rio Grande (Tijeras Arroyo to Almeda Bridge)	☒Yes ☐ No	Dissolved oxygen E. coli, Mercury - Fish Consumption Advisory PCBS-Fish Consumption Advisory Temperature	☒Yes ☐ No	Middle Rio Grande Watershed 4/13/2010	E. Coli	☐ Yes ☒ No	

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Description of storm sewer systems:

The site will be graded to prevent runoff from leaving site and to drain away from stabilized and paved surfaces. Curb inlets convey stormwater to the local municipal separate storm sewer system. The stormwater will be conveyed offsite via the MS4.

Drainage Patterns:
The site will be graded to prevent runoff from leaving site and to drain toward the storm inlets. Curb inlets convey stormwater to the local municipal separate storm sewer system.

Site Features and Sensitive Areas to be Protected:
There are existing trees onsite; only remove trees slated for removal and protect trees to remain.

2.3 Nature of the Construction Activity

General Description of Project
HB Construction, Inc. plans construction of a commercial development project in Albuquerque, Bernalillo County, New Mexico. HB Construction, Inc. is responsible for overall site development and building construction. Soil disturbing activities will include clearing and grubbing; installing stabilized construction exits; installing erosion and sediment controls; grading; installation of the building foundation; excavation and installation of utilities; development of structure and parking areas; and installation of post-construction controls. The portion of the development, Albuquerque School of Excellence, this SWPPP will apply to, will consist of 2.27 disturbed acres.

Albuquerque School of Excellence will discharge to a water that is impaired for polychlorinated Biphenyls (PCB's) and is engaging in a demolition of a structure with at least 10,000 square feet of floor space built or renovated before January 1,1980. Appropriate personal protective equipment and tools will be used to minimize dust and heat. There is a debris containment area onsite that will be disposed of by C & C Demolition Services, which will be in compliance with applicable state, federal, and local laws.

Size of Construction Project
The following are estimates of the construction site (EPA 1992):

Total project area:	8.15 acres
Construction area to be disturbed:	2.27 acres
Maximum area to be disturbed at any one time:	2.27 acres
Percentage impervious area before construction:	25%
Runoff coefficient before construction:	0.20-0.30
Percentage impervious area after construction:	70-75%
Runoff coefficient after construction:	0.40-0.50

Construction Support Activities/ Offsite Areas of Concern
There will be no concrete batch plant, borrow disposal areas or supporting structures utilized during this project. Equipment staging and material storage areas will be clearly marked on the inspection map.

What is the function of the construction activity?

☐ Development ☒ Commercial ☐ Industrial ☐ Road Construction ☐ Linear Utility

☐ Other (please specify):

Will there be demolition of any structure built or renovated before January 1, 1980?	☒ YES ☐ NO
If yes, do any of the structures being demolished have at least 10,000 square feet of floor space?	☐ YES ☐ NO ☒ N/A
Was the pre-development land use used for agriculture (see Appendix A of the General permit for definition of "agricultural land")?	☐ YES ☒ NO

Pollutant-Generating Activities
List and describe all pollutant-generating activities and indicate for each activity the type of pollutant that will be generated. Take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed during construction.

SEE SECTION 5.1 POTENTIAL POLLUTANTS CHART

Construction Support Activities *(only provide if applicable)*
Describe any construction support activities for the project (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas):
Not Applicable

Contact information for construction support activity:
Not Applicable

2.4 Sequence and Estimated Dates of Construction Activities

Estimated Project Start Date: 10/01/25
Estimated Project Completion Date: 03/01/27

The general construction sequence will be:

Phase I

1. Install structural controls as directed by the city;
   - Install silt fencing around the perimeter of the site.
   - Install stabilized construction entrance for offsite tracking prevention off Sequoia Rd N.W.
   - Install curb and area inlet protection devices as shown on the Erosion Control Plan.
   - Install Flitrexx Siltsoxx throughout the site as shown on the Erosion Control Plan.
   - Install debris containment area on site as shown on the Erosion Control Plan.
   - Maintain existing vegetation
2. Minor demo as indicated on the Demolition Plan.
3. Site preparation, clearing, grading

Phase II

4. Excavation of storm sewer, water and wastewater utility, gas, utility, cable, electric excavation,
5. Grade and prepare streets and parking areas; pour slab
6. Building Construction;
   - Construction of Structure(s) according to the pollutant control requirements of this SWPPP.
7. Grade;
   - Perform final grading according to the pollutant control requirements in this SWPPP.
8. Install permanent stormwater controls; and
   - Landscape open areas.
   - Seed all disturbed unpaved areas.
9. Add and maintain permanent stormwater controls and remove any temporary BMPs.
   - Add and maintain existing vegetation and seeded areas

These are the major activities that will disturb soils onsite. General construction plans are commercial construction. Surface runoff will drain to stormwater curb inlets that are connected to a municipal separate storm sewer system that discharges offsite. Appropriate control measures or best management practices (BMPs) for these activities are described in Section 4: Erosion and Sediment Control BMPs, Good Housekeeping BMPs, and Post-Construction BMPs of this SWPPP.

The following management practices will be employed to sequence construction activities so as to minimize the overall amount of disturbed soil that will be subject to potential erosion at one time:

1. Prevent the disturbance of an area until ready to proceed with field work;
2. Anticipate the site conditions that will exist as the construction progresses toward the final product;
3. Have the materials on-hand to complete the work without delay;
4. Stabilize disturbed areas as soon as practicable, and apply temporary stabilization immediately after grading;
5. Consider the time of year and be prepared for sudden thunderstorms;
6. Install erosion and sediment controls prior to site disturbance;
7. Physically mark off limits of disturbance on the site with tape, signs, or other methods so that workers can see areas to be protected;
8. Maintain stormwater control devices until stabilized disturbed areas have achieved final stabilization;
9. Carry out a regular maintenance schedule for BMPs; and
10. Designate one individual responsible for implementing BMPs. Make sure that all workers understand the provisions of the BMPs. Establish reporting procedures for problems identified by workers.

For disturbance of 5 acres or less, if construction ceases for longer than 14 days, temporary or permanent stabilization practices, which may include temporary seeding, hay, geotextiles, mulches, and other techniques, will be employed immediately for all graded and other disturbed portions of the site. Immediately means as soon as practicable but no later than the end of the next work day. Non-vegetative erosion control measures may be used in arid areas, semi-arid areas, or drought-stricken areas, when vegetative controls are not feasible.

When disturbance is over 5 acres, the time frame is 7 days instead of 14 days.

A Construction Activities Record will be maintained by the Operator and will be kept in the SWPPP. The Record will include the dates when construction activities temporarily or permanently cease on a portion of the site and the dates when any stabilization measures are initiated. The Construction Activities Record is provided behind the Map Tab of the SWPPP. Construction specifications and details for vegetation are provided in Appendix E.

2.5 Allowable Non-Stormwater Discharges

The following non-stormwater discharges are allowable under the general stormwater permit which authorizes this project:

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities	No
Fire hydrant flushing	No
Landscape irrigation	Yes
Waters used to wash vehicles and equipment provided there is no discharge of soaps, solvents, or detergents used.	No
Water used to control dust	No
Potable water including uncontaminated water line flushing	No
Routine external building wash down with NO hazardous substances such as soaps, solvents and detergents, paint or caulk containing PCBs.	Yes
Pavement wash waters, providing spills or leaks of toxic or hazardous materials have not occurred and where soaps, solvents, and detergents are not used.	Yes
Uncontaminated air conditioning or compressor condensate	No
Uncontaminated, non-turbid discharges of ground water or spring water	No
Foundation or footing drains	No
Uncontaminated construction dewatering water	No

If any of the above listed allowable non-stormwater discharges become contaminated, these discharges will be contained so as to not enter the MS4 and will be disposed of properly. A routine inspection of potential non-permitted non-stormwater discharges will be conducted at the site during the regularly scheduled inspections. Any discharge would be recorded in the inspection report.

2.6 Site Maps

The following site maps and plans are provided as figures in this SWPPP:

Erosion Control Map
Demolition Plan
Grading Plan
Tree Mitigation Plan
Site Location Map
Surface Water Map

The provided maps will indicate the site location, the construction site details and the receiving waters as well as the drainage pattern, storm inlets, area of disturbance, locations of all controls and buffers, temporary or permanent stabilization practices, any offsite activities, location of stormwater discharge, vehicle wash areas and construction entrance/exits, if applicable.

EROSION CONTROL NOTES

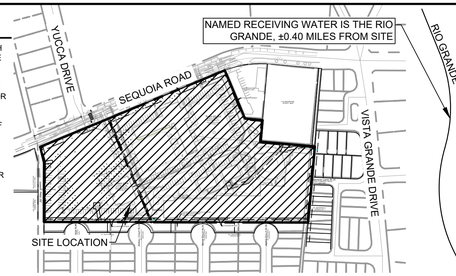
1. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS - CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.
2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.
3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS.
4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. SEE PHASING SCHEDULE THIS SHEET.
5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
6. CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, THE CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PARKING LOT CONSTRUCTION.
7. CONTRACTOR SHALL PROVIDE INLET PROTECTION FOR ANY AFFECTED INLETS DOWNSTREAM OF THE PROPOSED IMPROVEMENTS, IF NEEDED.
8. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP/SITE MAP TO INCLUDE BMP'S FOR ANY OFF-SITE MATERIAL WASTE, BORROW OR EQUIPMENT STORAGE AREAS.
9. CONTRACTOR IS RESPONSIBLE FOR POSTING OF SITE NOTICES, AND ANY ADDITIONAL INFORMATION OR SUBMITTALS REQUIRED BY EPA OR LOCAL JURISDICTION.
10. COORDINATE EXISTING TREES TO REMAIN WITH LANDSCAPE PLANS. ALL EXISTING TREES TO REMAIN ARE TO RECEIVE TREE PROTECTION AROUND THE CRITICAL ROOT ZONE IN ORDER TO PREVENT DAMAGE DURING CONSTRUCTION. TREE PROTECTION SHOULD BE INSTALLED PRIOR TO ANY DEMOLITION OR EARTH DISTURBING ACTIVITIES.
11. THE RIO GRANDE IS A WATER OF THE US WITHIN +/- 0.40 MI OF THE SITE. THE RIO GRANDE IS ON THE 303(D) LIST WITH IMPAIRMENTS FOR DISOLVED OXYGEN, E.COLI, MERCURY, AND PCBs. THERE IS NO LISTED TMDL
12. THERE ARE NO FEDERALLY LISTED CRITICAL HABITATS ON SITE OR AT DISCHARGE POINT
13. THERE IS NO SEDIMENT BASIN REQUIRED BASED ON AMOUNT OF DISTURBED AREA
14. CONTRACTOR TO PROVIDE EROSION CONTROL FOR LIMITED SCOPE OF WORK IN THE RIGHT OF WAY IF REQUIRED FOR SEDIMENT AND DUST CONTROL. IMMEDIATELY STABILIZE AREAS UPON COMPLETION AND REMOVE ANY BMPS FROM ROW
15. CONTRACTOR SHALL COVER ALL WASTE, INCLUDING PCB-CONTAINING DEMOLITION DEBRIS, DURING PRECIPITATION AND NON-WORK HOURS PER CGP 2.3.3.E.

ADDITIONAL SITE SPECIFIC NOTES:

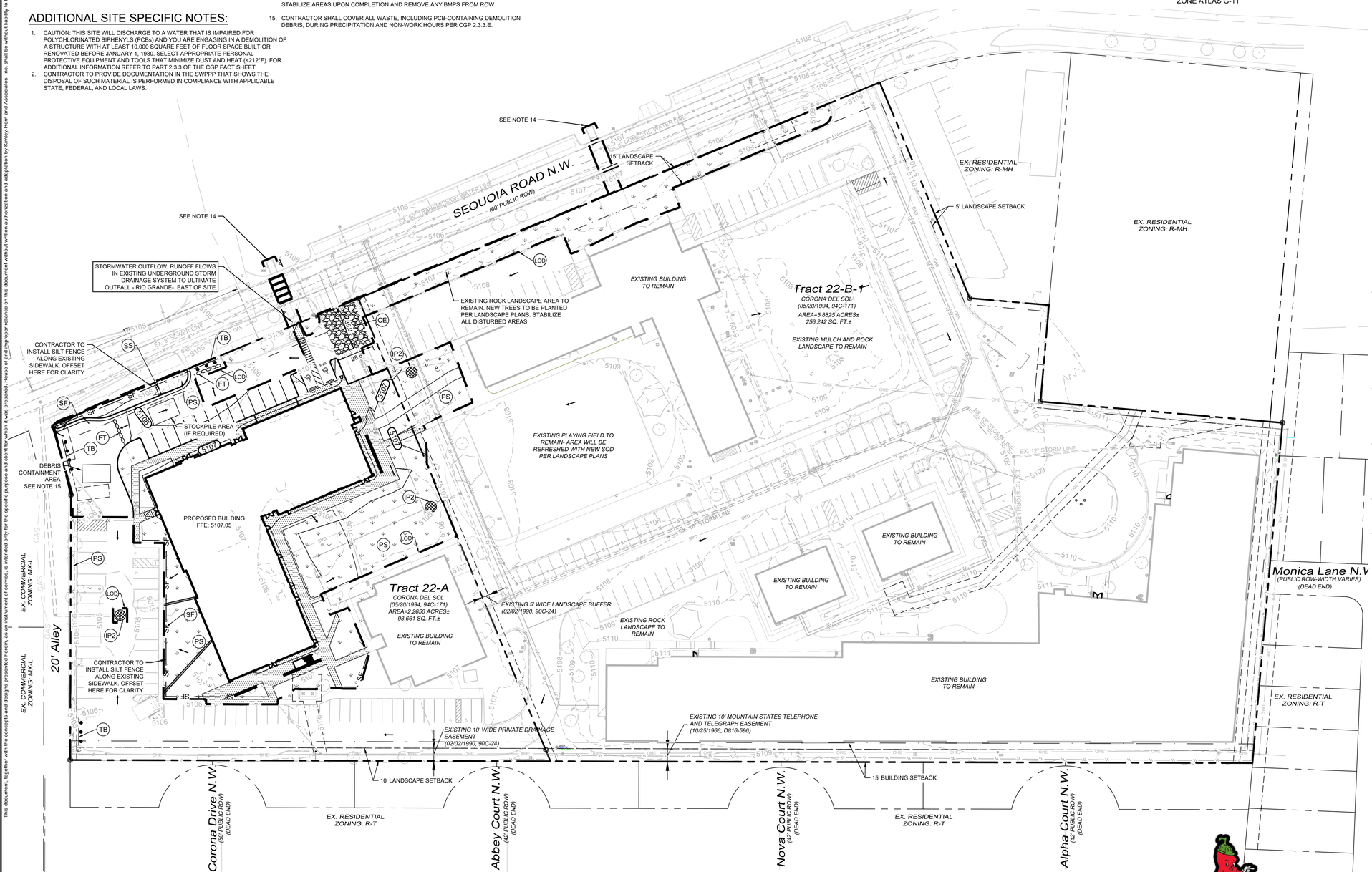
1. CAUTION: THIS SITE WILL DISCHARGE TO A WATER THAT IS IMPAIRED FOR POLYCHLORINATED BIPHENYLS (PCBs) AND YOU ARE ENGAGING IN A DEMOLITION OF A STRUCTURE WITH AT LEAST 10,000 SQUARE FEET OF FLOOR SPACE BUILT OR RENOVATED BEFORE JANUARY 1, 1980. SELECT APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AND TOOLS THAT MINIMIZE DUST AND HEAT (<212°F). FOR ADDITIONAL INFORMATION REFER TO PART 2.3.3 OF THE CGP FACT SHEET.
2. CONTRACTOR TO PROVIDE DOCUMENTATION IN THE SWPPP THAT SHOWS THE DISPOSAL OF SUCH MATERIAL IS PERFORMED IN COMPLIANCE WITH APPLICABLE STATE, FEDERAL, AND LOCAL LAWS.

CITY OF ALBUQUERQUE EROSION CONTROL NOTES DATED 6/16/2023

1. ALL EROSION AND SEDIMENT CONTROL (ESC) WORK ON THESE PLANS, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON SHALL BE PERMITTED, CONSTRUCTED, INSPECTED, AND MAINTAINED IN ACCORDANCE WITH:
   a. THE CITY ORDINANCE § 14-5-2-11, THE ESC ORDINANCE,
   b. THE EPA'S 2022 CONSTRUCTION GENERAL PERMIT (CGP), AND
   c. THE CITY OF ALBUQUERQUE CONSTRUCTION BMP MANUAL.
2. ALL BMP'S MUST BE INSTALLED PRIOR TO BEGINNING ANY EARTH MOVING ACTIVITIES EXCEPT AS SPECIFIED HEREON IN THE PHASING PLAN. CONSTRUCTION OF EARTHEN BMP'S SUCH AS SEDIMENT TRAPS, SEDIMENT BASINS, AND DIVERSION BERMS SHALL BE COMPLETED AND INSPECTED PRIOR TO ANY OTHER CONSTRUCTION OR EARTHWORK. SELF-INSPECTION IS REQUIRED AFTER INSTALLATION OF THE BMP'S AND PRIOR TO BEGINNING CONSTRUCTION.
3. SELF-INSPECTIONS - IN ACCORDANCE WITH CITY ORDINANCE § 14-5-2-11(C)(1), "AT A MINIMUM A ROUTINE SELF-INSPECTION IS REQUIRED TO REVIEW THE PROJECT FOR COMPLIANCE WITH THE CONSTRUCTION GENERAL PERMIT ONCE EVERY 14 DAYS AND AFTER ANY PRECIPITATION EVENT OF 1/4 INCH OR GREATER UNTIL THE SITE CONSTRUCTION HAS BEEN COMPLETED AND THE SITE DETERMINED AS STABILIZED BY THE CITY. REPORTS OF THESE INSPECTIONS SHALL BE KEPT BY THE PERSON OR ENTITY AUTHORIZED TO DIRECT THE CONSTRUCTION ACTIVITIES ON THE SITE AND MADE AVAILABLE UPON REQUEST.
4. CORRECTIVE ACTION REPORTS MUST BE KEPT BY THE PERSON OR ENTITY AUTHORIZED TO DIRECT THE CONSTRUCTION ACTIVITIES ON THE SITE AND MADE AVAILABLE UPON REQUEST.
5. FINAL STABILIZATION AND NOTICE OF TERMINATION (NOT) - IN ACCORDANCE WITH CITY ORDINANCE § 14-5-2-11(C)(1), SELF-INSPECTIONS MUST CONTINUE UNTIL THE SITE IS "DETERMINED AS STABILIZED BY THE CITY." THE PROPERTY OWNER/OPERATOR IS RESPONSIBLE FOR DETERMINING WHEN THE "CONDITIONS FOR TERMINATING CGP COVERAGE" PER CGP PART 8.2 ARE SATISFIED AND THEN FOR FILING THEIR NOTICE OF TERMINATION (NOT) WITH THE EPA. EACH OPERATOR MAY TERMINATE CGP COVERAGE ONLY IF ONE OR MORE OF THE CONDITIONS IN PART 8.2.1, 8.2.2, OR 8.2.3 HAS OCCURRED. AFTER FILING THE NOT WITH THE EPA, THE PROPERTY OWNER IS RESPONSIBLE FOR REQUESTING A DETERMINATION OF STABILIZATION FROM THE CITY.
6. WHEN DOING WORK IN THE CITY RIGHT-OF-WAY (E.G. SIDEWALK, DRIVE PADS, UTILITIES, ETC.) PREVENT DIRT FROM GETTING INTO THE STREET. IF DIRT IS PRESENT IN THE STREET, THE STREET SHOULD BE SWEPT DAILY OR PRIOR TO A RAIN EVENT OR CONTRACTOR INDUCED WATER EVENT (E.G. CURB CUT OR WATER TEST).
7. WHEN INSTALLING UTILITIES BEHIND THE CURB, THE EXCAVATED DIRT SHOULD NOT BE PLACED IN THE STREET.
8. WHEN CUTTING THE STREET FOR UTILITIES THE DIRT SHALL BE PLACED ON THE UPHILL SIDE OF THE STREET CUT AND THE AREA SWEPT AFTER THE WORK IS COMPLETE. A WATTLE OR MULCH SOCK MAY BE PLACED AT THE TOE OF THE EXCAVATED DIRT PILE IF SITE CONSTRAINTS DO NOT ALLOW PLACING THE EXCAVATED DIRT ON THE UPHILL SIDE OF THE STREET CUT.
9. ESC PLANS MUST SHOW LONGITUDINAL STREET SLOPE AND STREET NAMES. ON STREETS WHERE THE LONGITUDINAL SLOPE IS STEEPER THAN 2.5%, WATTLES/MULCH SOCKS OR J-HOOD SILT FENCE SHALL BE SHOWN IN THE FRONT YARD SWALE OR ON THE SIDE OF THE STREET.



VICINITY MAP
(NOT TO SCALE)
ZONE ATLAS G-11



LEGEND

- PROPERTY LINE
- 5106 — EXISTING CONTOUR
- 5106 — PROPOSED CONTOUR
- DIRECTION OF FLOW
- LOD — PROPOSED LIMITS OF DISTURBANCE
- SF — SILT FENCE
- FT — FLITREXX SILTSOXX
- TB — TEMPORARY BARRICADE
- CE — CONSTRUCTION EXIT
- PS — PERMANENT STABILIZATION
- IP2 — PROPOSED GRATE INLET PROTECTION. SEE DETAIL SHEET.
- SS — SWPPP SIGN

SITE DATA

LOT AREA	2.26± AC
TOTAL ONSITE DISTURBED AREA	1.27± AC
TOTAL OFFSITE DISTURBED AREA	0.66± AC
TOTAL DISTURBED AREA	1.93± AC

EROSION CONTROL SCHEDULE AND PHASING

THE PROJECT SHALL GENERALLY CONFORM TO THE FOLLOWING PHASING SCHEDULE. REFERENCE THE SWPPP BOOK AND NPDES GENERAL PERMIT FOR DETAILED REQUIREMENTS.

PHASE 1 - DEMOLITION
- A. INSTALL PERIMETER BMPs INCLUDING THE CONSTRUCTION ENTRANCE/EXIT, SWPPP SIGNAGE, SILT FENCE, AND ALL OTHER NECESSARY BMPs ACCORDING TO THE LOCATION SHOWN ON THE EROSION CONTROL PLAN. CLEAR ONLY THE MINIMUM AREA REQUIRED TO INSTALL BMPs.
- B. SET THE PROJECT OFFICE TRAILER AND PREPARE TEMPORARY PARKING AND STORAGE AREAS.
- C. DENOTE DATES OF BMP INSTALLATION AND MAINTENANCE ON SITE-MAPS.
- D. BEGIN DEMOLITION AND CLEARING OF THE SITE.
- E. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WHENEVER CLEARING, GRADING, OR EARTH DISTURBING ACTIVITIES HAVE CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED AND WILL NOT RESUME WITHIN 14 DAYS PER GENERAL PERMIT REQUIREMENTS.

PHASE 2 - GRADING
- A. ENSURE APPROPRIATE BMPs ARE IN PLACE DOWNSTREAM OF SITE WORK OR WHERE RUNOFF MAY EXIT THE SITE.
- B. BEGIN GRADING THE SITE.
- C. SEED AND RE-VEGETATE SLOPES AS AREAS ARE BROUGHT TO GRADE OR STOCKPILES THAT WILL REMAIN INACTIVE FOR 14 DAYS PER GENERAL PERMIT REQUIREMENTS.

PHASE 3 - UTILITIES
- D. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE.
- E. INSTALL UTILITIES, STORM DRAINS, CURB AND GUTTERS.
- F. INSTALL INLET PROTECTION AS SPECIFIED ON PLAN SHEETS AS STORM STRUCTURES ARE INSTALLED
- G. TEMPORARILY STABILIZE, THROUGHOUT CONSTRUCTION, ANY DISTURBED AREAS THAT ARE LIKELY TO REMAIN INACTIVE FOR 14 DAYS.

PHASE 4 - PAVING
- H. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE.
- I. STABILIZE SUBGRADE.
- J. PAVE PARKING LOT AND SIDEWALKS AS SPECIFIED ON PLAN SHEETS.

PHASE 5 - LANDSCAPING AND DEVELOPMENT
- K. INSTALL LANDSCAPING PER THE LANDSCAPE PLANS AND DETAILS.
- L. REMOVE EROSION CONTROL DEVICES WHEN FINAL STABILIZATION IS ACHIEVED PER THE TPDES GENERAL PERMIT.
- M. STABILIZE ANY AREAS DISTURBED BY REMOVAL OF BMPs.

SEQUENCE OF CONSTRUCTION NOTES

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. ANY SEQUENCE OF CONSTRUCTION SHOWN ON THESE PLANS IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES.THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS

BENCHMARKS

NOTE:
1. ELEVATION DATUM IS BASED ON NAVD 1988 FROM AGRS MONUMENT "9_G11", PUBLISHED ELEVATION (FEET) = 5116.009

-BM#1
A.G.R.S. MONUMENT "8_G11"
STANDARD C.O.A. ALUMINUM DISC
NEW MEXICO STATE PLAN COORDINATES
(CENTRAL ZONE - N.A.D. 1983)
N: 1,502,236.625
E: 1,505,431.887
ELEV: 5116.009 (NAVD 1988)

-BM#2
A.G.R.S. MONUMENT "12_H11"
STANDARD ALUMINUM DISC
NEW MEXICO STATE PLAN COORDINATES
(CENTRAL ZONE - N.A.D. 1983)
N: 1,497,519.02
E: 1,505,414.361
ELEV: 5104.854 (NAVD 1988)

CAUTION!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

nm811 Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM

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LAUREN A. NUTTER — NEW MEXICO — 24254 — PROFESSIONAL ENGINEER — 1/5/2026

KHA PROJECT	068910607
DATE	JANUARY 2026
SCALE	AS SHOWN
DESIGNED BY	LHD
DRAWN BY	LHD
CHECKED BY	LAN

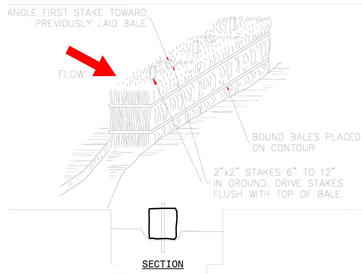
EROSION CONTROL PLAN

ALBUQUERQUE SCHOOL OF EXCELLENCE
PREPARED FOR
BUILDING HOPE

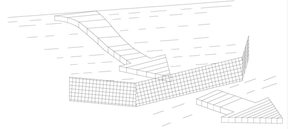
SHEET NUMBER
C3.0

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

IMAGES: Temporary Traffic Barrier ;
XREFS: xSite - xBenchmarks - xStm - x24x36_SSM_Border - xAerial - Large - xArch - xSurvey - xDoc0 - xOffsite - Tom Lane - xSurvey - Offsite - xSchematic - Offsite
LAST SAVED BY: LOGAN 1/5/2026 3:01 PM
PLOTTED BY: LOGAN 1/5/2026 3:01 PM
DWG NAME: C3.0 - EROSION CONTROL PLAN.dwg



TYPE II
STRAW BALE OPTION



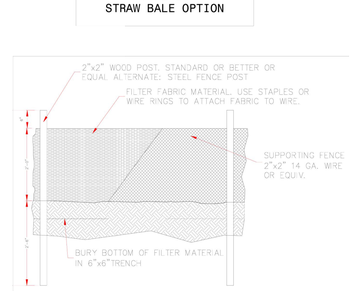
TYPE I
SILT FENCE OPTION

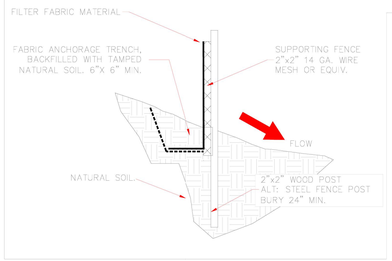
NOTES: SILT FENCE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE POST SPACING FOR SILT FENCES TO MINIMIZE MAINTENANCE.

1. POST SPACING SHALL BE 4 FT. MAXIMUM WITHOUT SUPPORTING FENCE, 10 FT. MAXIMUM WITH SUPPORTING FENCE.
2. POSTS FOR 4 FT. MAXIMUM POST SPACING SHALL BE 2 INCH SQUARE NOMINAL SIZE OR HEAVIER WOOD POSTS, OR STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 LB. PER LINEAR FOOT.

   POSTS FOR 10 FT. MAXIMUM POST SPACING SHALL BE 4 INCH SQUARE NOMINAL SIZE OR HEAVIER WOOD POSTS, OR STEEL POSTS AS SPECIFIED ABOVE.
3. SUPPORTING FENCE SHALL BE WIRE MESH (14 GA. MIN., 1 INCH MAX. MESH OPENINGS), SNOW FENCE, PLASTIC FENCE, OR APPROVED EQUAL.
4. SUPPORTING FENCE SHALL BE FASTENED SECURELY TO POSTS WITH STAPLES OR WIRE TIES. FILTER FABRIC SHALL BE FASTENED SECURELY TO SUPPORTING FENCE WITH WIRE TIES SPACED AT 2 FT. CENTERS ALONG THE TOP AND MID-SECTION. WHEN A SUPPORTING FENCE IS NOT USED, FILTER FABRIC SHALL BE SECURELY FASTENED TO POSTS WITH STAPLES OR WIRE TIES.
5. WHEN SILT FENCE IS USED FOR CHECK DAMS INSTALLED IN DITCHES, A SUPPORTING FENCE SHALL BE PROVIDED, WITH MAXIMUM POST SPACING OF 10 FT.
6. STANDARD "T" OR "U" SECTION STEEL POSTS SHALL NOT BE USED WITHIN THE CONSTRUCTION CLEAR ZONE RECOVERY AREA.





SILT FENCE

IDENT. NO.	DESCRIPTION (OR CHANGE NOTICE)	DATE	BY

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

SILT FENCE

SHEET NO. 3 OF 7

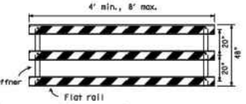
TYPE III BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type III Barricades and a list of all materials used in the construction of Type III Barricades.
2. Type III Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.

TYPICAL STRIPING DETAIL FOR BARRICADE RAIL

TYPICAL PANEL DETAIL
FOR SKID OR POST TYPE BARRICADES
4' min., 8' max.



Stiffner may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

TEMPORARY TRAFFIC BARRIER DETAIL

TB

N.T.S.

LAST REVISED:
NOV 2002

PRODUCT SPECIFICTIONS

Filtrexx SiltSoxx® EXTREME

filtrexx® SUSTAINABLE TECHNOLOGIES

PURPOSE & DESCRIPTION

Filtrexx **SiltSoxx EXTREME** is a pre-filled compost filter sock comprised of durable mesh material and certified FilterMedia™. Filtrexx SiltSoxx EXTREME is specially designed to withstand the harsh surface conditions of asphalt and concrete. Filtrexx SiltSoxx EXTREME features an extra tough, wear & tear resistant mesh, available in green/black stripe or orange.

APPLICATIONS

- Urban construction
- On asphalt/concrete
- Rugged conditions
- High traffic areas

FOR ADDITIONAL INFORMATION

Refer to the **Filtrexx Catalog** for full item listings.

Refer to **Filtrexx Design Specifications** for complete application, design, installation, maintenance, and removal documentation at www.filtrexx.com/specs

FIELD APPLICATION PHOTO REFERENCES

Filtrexx SiltSoxx EXTREME used in rugged conditions.

Filtrexx SiltSoxx EXTREME Specifications

Product Name	**SiltSoxx EXTREME**
Mesh Material Type	Multi-Filament Polypropylene (MFPP) Photodegradable
Uses	hard surfaces; rugged sites; high traffic
Diameters	8", 12"
Mesh Opening Size	1/16"
Functional Longevity/ Project Duration[1]	up to 5 yr
Tensile Strength (ASTM D4595)[2]	MD: 1062 lbs TD: 797 lbs
Fill Material	Locally sourced FilterMedia™
Mesh Color	green/black thick stripe orange
Mesh Sample	
FilterMedia Sample	

[1]Functional longevity ranges are estimates only. Site specific environmental conditions may result in significantly shorter or longer time periods.
[2]Tensile Strength is based on 12" diameter using ATSM D4595. See Filtrexx TechLink #3342 for full tensile strength testing.

Filtrexx SiltSoxx is in compliance with most state & federal agencies including:

US Army Corps of Engineers · USDA NRCS · Made in USA · USDA CERTIFIED BIOBASED PRODUCT

Filtrexx®, Filtrexx SiltSoxx®, the branch & leaf logo® and the color GREEN® are Registered Trademarks used by Filtrexx International. FilterMedia™ is a Trademark used by Filtrexx International.

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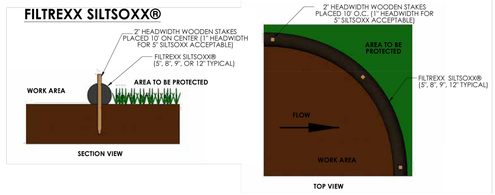
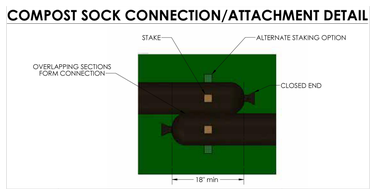
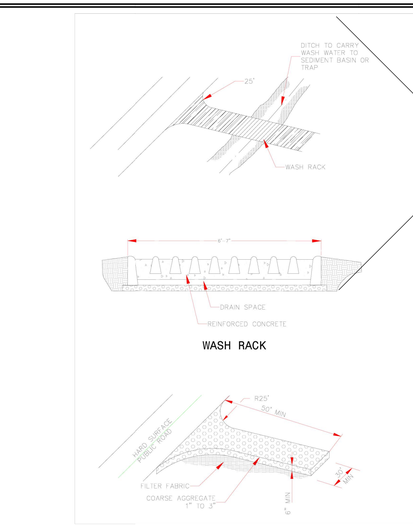
filtrexx.com | 877.542.7699 | info@filtrexx.com

Figure 1.1. Engineering Design Drawing for Perimeter Control





NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILT SOXX FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

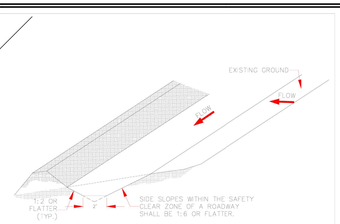


WASH RACK

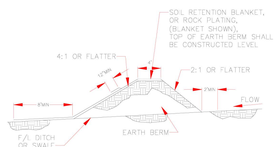
WASH RACK NOT USED WITH THIS PROJECT

CE

OFFSITE TRACKING PREVENTION



TYPICAL SWALE CONFIGURATION



DIVERSION DIKE

IDENT. NO.	DESCRIPTION (OR CHANGE NOTICE)	DATE	BY

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

OFFSITE TRACKING PREVENTION & DIVERSION DIKE

SHEET NO. 7 OF 7

nm811 Know what's below. Call before you dig.

CAUTION!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

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IMAGES: Temporary Traffic Barrier ; xSite - xBenchmarks - xStm - x24x36_SSM_Border - xAerial - Large - xArch - xSurvey - xGrad - xOfsite - Turn Lane - xSurvey - Offsite - xSchematic - Offsite
XREFS:
ASSET GROUP:
DUREY, LOGAN 7/5/2026 2:50 PM
PLOTTED BY
DWG NAME C3.0 - EROSION CONTROL PLAN.dwg

	BY	DATE	REVISIONS	No.

Kimley»Horn
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PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM
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LAUREN A. NUTTER · NEW MEXICO · 24254 · PROFESSIONAL ENGINEER
1/5/2026

KHA PROJECT	068910607
DATE	JANUARY 2026
SCALE	AS SHOWN
DESIGNED BY	LHD
DRAWN BY	LHD
CHECKED BY	LAN

EROSION CONTROL DETAILS

ALBUQUERQUE SCHOOL OF EXCELLENCE

PREPARED FOR

BUILDING HOPE

SHEET NUMBER
C3.1

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XREFS:
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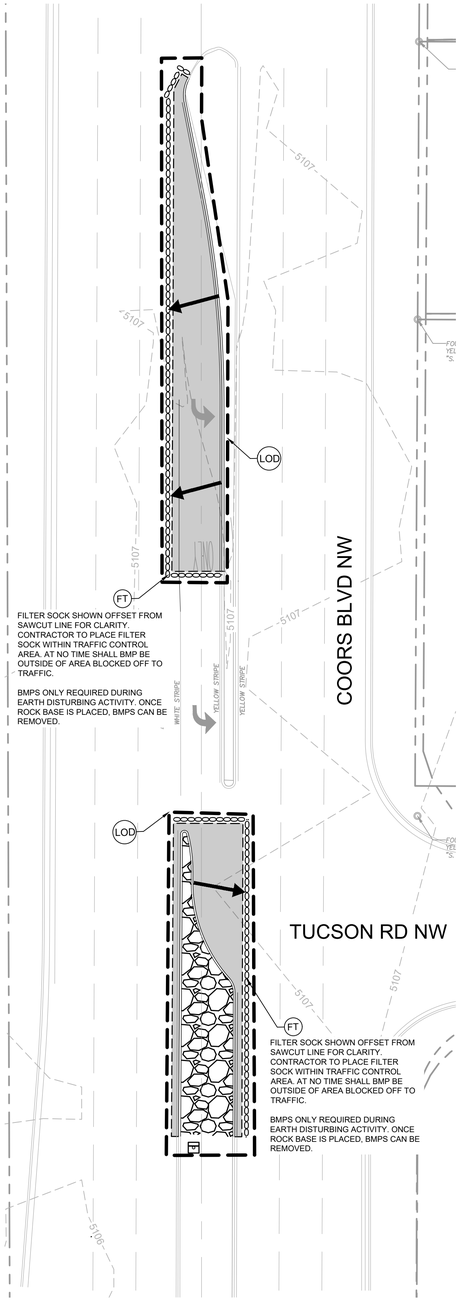
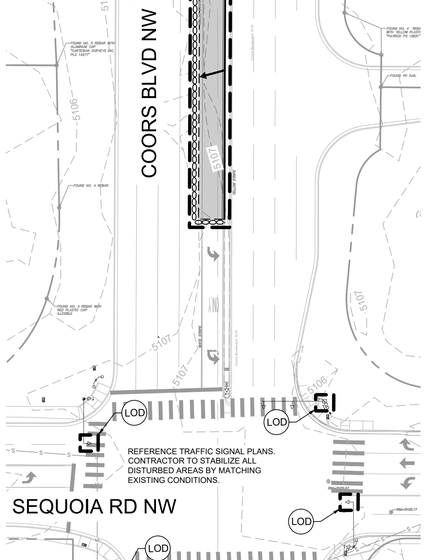
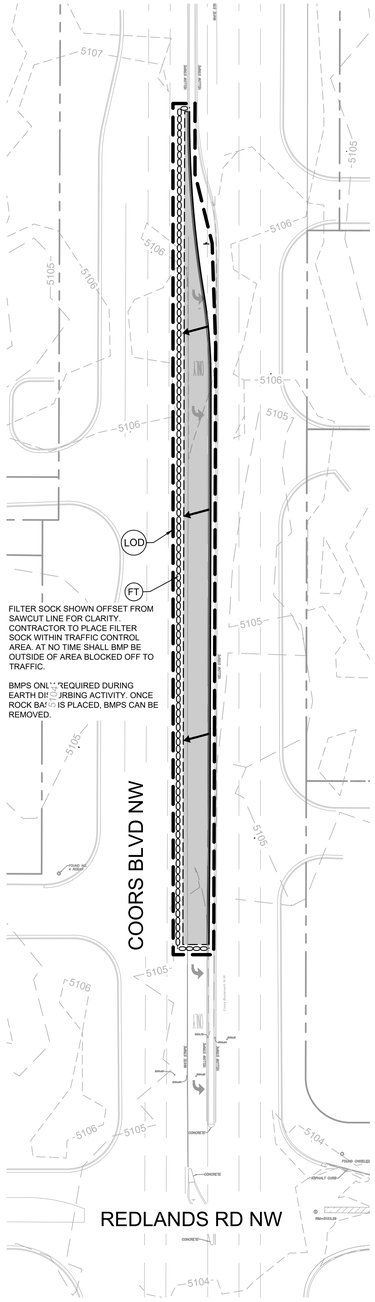
PLOTTED BY: DAVEY, LOGAN
DWG NAME: C3.X - EROSION CONTROL PLAN.dwg



SOUTHBOUND LEFT - COORS BLVD NW AT TUCSON RD NW



SOUTHBOUND LEFT - COORS BLVD NW AT SEQUOIA RD NW



SOUTHBOUND LEFT - COORS BLVD NW AT REDLANDS RD NW

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

- PROPERTY LINE
- DIRECTION OF FLOW
- LOD — PROPOSED LIMITS OF DISTURBANCE
- FT — FLITREXX SILTSOXX

OFFSITE WORK EROSION CONTROL SCHEDULE AND PHASING

THE PROJECT SHALL GENERALLY CONFORM TO THE FOLLOWING PHASING SCHEDULE. REFERENCE THE SWPPP BOOK AND NPDES GENERAL PERMIT FOR DETAILED REQUIREMENTS.

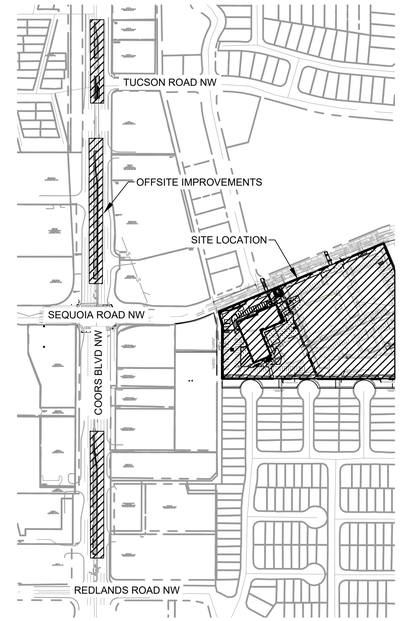
PHASE 1 - DEMOLITION
- A. INSTALL PERIMETER BMPs ACCORDING TO THE LOCATION SHOWN ON THE EROSION CONTROL PLAN. CLEAR ONLY THE MINIMUM AREA REQUIRED TO INSTALL BMPs.
- B. DENOTE DATES OF BMP INSTALLATION AND MAINTENANCE ON SITE-MAPS.
- C. BEGIN DEMOLITION AND PAVEMENT REMOVAL.
- D. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WHENEVER CLEARING, GRADING, OR EARTH DISTURBING ACTIVITIES HAVE CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED AND WILL NOT RESUME WITHIN 14 DAYS PER GENERAL PERMIT REQUIREMENTS.

PHASE 2 - GRADING
- A. ENSURE APPROPRIATE BMPs ARE IN PLACE DOWNSTREAM OF TURN LANE WORK OR WHERE RUNOFF MAY EXIT THE TURN LANE.
- B. BEGIN GRADING THE TURN LANES.
- C. PLACE ROCK COVER AS AREAS ARE BROUGHT TO GRADE. NO STOCKPILES IN TURN LANES.

PHASE 3 - PAVING
- D. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE.
- E. STABILIZE SUBGRADE. REMOVE BMPS AFTER ROCK IS PLACED IN TURN LANE.
- F. PAVE TURN LANES AS SPECIFIED ON PLAN SHEETS.

SEQUENCE OF CONSTRUCTION NOTES

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. ANY SEQUENCE OF CONSTRUCTION SHOWN ON THESE PLANS IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES.THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS



VICINITY MAP
(NOT TO SCALE)
ZONE ATLAS G-11

EROSION CONTROL NOTES

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS - CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.
2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.
3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS.
4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. SEE PHASING SCHEDULE THIS SHEET.
5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
6. CONTRACTOR SHALL PROVIDE INLET PROTECTION FOR ANY AFFECTED INLETS DOWNSTREAM OF THE PROPOSED IMPROVEMENTS, IF NEEDED.
7. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP/SITE MAP TO INCLUDE BMP'S FOR ANY OFF-SITE MATERIAL WASTE, BORROW OR EQUIPMENT STORAGE AREAS.
8. CONTRACTOR IS RESPONSIBLE FOR POSTING OF SITE NOTICES, AND ANY ADDITIONAL INFORMATION OR SUBMITTALS REQUIRED BY EPA OR LOCAL JURISDICTION.
9. COORDINATE EXISTING TREES TO REMAIN WITH LANDSCAPE PLANS. ALL EXISTING TREES TO REMAIN ARE TO RECEIVE TREE PROTECTION AROUND THE CRITICAL ROOT ZONE IN ORDER TO PREVENT DAMAGE DURING CONSTRUCTION. TREE PROTECTION SHOULD BE INSTALLED PRIOR TO ANY DEMOLITION OR EARTH DISTURBING ACTIVITIES.
10. THERE ARE NO WATERS OF THE US ON THE SITE OR WITHIN A MILE OF THE SITE
11. THERE ARE NO FEDERALLY LISTED CRITICAL HABITATS ON SITE OR AT DISCHARGE POINT
12. THERE IS NO SEDIMENT BASIN REQUIRED BASED ON AMOUNT OF DISTURBED AREA
13. CONTRACTOR TO PROVIDE EROSION CONTROL FOR LIMITED SCOPE OF WORK IN THE RIGHT OF WAY IF REQUIRED FOR SEDIMENT AND DUST CONTROL. IMMEDIATELY STABILIZE AREAS UPON COMPLETION AND REMOVE ANY BMPS FROM ROW.
14. FILTER SOCK SHOWN OFFSET FROM SAWCUT LINE FOR CLARITY. CONTRACTOR TO PLACE FILTER SOCK WITHIN TRAFFIC CONTROL AREA. AT NO TIME SHALL BMP BE OUTSIDE OF AREA BLOCKED OFF TO TRAFFIC. BMPS ONLY REQUIRED DURING EARTH DISTURBING ACTIVITY. ONCE ROCK BASE IS PLACED, BMPS CAN BE REMOVED.

CITY OF ALBUQUERQUE EROSION CONTROL NOTES DATED 6/16/2023

1. ALL EROSION AND SEDIMENT CONTROL (ESC) WORK ON THESE PLANS, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON SHALL BE PERMITTED, CONSTRUCTED, INSPECTED, AND MAINTAINED IN ACCORDANCE WITH:
   a. THE CITY ORDINANCE § 14-5-2-11, THE ESC ORDINANCE,†
   b. THE EPA'S 2022 CONSTRUCTION GENERAL PERMIT (CGP), AND
   c. THE CITY OF ALBUQUERQUE CONSTRUCTION BMP MANUAL.
2. ALL BMP'S MUST BE INSTALLED PRIOR TO BEGINNING ANY EARTH MOVING ACTIVITIES EXCEPT AS SPECIFIED HEREON IN THE PHASING PLAN. CONSTRUCTION OF EARTHEN BMP'S SUCH AS SEDIMENT TRAPS, SEDIMENT BASINS, AND DIVERSION BERMS SHALL BE COMPLETED AND INSPECTED PRIOR TO ANY OTHER CONSTRUCTION OR EARTHWORK. SELF-INSPECTION IS REQUIRED AFTER INSTALLATION OF THE BMP'S AND PRIOR TO BEGINNING CONSTRUCTION.
3. SELF-INSPECTIONS - IN ACCORDANCE WITH CITY ORDINANCE § 14-5-2-11(C)(1), "AT A MINIMUM A ROUTINE SELF-INSPECTION IS REQUIRED TO REVIEW THE PROJECT FOR COMPLIANCE WITH THE CONSTRUCTION GENERAL PERMIT ONCE EVERY 14 DAYS AND AFTER ANY PRECIPITATION EVENT OF 1/4 INCH OR GREATER UNTIL THE SITE CONSTRUCTION HAS BEEN COMPLETED AND THE SITE DETERMINED AS STABILIZED BY THE CITY. REPORTS OF THESE INSPECTIONS SHALL BE KEPT BY THE PERSON OR ENTITY AUTHORIZED TO DIRECT THE CONSTRUCTION ACTIVITIES ON THE SITE AND MADE AVAILABLE UPON REQUEST.
4. CORRECTIVE ACTION REPORTS MUST BE KEPT BY THE PERSON OR ENTITY AUTHORIZED TO DIRECT THE CONSTRUCTION ACTIVITIES ON THE SITE AND MADE AVAILABLE UPON REQUEST.
5. FINAL STABILIZATION AND NOTICE OF TERMINATION (NOT) - IN ACCORDANCE WITH CITY ORDINANCE § 14-5-2-11(C)(1), SELF-INSPECTIONS MUST CONTINUE UNTIL THE SITE IS "DETERMINED AS STABILIZED BY THE CITY," THE PROPERTY OWNER/OPERATOR IS RESPONSIBLE FOR DETERMINING WHEN THE "CONDITIONS FOR TERMINATING CGP COVERAGE" PER CGP PART 8.2 ARE SATISFIED AND THEN FOR FILING THEIR NOTICE OF TERMINATION (NOT) WITH THE EPA. EACH OPERATOR MAY TERMINATE CGP COVERAGE ONLY IF ONE OR MORE OF THE CONDITIONS IN PART 8.2.1, 8.2.2, OR 8.2.3 HAS OCCURRED. AFTER FILING THE NOT WITH THE EPA, THE PROPERTY OWNER IS RESPONSIBLE FOR REQUESTING A DETERMINATION OF STABILIZATION FROM THE CITY.
6. WHEN DOING WORK IN THE CITY RIGHT-OF-WAY (E.G. SIDEWALK, DRIVE PADS, UTILITIES, ETC.) PREVENT DIRT FROM GETTING INTO THE STREET. IF DIRT IS PRESENT IN THE STREET, THE STREET SHOULD BE SWEPT DAILY OR PRIOR TO A RAIN EVENT OR CONTRACTOR INDUCED WATER EVENT (E.G. CURB CUT OR WATER TEST).
7. WHEN INSTALLING UTILITIES BEHIND THE CURB, THE EXCAVATED DIRT SHOULD NOT BE PLACED IN THE STREET.
8. WHEN CUTTING THE STREET FOR UTILITIES THE DIRT SHALL BE PLACED ON THE UPHILL SIDE OF THE STREET CUT AND THE AREA SWEPT AFTER THE WORK IS COMPLETE. A WATTLE OR MULCH SOCK MAY BE PLACED AT THE TOE OF THE EXCAVATED DIRT PILE IF SITE CONSTRAINTS DO NOT ALLOW PLACING THE EXCAVATED DIRT ON THE UPHILL SIDE OF THE STREET CUT.
9. ESC PLANS MUST SHOW LONGITUDINAL STREET SLOPE AND STREET NAMES. ON STREETS WHERE THE LONGITUDINAL SLOPE IS STEEPER THAN 2.5%, WATTLES/MULCH SOCKS OR J-HOOD SILT FENCE SHALL BE SHOWN IN THE FRONT YARD SWALE OR ON THE SIDE OF THE STREET.

nm811 Know what's below. Call before you dig.

CAUTION!!
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No.	REVISIONS	DATE	BY

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LAUREN A. NUTTER
NEW MEXICO
24254
PROFESSIONAL ENGINEER
1/5/2026

KHA PROJECT	068910607
DATE	JANUARY 2026
SCALE	AS SHOWN
DESIGNED BY	LHD
DRAWN BY	LHD
CHECKED BY	LAN

ALBUQUERQUE SCHOOL OF EXCELLENCE
PREPARED FOR
BUILDING HOPE

OFFSITE EROSION CONTROL PLAN

SHEET NUMBER
C3.2

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IMAGES
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LAST SAVED
PLOTTED BY
DWG NAME

Hepler NM Seal Signed.
x:\Albuquerque\...\Survey - xTree mitigation - HJW - x24x36_SIM_Border.dwg
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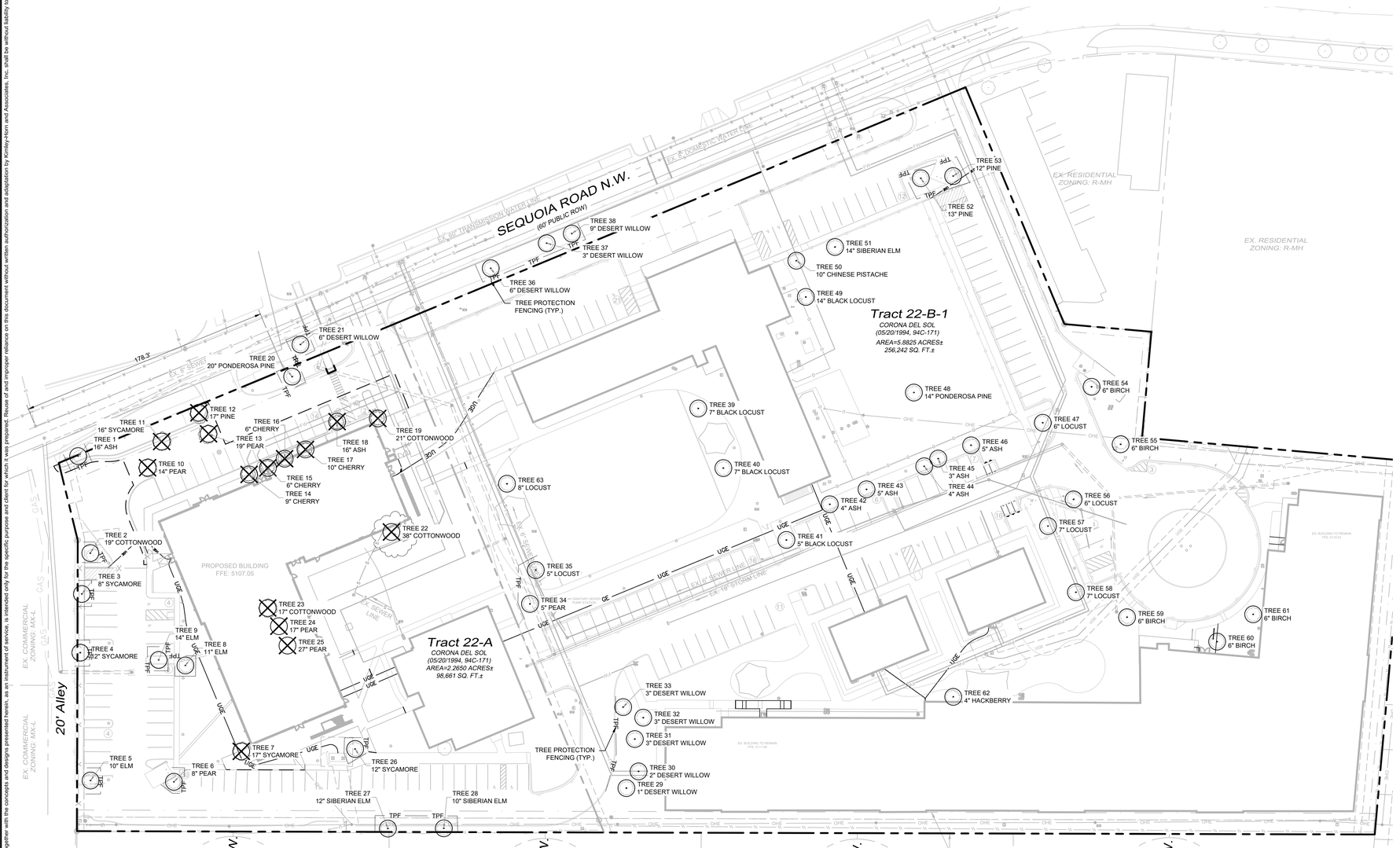
HEPLER, CHRISTOPHER
8/22/2025 9:07 AM
Tina Marie Gonzales

EXISTING TREE TO BE REMOVED

EXISTING TREE TO REMAIN

TPF TPF TREE PROTECTION FENCING



TREE MITIGATION CHART

TREE #	D.B.H	SPECIES	COMMENT	REMAIN OR REMOVE	# OF CREDITS	LOCATION OF CREDIT
1	16"	ASH		REMAIN	6	FRONTAGE
2	19"	COTTONWOOD	HIGH POLLEN	REMAIN	6	LOT EDGE
3	8"	SYCAMORE	HIGH POLLEN	REMAIN	4	LOT EDGE
4	12"	SYCAMORE	HIGH POLLEN	REMAIN	4	LOT EDGE
5	10"	ELM		REMAIN	4	LOT EDGE
6	8"	PEAR		REMAIN	4	PARKING
7	17"	SYCAMORE	HIGH POLLEN	REMOVE	(-)	PARKING
8	11"	ELM		REMAIN	4	PARKING
9	14"	ELM		REMAIN	6	PARKING
10	14"	PEAR	WITHIN L.O.D	REMOVE	(-)	N/A
11	16"	SYCAMORE	WITHIN L.O.D	REMOVE	(-)	N/A
12	17"	PINE	WITHIN L.O.D	REMOVE	(-)	N/A
13	19"	PEAR	WITHIN L.O.D	REMOVE	(-)	N/A
14	9"	CHERRY	WITHIN L.O.D	REMOVE	(-)	N/A
15	6"	CHERRY	WITHIN L.O.D	REMOVE	(-)	N/A
16	6"	CHERRY	WITHIN L.O.D	REMOVE	(-)	N/A
17	10"	CHERRY	WITHIN L.O.D	REMOVE	(-)	N/A
18	16"	ASH		REMOVE	(-)	N/A
19	21"	COTTONWOOD		REMOVE	(-)	N/A
20	20"	PONDEROSA PINE		REMAIN	6	FRONTAGE
21	6"	DESERT WILLOW		REMAIN	2	FRONTAGE
22	38"	COTTONWOOD	WITHIN L.O.D	REMOVE	(-)	N/A
23	17"	COTTONWOOD	WITHIN L.O.D	REMOVE	(-)	N/A
24	17"	PEAR	WITHIN L.O.D	REMOVE	(-)	N/A
25	27"	PEAR	WITHIN L.O.D	REMOVE	(-)	N/A
26	12"	SYCAMORE	HIGH POLLEN	REMAIN	4	PARKING
27	12"	SIBERIAN ELM		REMAIN	4	SOUTH BUFFER
28	10"	SIBERIAN ELM		REMAIN	4	SOUTH BUFFER
29	1"	DESERT WILLOW		REMAIN	1	PARKING
30	2"	DESERT WILLOW		REMAIN	1	PARKING
31	3"	DESERT WILLOW		REMAIN	1	PARKING
32	3"	DESERT WILLOW		REMAIN	1	PARKING
33	3"	DESERT WILLOW		REMAIN	1	PARKING
34	5"	PEAR		REMAIN	2	PARKING
35	5"	LOCUST		REMAIN	2	PARKING
36	6"	DESERT WILLOW		REMAIN	2	FRONTAGE
37	3"	DESERT WILLOW		REMAIN	1	FRONTAGE
38	9"	DESERT WILLOW		REMAIN	2	FRONTAGE
39	7"	BLACK LOCUST		REMAIN	2	PARKING
40	7"	BLACK LOCUST		REMAIN	2	PARKING
41	5"	BLACK LOCUST		REMAIN	2	PARKING
42	4"	ASH	HIGH POLLEN	REMAIN	1	PARKING
43	5"	ASH	HIGH POLLEN	REMAIN	2	PARKING
44	4"	ASH	HIGH POLLEN	REMAIN	1	PARKING
45	3"	ASH	HIGH POLLEN	REMAIN	1	PARKING
46	5"	ASH	HIGH POLLEN	REMAIN	2	PARKING
47	5"	LOCUST		REMAIN	2	PARKING
48	14"	PONDEROSA PINE		REMAIN	6	PARKING
49	14"	BLACK LOCUST		REMAIN	6	PARKING
50	10"	CHINESE PISTACHE		REMAIN	4	PARKING
51	14"	SIBERIAN ELM		REMAIN	6	PARKING
52	13"	PINE		REMAIN	4	PARKING
53	12"	PINE		REMAIN	4	PARKING
54	6"	BIRCH		REMAIN	2	PARKING
55	6"	BIRCH		REMAIN	2	PARKING
56	6"	LOCUST		REMAIN	2	PARKING
57	7"	LOCUST		REMAIN	2	PARKING
58	7"	LOCUST		REMAIN	2	PARKING
59	6"	BIRCH		REMAIN	2	PARKING
60	6"	BIRCH		REMAIN	2	PARKING
61	6"	BIRCH		REMAIN	2	OTHER
62	4"	HACKBERRY		REMAIN	1	PARKING
63	8"	LOCUST		REMAIN	4	OTHER

TOTAL TREE CREDITS	
19	FRONTAGE
81	PARKING
8	SOUTH BUFFER
18	LOT EDGE

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80
1" = 40' @ 24X36

CAUTION!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

nm811 Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
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STATE OF NEW MEXICO
CHRISTOPHER PEARCE HEPLER
LA002
REGISTERED LANDSCAPE ARCHITECT

KHA PROJECT	068910607
DATE	AUGUST 2025
SCALE	AS SHOWN
DESIGNED BY	JNL
DRAWN BY	JNL
CHECKED BY	CPH

ALBUQUERQUE SCHOOL OF EXCELLENCE
PREPARED FOR
BUILDING HOPE

TREE MITIGATION PLAN

SHEET NUMBER
L1.0

TREE MITIGATION SPECIFICATIONS

A. GENERAL

1. CONTRACTOR SHALL ADHERE TO ALL TREE PROTECTION REQUIREMENTS LISTED IN THESE SPECIFICATIONS AND/OR THOSE REQUIRED BY LOCAL JURISDICTIONAL AUTHORITY. WHICHEVER IS MORE STRINGENT SHALL APPLY.
2. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION PROCEDURES WITH THE PROJECT ARBORIST PRIOR TO BEGINNING WORK.
3. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATION MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE.
4. NO SIGNS, BUILDING PERMITS, WIRES OR OTHER ATTACHMENTS OF ANY KIND SHALL BE ATTACHED TO ANY TREE. GUY WIRES DESIGNED TO PROTECT TREES ARE EXCLUDED FROM THIS PROHIBITION.
5. EXISTING TREE LOCATIONS AND SIZES ARE APPROXIMATE AND ARE BASED ON A SURVEY PROVIDED BY THE OWNER SELECTED SURVEYOR, OR FROM ON SITE OBSERVATIONS.
6. CONTRACTOR SHALL COORDINATE TREE REMOVAL WITH LOCAL JURISDICTIONAL AUTHORITY AND PROJECT ARBORIST PRIOR TO CONSTRUCTION. NO PERSON MAY REMOVE OR CAUSE TO BE REMOVED ANY PROTECTED TREE WITHOUT FIRST HAVING RECEIVED APPROVAL FROM THE LOCAL JURISDICTIONAL AUTHORITY.
7. FOR PROTECTED TREES BEING REMOVED, THE CONTRACTOR MUST GIVE THE LOCAL JURISDICTIONAL AUTHORITY REASONABLE OPPORTUNITY TO RELOCATE TO ANOTHER SITE AT THE LOCAL JURISDICTIONAL AUTHORITY'S EXPENSE.
8. CONTRACTOR IS RESPONSIBLE FOR POSSESSING ALL REQUIRED APPLICATOR LICENSES, BUSINESS REGISTRATIONS AND INSURANCE, PESTICIDE LABELS, AND MATERIAL DATA SAFETY SHEETS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR HAVING ALL SPILL CONTAINMENT MATERIALS AND REQUIRED PERSONAL PROTECTIVE EQUIPMENT FOR PESTICIDE APPLICATIONS AND ACCIDENTAL SPILLS ON SITE AT ALL TIMES. THE OWNER RESERVES THE RIGHT TO INSPECT EACH APPLICATOR AND HAVE THESE MATERIALS PRESENTED BEFORE AND DURING ANY PESTICIDE TREATMENT.
9. WHERE TRAFFIC AREAS ARE PROPOSED WITHIN THE DRIP LINE OF PROTECTED TREES AND LESS THAN (4) INCHES OF GRADE CHANGE ARE PROPOSED, PERMEABLE SURFACES THAT ALLOW AIR AND WATER INTO THE SOIL SHOULD BE USED IN LIEU OF ASPHALT OR OTHER SUCH IMPERVIOUS SURFACES.
10. TREE WELLS OF AN APPROVED DESIGN SHALL BE CONSTRUCTED AROUND ALL TREES TO BE PRESERVED WHEN MORE THAN (4) INCHES OF FILL IS TO BE DEPOSITED WITHIN THE DRIP LINE AREA OF THOSE TREES. COORDINATE WITH PROJECT ARBORIST.
11. THE SEQUENCE OF TREE MITIGATION AND PRESERVATION MEASURES IS IMPERATIVE TO THE HEALTH AND SURVIVABILITY OF THE SUBJECT TREES AND SHALL BE COORDINATED WITH THE PROJECT ARBORIST. THE DESIRED SEQUENCE IS OUTLINED BELOW:
    a. TREE PROTECTION FENCING.
    b. ROOT PRUNING AND ROOT BARRIERS.
    c. CLEARING.
    d. TREE CANOPY PRUNING.
    e. FERTILIZATION.
    f. INSECTICIDE.
    g. IRRIGATION.

B. TREE PROTECTION FENCING

1. PRIOR TO THE ERECTION OF ANY TREE PROTECTION FENCING, ALL FOREIGN SURFACE MATERIAL, TRASH OR DEBRIS SHALL BE REMOVED FROM THE AREA TO BE ENCLOSED BY THE FENCING. AFTER ERECTION OF THE FENCING NO SUCH MATERIAL OR LITTER SHALL BE PERMITTED TO REMAIN WITHIN THE PROTECTED AREA.
2. TREE PROTECTION FENCING SHALL BE PLACED AROUND ALL PROTECTED TREES TO CREATE A PROTECTIVE ROOT ZONE AND SHALL REMAIN IN PLACE UNTIL SITE CLEARING, LAND ALTERATION, AND CONSTRUCTION ACTIVITIES ARE COMPLETE.
3. NATIVE GROUND COVER AND UNDERSTORY VEGETATION EXISTING WITHIN THE PROTECTED AREA SHALL REMAIN THROUGHOUT CONSTRUCTION. OTHER DESIGNATED VEGETATION AND INVASIVE PLANT SPECIES SHALL BE REMOVED ONLY BY MANUAL LABOR UTILIZING HAND TOOLS, OR BY OTHER METHODS APPROVED BY THE PROJECT ARBORIST.
4. TREE PROTECTION FENCING TYPES AND LOCATIONS SHALL BE ERECTED AS SHOWN ON THE DRAWINGS, OR AS REQUIRED BY LOCAL JURISDICTIONAL AUTHORITY.
5. FINAL LOCATIONS SHALL BE COORDINATED WITH AND APPROVED BY THE PROJECT ARBORIST.
6. NO MATERIALS, EQUIPMENT, SPOIL, WASTE OR WASHOUT WATER MAY BE DEPOSITED, STORED, OR PARKED WITHIN (20) FEET OF THE TREE PROTECTION ZONE.
7. EROSION CONTROL DEVICES SUCH AS SILT FENCING, DEBRIS BASINS, AND WATER DIVERSION STRUCTURES SHALL BE INSTALLED AS NECESSARY TO PREVENT SILTATION AND/OR EROSION WITHIN THE TREE PROTECTION ZONE.
8. CONSTRUCTION ACTIVITY SHALL NOT DESTROY OR IRREVERSIBLY HARM THE ROOT SYSTEM OF PROTECTED TREES. POST HOLES AND TRENCHES LOCATED CLOSE TO PROTECTED TREES SHALL BE ADJUSTED TO AVOID DAMAGE TO MAJOR ROOTS.
9. DO NOT INSTALL CONDUIT, DRAIN OR IRRIGATION LINES, OR ANY UTILITY LINE WITHIN THE TREE PROTECTION ZONE WITHOUT THE APPROVAL OF THE PROJECT ARBORIST. IF LINES MUST TRAVERSE THE PROTECTION AREA, THEY SHALL BE TUNNELED OR BORED UNDER THE TREE.
10. CONTRACTOR'S ACCESS TO FENCED TREE PROTECTION AREAS WILL BE PERMITTED ONLY WITH APPROVAL OF THE PROJECT ARBORIST.
11. EXCAVATION OR GRADING REQUIRED WITHIN THE PROTECTED AREA SHALL BE LIMITED TO (3) INCHES OF CUT OR FILL. COORDINATE WITH PROJECT ARBORIST.
12. STRUCTURES AND UNDERGROUND FEATURES TO BE REMOVED WITHIN THE TREE PROTECTION ZONE SHALL BE COORDINATED WITH THE PROJECT ARBORIST.
13. TREE PROTECTION FENCING AROUND TREES TO BE RELOCATED SHALL BE ERECTED UNTIL THE TREE IS READY TO BE RELOCATED AND NEW FENCING SHALL BE ERECTED AT THE TREES NEW LOCATION AND WILL REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE.
14. IF ANY DAMAGE TO TREE PROTECTION FENCING SHOULD OCCUR BY ACCIDENT OR NEGLIGENCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE REPAIRS.
15. IF TEMPORARY HAUL OR ACCESS ROADS MUST PASS OVER THE PROTECTED AREA OF TREES TO BE PRESERVED, A ROAD BED OF (6) INCHES OF MULCH OR GRAVEL (WEED BARRIER FABRIC IS REQUIRED IF GRAVEL) SHALL BE CREATED TO PROTECT THE SOIL. THE ROAD BED MATERIAL SHALL BE REPLENISHED AS NECESSARY TO MAINTAIN A (6) INCH ROAD BED AT ALL TIMES. CONTRACTOR SHALL REMOVE ALL SUCH MATERIALS FROM THE SITE AS SOON AS TEMPORARY ACCESS IS NO LONGER NECESSARY.
16. CONTRACTOR SHALL COORDINATE WITH THE PROJECT ARBORIST PRIOR TO THE REMOVAL OF ALL TREE PROTECTION FENCING.

C. ROOT PRUNING/TRENCHING

1. TRENCHING LOCATIONS SHALL BE APPROVED IN THE FIELD BY THE PROJECT ARBORIST.
2. TRENCHING EQUIPMENT THAT WILL TURN AT HIGH RPM'S IS PREFERRED, AND SHALL BE APPROVED BY THE PROJECT ARBORIST. APPROVED EQUIPMENT WILL BE USED TO PERFORM ALL ROOT PRUNING OPERATIONS. A MINIMUM DEPTH OF THREE FEET IS REQUIRED.
3. INSTALL ROOT BARRIER WHERE DESIGNATED. SEE DRAWINGS.
4. ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY THE PROVISIONS OF LAND DEVELOPMENT CODE SHALL BE IN ACCORDANCE WITH ANSI-300 STANDARDS.
5. THE TRENCH SHALL BE BACKFILLED WITH PREVIOUSLY EXCAVATED SOIL AND COMPACTED IMMEDIATELY.
6. TREES TO BE RELOCATED SHALL BE ROOT PRUNED A MINIMUM OF (12) WEEKS PRIOR TO TREE RELOCATION.
7. WHEN THE TREE ROOT ZONE WILL BE DISTURBED, AFFECTED ROOTS MUST BE SEVERED BY CLEAN PRUNING CUTS AT THE POINT WHERE CONSTRUCTION IMPACTS THE ROOTS.

D. CLEARING

1. ANY BRUSH CLEARING REQUIRED WITHIN THE TREE PROTECTION ZONE SHALL BE ACCOMPLISHED WITH HAND-OPERATED EQUIPMENT.
2. CONTRACTOR SHALL CLEAR ALL TREE PROTECTION AREAS OF VINES, SHRUBS, GROUND COVERS, WEEDS, SAPLINGS, AND INVASIVE SPECIES.
3. PROJECT ARBORIST MUST APPROVE METHODS OTHER THAN HAND CLEARING.
4. A (3) INCH LAYER OF MULCH SHALL BE APPLIED OVER THE SURFACE OF EXPOSED ROOTS OF PROTECTED TREES DURING THE SITE CLEARING PHASE.

E. TREE CANOPY PRUNING

1. TREE PRUNING SPECIFICATIONS SHALL BE DEFINED BASED ON SPECIFIC RECOMMENDATIONS OF THE PROJECT ARBORIST. INFORMATION PRESENTED BELOW SHOULD BE USED AS A GUIDELINE
2. CONTRACTOR SHALL VISIT THE SITE WITH THE PROJECT ARBORIST TO VERIFY THE EXTENT OF REQUIRED PRUNING.
3. ALL PRUNING SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST OR AN AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA) REGISTERED CONSULTING ARBORIST (RCA).
4. AT LEAST (1) MEMBER OF THE PRUNING CREW SHALL BE AN ISA CERTIFIED ARBORIST.
5. WHILE IN THE TREE, THE ARBORIST SHALL PERFORM AN AERIAL INSPECTION TO IDENTIFY DEFECTS THAT REQUIRE TREATMENT. ANY ADDITIONAL WORK NEEDED SHALL BE REPORTED TO THE OWNER.
6. PRUNING SHALL BE DONE IN ACCORDANCE WITH; THE LATEST EDITION OF THE ANSI A300 PRUNING STANDARD (AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS); THE LATEST EDITION OF ANSI Z133.1 SAFETY STANDARD; THE LATEST EDITION OF ISA'S "BEST MANAGEMENT PRACTICES: TREE PRUNING".
7. WHERE TEMPORARY CLEARANCE IS NEEDED FOR ACCESS, BRANCHES SHALL BE TIED BACK TO HOLD THEM OUT OF THE CLEARANCE ZONE.
8. NO MORE THAN (20) PERCENT OF LIVE FOLIAGE SHALL BE REMOVED WITHIN ANY TREE.
9. ALL TREES WITHIN THE PROJECT AREA SHALL BE PRUNED AS FOLLOWS:
    a. LIVE BRANCH PRUNING SHOULD BE PERFORMED ONLY WHEN THE DANGER OF INSECT OR DISEASE INFESTATION IS NOT PRESENT.
    b. REMOVE STUBS, CUTTING OUTSIDE THE WOUND WOOD TISSUE THAT HAS FORMED AROUND THE BRANCH.
    c. CLEANING, FOR THE SELECTIVE REMOVAL OF DEAD, DISEASED, BROKEN, OR CROSSING BRANCHES DOWN TO ONE INCH IN DIAMETER OR AS DIRECTED BY THE PROJECT ARBORIST.
    d. PRUNING CUTS LARGER THAN (4) INCHES IN DIAMETER, EXCEPT FOR DEAD WOOD, SHALL BE AVOIDED.
    e. PRUNING CUTS THAT EXPOSE HEARTWOOD SHALL BE AVOIDED WHENEVER POSSIBLE.
    f. ALL TREES WITH CROWNS THAT PROJECT INTO PARKING LOT/ROADWAY AREAS SHALL BE RAISED TO (14) FEET ABOVE FINISHED GRADE.
    g. ALL TREES WITH CROWNS THAT PROJECT INTO SIDEWALK AREAS SHALL BE RAISED TO A HEIGHT OF (8) FEET ABOVE FINISHED GRADE.
10. TREES, WHO'S ROOT SYSTEMS WILL BE IMPACTED SHALL RECEIVE THE FOLLOWING PRUNING TO COMPENSATE FOR ROOT LOSS:
    a. THE LOCATION AND SIZE OF BRANCHES FOR REDUCTION SHALL BE DEFINED BY THE PROJECT ARBORIST.
    b. REDUCTION, OR THE SELECTIVE PRUNING TO REDUCE TREE HEIGHT OR SPREAD.
    c. REDUCE END WEIGHT ON HEAVY, HORIZONTAL BRANCHES BY SELECTIVELY REMOVING SMALL DIAMETER BRANCHES, NO GREATER THAN (2) TO (3) INCHES, NEAR THE ENDS OF SCAFFOLD BRANCHES.
    d. RAISING SHALL CONSIST OF SELECTIVE PRUNING TO PROVIDE VERTICAL CLEARANCE.
11. PROPOSED/REPLACEMENT TREES
    a. PRUNING SHALL BE LIMITED TO CLEANING.
13. BRUSH SHALL BE CHIPPED AND SPREAD (ONLY WHEN DISEASE OR INSECT INFESTATION IS NOT PRESENT) UNDERNEATH TREES WITHIN THE TREE PROTECTION ZONE TO A MAXIMUM DEPTH OF (3) INCHES, LEAVING THE TRUNK CLEAR OF MULCH.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EXCESS DEBRIS ON A DAILY BASIS.

F. FERTILIZATION

1. CONTRACTOR SHALL COORDINATE FERTILIZATION PLAN, FOLLOWING BEST MANAGEMENT PRACTICES WITH THE PROJECT ARBORIST PRIOR TO COMMENCEMENT OF WORK.
2. EVERY EFFORT SHALL BE MADE TO UTILIZE CHEMICALS OF AN ORGANIC OR BIODEGRADABLE NATURE IN ORDER TO OFFER THE LEAST IMPACT TO THE NATURAL ENVIRONMENT. CONTRACTOR IS RESPONSIBLE FOR MIXING, APPLYING, AND DISPOSAL OF ALL CHEMICALS IN ACCORDANCE WITH STRICT ADHERENCE TO MANUFACTURER'S SPECIFICATIONS. COORDINATE WITH PROJECT ARBORIST FOR FURTHER INSTRUCTION.
3. ONLY TREES AFFECTED BY CONSTRUCTION OR AS SHOWN ON THE DRAWINGS SHALL BE TREATED.
4. TREES SPECIFIED TO RECEIVE FERTILIZER SHALL BE TREATED AS FOLLOWS.
    a. MIX FERTILIZER ACCORDING TO MANUFACTURER'S SPECIFICATIONS INTO A TANK WITH AGITATION CAPABILITY.
    b. MIX WETTING AGENT ACCORDING TO MANUFACTURER'S SPECIFICATIONS INTO SAME TANK WITH FERTILIZER. AGITATE MIX.
    c. INJECT THE MIXTURE WITH A HYDRAULIC INJECTION SYSTEM INTO THE UPPER (6) TO (12) INCHES OF SOIL WITH A SOIL PROBE. INJECT AT THE RATE OF ONE THIRD (1/3) GALLON AT EACH INJECTION SITE.
    d. THE CRITICAL ROOT ZONE AREA PLUS (2) FEET BEYOND THE CRITICAL ROOT ZONE SHALL BE INJECTED, BUT NOT BEYOND ROOT PRUNING LOCATIONS.
    e. FERTILIZER SHALL BE INSTALLED PRIOR TO THE INSTALLATION OF ANY AERATION SYSTEMS.
    f. EMPTY PRODUCT CONTAINERS SHALL BE STOCKPILED FOR INSPECTION BY THE PROJECT ARBORIST PRIOR TO DISPOSAL.
5. TRANSPLANT INOCULANT & BIOSTIMULANT.
    a. CONTRACTOR SHALL PROVIDE INSECTABLE MYCORRHIZAL TRANSPLANT INOCULANT ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND AS RECOMMENDED BY THE PROJECT ARBORIST. INSECT INOCULANT IN (10) INCH WIDE SOIL RING AROUND THE ROOT BALL.
    b. INJECT THE MIXTURE WITH A HYDRAULIC INJECTION SYSTEM INTO THE UPPER (6) TO (12) INCHES OF SOIL WITH A SOIL PROBE. INJECT AT THE RATE OF ONE THIRD (1/3) GALLON AT EACH INJECTION SITE.
    c. EMPTY PRODUCT CONTAINERS SHALL BE STOCKPILED FOR INSPECTION BY PROJECT ARBORIST PRIOR TO DISPOSAL.
6. TRANSPLANT MAINTENANCE
    a. APPROXIMATELY (1) YEAR AFTER PLANTING, THE CONTRACTOR SHALL REFERTILIZE ALL TRANSPLANTS UTILIZING THE SAME PROCEDURES ABOVE.

G. INSECTICIDE

1. NOTIFY PROJECT ARBORIST IF ANY INFESTATION IS NOTICED.
2. FOLLOW PROJECT ARBORIST'S RECOMMENDED PROCEDURES.
3. FOLLOW ALL MANUFACTURERS' RECOMMENDATIONS CONCERNING APPLICATION. READ ALL WARNING LABELS.
4. ANY PETS, AS WELL AS, THE PETS FOOD AND WATER BOWLS SHOULD BE REMOVED FROM THE AREA AND ANY SWIMMING POOLS SHOULD BE COVERED. COORDINATE WITH PROJECT ARBORIST FOR FURTHER INSTRUCTION.
5. ENSURE COMPLETE COVERAGE AND REAPPLY (2) TO (3) MONTHS (OR IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS) AFTER INITIAL APPLICATION UTILIZING SAME PROCEDURE.

H. IRRIGATION

1. EVERY EFFORT SHALL BE MADE TO WATER THE PRESERVED TREES AND TRANSPLANTS. CONTRACTOR SHALL IRRIGATE BY HAND OR BY TEMPORARY IRRIGATION.
2. IRRIGATE AS REQUIRED BY PROJECT ARBORIST UNTIL PERMANENT IRRIGATION IS INSTALLED AND OPERATING.
3. UNDERGROUND IRRIGATION SHALL NOT BE INSTALLED WITHIN THE DRIP LINES OF EXISTING TREES UNLESS ROOT PROTECTION MEASURES ARE PROVIDED AND APPROVED BY PROJECT ARBORIST.

I. TREE REMOVALS

1. PRIOR TO AND DURING LAND CLEARING, INCLUDING GRUBBING, ALL TREES TO BE REMOVED SHALL BE CLEARLY MARKED BY PROJECT ARBORIST WITH RED SURVEY RIBBON AT (36) INCHES MINIMUM ABOVE GRADE.
2. CONTRACTOR SHALL REMOVE ALL TREES AS SHOWN ON THE DRAWINGS AFTER THE TREE PROTECTION FENCING IS INSTALLED.
3. ALL TREES SHOWN TO BE REMOVED SHALL BE FELLED WITH A CHAIN SAW AND STUMP GROUND (6) INCHES BELOW SURFACE. ANY TREE SHOWN TO BE REMOVED THAT IS IN AN AREA WHERE COMPACTION IS CRITICAL SHALL BE FELLED WITH A CHAIN SAW AND STUMP REMOVED BY CONTRACTOR.
4. ALL WOOD AND STUMPS FROM REMOVALS SHALL BE HAULED FROM THE SITE THE SAME DAY, EXCEPT FOR TOPS. ALL TOPS ARE TO BE MULCHED AND STOCKPILED OR HAULED DIRECTLY TO MULCHED AREAS FOR PROTECTED / RELOCATED TREES IF SCHEDULING PERMITS. TOPS SHALL BE CHIPPED AND PLACED IN THE TREE PROTECTION ZONE TO A DEPTH OF (3) INCHES. ALL EXCESS WOOD CHIPS SHOULD BE HAULED OFF SITE AFTER TRANSPLANTING IS COMPLETE.
5. ALL BURN PITS IF APPLICABLE MUST BE APPROVED BY THE PROJECT ARBORIST, OWNER, AND LOCAL JURISDICTIONAL AUTHORITY.
6. TREES TO BE REMOVED THAT HAVE BRANCHES EXTENDING INTO THE CANOPY OF TREES TO REMAIN MUST BE REMOVED BY AN ISA CERTIFIED ARBORIST AND NOT BY DEMOLITION OR CONSTRUCTION CONTRACTORS. THE QUALIFIED ARBORIST SHALL REMOVE THE TREE IN A MANNER THAT CAUSES NO DAMAGE TO THE TREES AND UNDERSTORY VEGETATION TO REMAIN.
7. TREES TO BE REMOVED LOCATED WITHIN THE TREE PROTECTION ZONE SHALL BE REMOVED BY AN ISA CERTIFIED ARBORIST. THE TREES SHALL BE CUT NEAR GROUND LEVEL AND THE STUMP GROUND OUT.

J. MACHINE DUG TRANSPLANTING

1. DIG TRANSPLANT-RECEIVING HOLE.
2. SET SPADE DUG ROOT BALL INTO RECEIVING HOLE (4) INCHES TO (6) INCHES ABOVE EXISTING GRADE.
3. WASH SAND OR TOPSOIL INTO AIR POCKETS BETWEEN ROOT BALL AND RECEIVING HOLE.
4. INSTALL TOPSOIL RING, (4) INCHES HIGH, (10) INCHES WIDE, AROUND PERIMETER OF ROOT BALL. MIX MYCORRHIZAL TRANSPLANT INOCULANT INTO TOPSOIL RING PER MANUFACTURERS SPECIFICATIONS.
5. INSTALL (3) INCHES OF MULCH FROM PERIMETER OF ROOT BALL TO WITHIN (6) INCHES OF TREE TRUNK.
6. COVER TOPSOIL RING WITH (1) INCH OF MULCH AND EXTEND MULCH (6) INCHES OUTSIDE PERIMETER OF ROOT BALL.
7. WATER TRANSPLANT.

K. HOLDING AREA FOR TRANSPLANTS

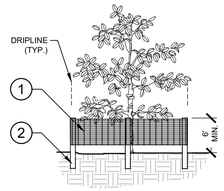
1. HOLDING AREAS SHOULD NOT BE NECESSARY. CONSTRUCTION PHASING SHOULD BE IMPLEMENTED SO THAT TREES ARE IMMEDIATELY RELOCATED TO THEIR PERMANENT LOCATION. COORDINATE WITH PROJECT ARBORIST AS NEEDED.
2. SHOULD A HOLDING AREA BE NECESSARY, TREE PROTECTION FENCING SHALL BE INSTALLED AT THE PERIMETER OF THE ENTIRE AREA.
3. CONTRACTOR SHALL COORDINATE LOCATION AND SPECIFICATIONS OF THE HOLDING AREA WITH PROJECT ARBORIST.
4. CONTRACTOR SHALL SUPPLY TEMPORARY IRRIGATION TO THE HOLDING AREA CONSISTING OF ABOVE GROUND PVC OR POLYETHYLENE PIPE, SPRAY OR ROTOR HEADS (WITH HEAD TO HEAD COVERAGE) AND A CONTROLLER. COORDINATE WITH PROJECT ARBORIST FOR CONTROLLER SETTINGS AND ALTERNATIVE WATERING METHODS.

L. TOPSOIL

1. ALL TOPSOIL SHALL BE NATURAL, FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING CHARACTERISTICS OF REPRESENTATIVE TOPSOIL IN THE VICINITY THAT PRODUCES HEAVY GROWTH.
2. TOPSOIL, PH RANGE OF (5.5) TO (7.5), (3) TO (5) PERCENT ORGANIC MATERIAL MINIMUM, FREE FROM SUBSOIL, OBJECTIONABLE WEEDS, LITTER, SODS, STIFF CLAY, STONES LARGER THAN (1) INCH IN DIAMETER, STUMPS, ROOTS, TRASH, TOXIC SUBSTANCES, OR ANY OTHER MATERIAL WHICH MAY BE HARMFUL TO PLANT GROWTH.
3. VERIFY AMOUNT STOCKPILED IF ANY, AND SUPPLY ADDITIONAL AS NEEDED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST (4) INCHES DEEP. DO NOT OBTAIN TOPSOIL FROM BOGS OR MARSHES.
4. PROJECT ARBORIST SHALL APPROVE ALL TOPSOIL PRIOR TO PLACEMENT.

M. REPAIR OF DAMAGED TREES

1. IF DAMAGE TO ANY TREE SHOULD OCCUR BY ACCIDENT OR NEGLIGENCE DURING THE CONSTRUCTION PERIOD, THE PROJECT ARBORIST SHALL APPRAISE THE DAMAGE AND MAKE RECOMMENDATIONS TO THE OWNER FOR REPAIR BY THE CONTRACTOR.
2. IF ANY TREE DESIGNATED TO BE SAVED IS DAMAGED BEYOND REPAIR OR REMOVED FROM THE SITE WITHOUT PERMISSION, THE PROJECT ARBORIST SHALL APPRAISE THE TREE AND MAKE RECOMMENDATIONS TO THE OWNER FOR REPLACEMENT BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPRAISED VALUE OF THE TREE, THE REPLACEMENT OF THE TREE, AND ANY FEES / PENALTIES THAT MAY BE ASSESSED TO THE OWNER BY THE LOCAL JURISDICTIONAL AUTHORITY.



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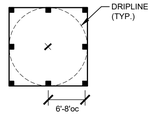

PLAN

CORNER CONNECTION

CONNECTION

1 6'H "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.

2 8' TALL METAL "T" POSTS OR 2" x 2" X 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

INSTALLATION NOTES:

A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.

B. POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/3 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 6' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.

C. SPACE POSTS EVERY 6' (MIN.) TO 8' (MAX.).

D. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

NOTE: IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH FENCE. WIRE MAY DAMAGE FENCE OVER TIME.

2 / 10 TREE PROTECTION FENCING
ELEVATION / PLAN NTS

Know what's below. Call before you dig. 811

CAUTION!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

No.	REVISIONS	DATE	BY

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STATE OF NEW MEXICO
CHRISTOPHER PEARCE HEPLER
A609
REGISTERED LANDSCAPE ARCHITECT

KHA PROJECT	068910607
DATE	AUGUST 2025
SCALE	AS SHOWN
DESIGNED BY	JNL
DRAWN BY	JNL
CHECKED BY	CPH

TREE MITIGATION NOTES & DETAILS

ALBUQUERQUE SCHOOL OF EXCELLENCE
PREPARED FOR
BUILDING HOPE

SHEET NUMBER
L1.1

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CONTRACTOR NOTE
1. CONTRACTOR TO PRUNE EXISTING VEGETATION AS NEEDED POST CONSTRUCTION.
2. CONTRACTOR TO REPAIR AND REPLACE ANY MULCH OR DAMAGED EXISTING SHRUBS IN LIKE-KIND UP TO THE LIMITS OF DISTURBANCE.

CONSTRUCTION BID NOTES:
1. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.
2. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO FIELD ADJUST ALL PLANT MATERIAL.
3. ALL QUANTITIES PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR SHALL CONFIRM ALL QUANTITIES PER PLAN PRIOR TO BIDDING AND CONSTRUCTION. PLANS TAKE PRECEDENT OVER PLANT SCHEDULE FOR PLANT QUANTITY COUNT.

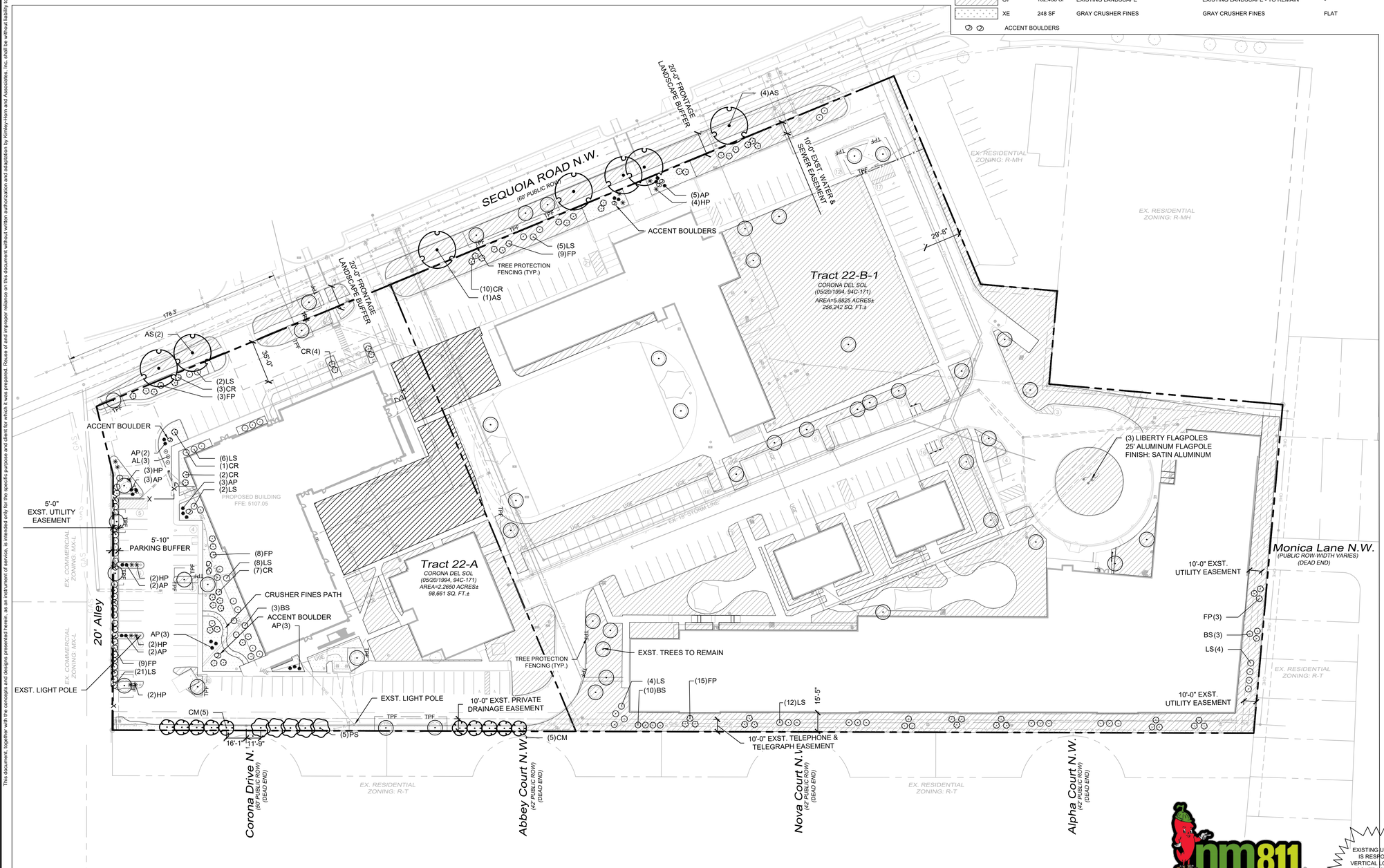
LANDSCAPE NOTES:
1. TREE CANOPIES AND GROUND-LEVEL PLANTS SHALL COVER A MINIMUM OF 75 PERCENT OF THE TOTAL LANDSCAPE AREA AS MEASURED BY CANOPY WIDTH OR THE AREA BENEATH THE DRIPLINE OF THE MATURE SIZE OF THE ACTUAL VEGETATION.
2. NO MORE THAN 10 PERCENT OF REQUIRED LANDSCAPE AREAS SHALL BE TURF GRASS SPECIES REQUIRING IRRIGATION FOR SURVIVAL AFTER THE FIRST 2 GROWING SEASONS.
3. THE USE OF GRAVEL OR CRUSHER FINES AS GROUND COVER IS LIMITED TO A MAXIMUM OF 75 PERCENT OF ANY LANDSCAPED AREA.
4. VEGETATION REQUIRED BY THIS SECTION 14-16-5-6 SHALL BE LOCATED AT LEAST 3 FEET IN ANY DIRECTION FROM ANY FIRE HYDRANTS, VALVE VAULTS, HOSE BIBS, MANHOLES, HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS.
5. TREES SHALL NOT BE PLANTED WITHIN 10 FEET IN ANY DIRECTION OF THE CENTERLINE OF A SEWER OR WATER LINE.
6. CONTRACTOR TO MODIFY, REPAIR OR REPLACE EXISTING IRRIGATION TO PROVIDE 100% COVERAGE FOR ALL EXISTING AND PROPOSED PLANT MATERIAL.

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	HYDROZONE
TREES								
	AS	7	ACER NEGUNDO 'SENSATION'	SENSATION BOX ELDER	B & B	2" CAL MIN	10` HT MIN	M
ORNAMENTAL TREES								
	CM	10	CERCIS CANADENSIS MEXICANA	MEXICAN REDBUD	B & B	1.5" CAL MIN	6` HT MIN	M
	PS	5	PSOROTHAMNUS SPINOSUS	SMOKETREE	B & B	1.5" CAL MIN	6` HT MIN	M
			EXISTING TREE TO REMAIN	SEE TREE MITIGATION PLAN FOR DETAILS				

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	SIZE	HYDROZONE
SHRUBS								
	AP	23	AGAVE PARRYI	PARRY'S AGAVE	5 GAL	SEE PLAN	18" FULL	L
	AL	3	AMORPHA CANESCENS	LEADPLANT	5 GAL	SEE PLAN	18" FULL	VL
	BS	16	BACCHARIS SAROTHROIDES	DESERTBROOM BACCHARIS	5 GAL	SEE PLAN	24" FULL	VL
	CR	27	CHRYSOTHAMNUS NAUSEOSUS	RUBBER RABBITBRUSH	5 GAL	SEE PLAN	24" FULL	VL
	FP	47	FALLUGIA PARADOXA	APACHE PLUME	5 GAL	SEE PLAN	24" FULL	VL
	HP	13	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL	SEE PLAN	18" FULL	VL
	LS	64	LEUCOPHYLLUM FRUTESCENS 'COMPACTA'	COMPACT TEXAS RANGER	5 GAL	SEE PLAN	40" FULL	L

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING	HYDROZONE
GROUND COVERS								
	G3	11,643 SF	3/4-1" ROCK MULCH	3/4-1" ROCK MULCH - TO MATCH EXISTING	ROCK			
	G7	102,438 SF	EXISTING LANDSCAPE	EXISTING LANDSCAPE - TO REMAIN	-			
	XE	248 SF	GRAY CRUSHER FINES	GRAY CRUSHER FINES	FLAT			
			ACCENT BOULDERS					



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STATE OF NEW MEXICO
CHRISTOPHER PEARCE HEPLER
LA602
REGISTERED LANDSCAPE ARCHITECT

KHA PROJECT	068910607
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CODE LANDSCAPE PLAN

ALBUQUERQUE SCHOOL OF EXCELLENCE

PREPARED FOR
BUILDING HOPE

SHEET NUMBER
L2.0

GENERAL LANDSCAPE SPECIFICATIONS

A. SCOPE OF WORK

1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.

2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BEST MANAGEMENT PRACTICES (BMP) DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MAINTENANCE OF TRAFFIC (MOT) THAT MAY BE REQUIRED FOR THE PROJECT.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR: REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA; LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION; THE SAFETY AND PROTECTION THEREOF; REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

C. PROTECTION OF EXISTING PLANT MATERIALS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC... THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF FOUR HUNDRED DOLLARS ($400) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE.

D. MATERIALS

1. GENERAL

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

2. PLANT MATERIALS

a. FURNISH NURSERY-GROWN PLANTS TRUE TO GENUS, SPECIES, VARIETY, CULTIVAR, STEM FORM, SHEARING, AND OTHER FEATURES INDICATED IN PLANT SCHEDULE SHOWN ON DRAWINGS AND COMPLYING WITH ANSI Z60.1 AND THE COLORADO NURSERY ACT; AND WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK, DENSELY FOLIATED WHEN IN LEAF AND FREE OF DISEASE, PESTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.

b. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE.

c. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE PROJECT LANDSCAPE ARCHITECT. ANY ROW TREES MUST BE APPROVED BY OFFICE OF THE CITY FORESTER.

d. PROVIDE PLANTS OF SIZES, GRADES, AND BALL OR CONTAINER SIZES COMPLYING WITH ANSI Z60.1 AND COLORADO NURSERY ACT FOR TYPES AND FORM OF PLANTS REQUIRED. PLANTS OF A LARGER SIZE MAY BE USED IF ACCEPTABLE TO PROJECT LANDSCAPE ARCHITECT WITH A PROPORTIONATE INCREASE IN SIZE OF ROOTS OR BALLS.

e. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

f. TREES WITH DAMAGED, CROOKED, OR MULTIPLE LEADERS; TIGHT VERTICAL BRANCHES WHERE BARK IS SQUEEZED BETWEEN TWO BRANCHES OR BETWEEN BRANCH AND TRUNK ("INCLUDED BARK"); CROSSING TRUNKS; CUT-OFF LIMBS MORE THAN ¾ INCH (19 MM) IN DIAMETER; OR WITH STEM GIRDLING ROOTS WILL BE REJECTED.

g. FURNISH TREES AND SHRUBS WITH ROOTS BALLS MEASURED FROM TOP OF ROOT BALL, WHICH SHALL BEGIN AT ROOT FLARE ACCORDING TO ANSI Z60.1 AND COLORADO NURSERY ACT. ROOT FLARE SHALL BE VISIBLE BEFORE PLANTING.

h. LABEL AT LEAST ONE PLANT OF EACH VARIETY, SIZE, AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF COMMON NAME AND FULL SCIENTIFIC NAME, INCLUDING GENUS AND SPECIES. INCLUDE NOMENCLATURE FOR HYBRID, VARIETY, OR CULTIVAR, IF APPLICABLE FOR THE PLANT AS SHOWN ON DRAWINGS.

i. IF FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF PLANTS IS SHOWN ON DRAWINGS, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD, AND NUMBER THE LABELS TO ASSURE SYMMETRY IN PLANTING.

E. SOIL MIXTURE

1. CONTRACTOR SHALL TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW:

2. SOIL MIXTURE SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

a. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT OPENINGS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER, HAVE A PH BETWEEN 5.5 AND 8.0, AND SOLUBLE SALTS LESS THAN 3.0 MMHOS/CM. SUBMIT SOIL SAMPLE AND PH TESTING RESULTS FOR APPROVAL.

b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.

3. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT THE PROJECT LANDSCAPE ARCHITECT TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.

F. WATER

1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC... IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

* WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

G. FERTILIZER

1. CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

* FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE) OR AS SHOWN IN PLANTING DETAILS. UNLESS OTHERWISE NOTED ON PLANS, MULCH SHALL BE DOUBLE SHREDDED HARDWOOD MULCH DARK BROWN FINES BY MOUNTAIN HIGH SAVATREE OR APPROVED EQUAL. DYED MULCH IS NOT ACCEPTABLE. SUBMIT SAMPLES TO PROJECT LANDSCAPE ARCHITECT FOR APPROVAL. MULCH SHALL BE PROVIDED OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE RING (6' MINIMUM) PLANTED UNDER THIS CONTRACT, AS WELL AS FOR ANY EXISTING LANDSCAPE AREAS AS SHOWN ON PLANS.

I. DIGGING AND HANDLING

1. ALL TREES SPECIFIED SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE APPROVED BY PROJECT LANDSCAPE ARCHITECT.

2. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.

3. B&B, AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

J. CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED.

K. MATERIALS LIST

1. QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE PLANS SHALL GOVERN. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

L. FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION.

2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH.

3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

M. PLANTING PROCEDURES

1. THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, BUILDING MATERIALS, AND TOXIC MATERIAL SHALL BE COMPLETELY REMOVED FROM PLANTING AREAS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS IN PLANTING AREAS WHICH WILL ADVERSELY AFFECT THE PLANT GROWTH, THE CONTRACTOR SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL COLORADO (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

3. CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL.

4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.

5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ONSITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE SHALL BE EXERCISED.

6. WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.

7. ALL PLANTING OPENINGS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH ANSI Z60.1-2014 AMERICAN STANDARD FOR NURSERY STOCK.

8. TEST ALL TREE OPENINGS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL.

9. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMEN.

10. PRIOR TO EXCAVATION OF TREE OPENINGS, AN AREA EQUAL TO TWO TIMES THE DIAMETER OF THE ROOT BALL SHALL BE ROTO-TILLED TO A DEPTH EQUAL TO THE DEPTH OF THE ROOT BALL.

11. EXCAVATION OF TREE OPENINGS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.

12. IN CONTINUOUS SHRUB AND GROUND COVER BEDS, THE ROTO-TILLED PERIMETER SHOULD EXTEND TO A DISTANCE OF ONE FOOT BEYOND THE DIAMETER OF A SINGLE ROOT BALL. THE BED SHALL BE TILLED TO A DEPTH EQUAL TO THE ROOT BALL DEPTH PLUS 6".

13. TREE OPENINGS FOR WELL DRAINED SOILS SHALL BE DUG SO THAT THE BOTTOM OF THE ROOT BALL WILL REST ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL WILL BE FLUSH WITH FINISH GRADE. IN POORLY DRAINED SOILS THE TREE OPENING SHALL BE DUG SO THAT THE ROOT BALL RESTS ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL IS 1" ABOVE FINISH GRADE. PLANT PIT WALLS SHALL BE SCARIFIED PRIOR TO PLANT INSTALLATION.

14. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.

15. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION 'E'.

16. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).

17. AMEND PINE AND OAK PLANT OPENINGS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT OPENINGS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.

18. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET, ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE.

19. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.

20. TREES SHALL BE PRUNED, IN ACCORDANCE WITH ANSI A-300, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST.

21. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOWN ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.

22. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.

23. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S RECOMMENDATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

N. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.

2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.

3. PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

4. SODDING

a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.

b. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.

5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

6. LAWN MAINTENANCE

a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK, INCLUDING REGRADING IF NECESSARY.

b. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

O. EDGING

a. CONTRACTOR SHALL INSTALL 4"X¼" ROLLED TOP STEEL EDGING BETWEEN ALL SOD/SEED AREAS AND PLANTING BEDS.

P. CLEANUP

1. UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM CONTRACTORS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

Q. PLANT MATERIAL MAINTENANCE

1. ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, PRUNING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

R. FINAL INSPECTION AND ACCEPTANCE OF WORK

1. FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

S. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

2. ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.

3. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE AND IRRIGATION MAINTENANCE, THE CONTRACTOR SHOULD VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER. CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH.

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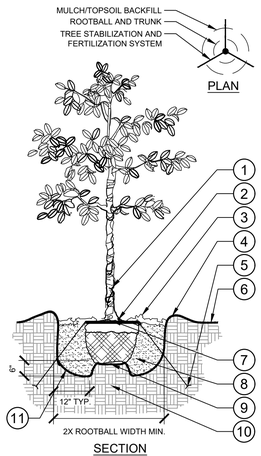
STATE OF NEW MEXICO
CHRISTOPHER PEARCE HEPLER
LA002
REGISTERED LANDSCAPE ARCHITECT

KHA PROJECT	068910607
DATE	AUGUST 2025
SCALE	AS SHOWN
DESIGNED BY	JNL
DRAWN BY	JNL
CHECKED BY	CPH

ALBUQUER



1. TRUNK/ROOT BALL TO BE CENTERED AND PLUMB/LEVEL IN PLANTING PIT.
2. 6" DIA. CLEAR OF MULCH AT TRUNK FLARE.
3. 3" MINIMUM ORGANIC MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, AN ORGANIC MULCH RING FOR TREES SHALL BE 6' DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
4. 4" HIGH BERM, FIRMLY COMPACTED.
5. ANCHOR SYSTEM INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
6. FINISHED GRADE. (SEE GRADING PLAN)
7. TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE.
8. PREPARED PLANTING SOIL AS SPECIFIED.
9. TOP OF ROOTBALL SHALL BE 1" ABOVE FINISHED GRADE. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.
10. UNDISTURBED NATIVE SOIL.
11. SCARIFY BOTTOM AND SIDES OF PLANTING PIT.

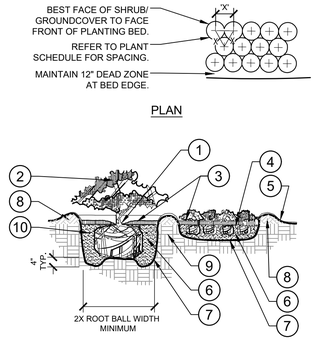
NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.

C. PRUNE ALL TREES IN ACCORDANCE WITH ANSI A-300.

1 14 TREE PLANTING
SECTION / PLAN NTS



1. TOP OF ROOTBALLS TO BE PLANTED AT GRADE OR SLIGHTLY ABOVE SURROUNDING SOIL. 2" DIA. CLEAR OF MULCH AT TRUNK FLARE.
2. PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.
3. 4" MULCH LAYER AS SPECIFIED.
4. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
5. FOR CONDITIONS WITH FINISHED GRADE OF 4:1 MAX SLOPE ON ALL SIDES (SEE GRADING PLAN).
6. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES) NOTE: WHEN GROUND-COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
7. SCARIFY PLANT OPENING SIDES AND BOTTOM.
8. 4" HIGH BERM FIRMLY COMPACTED.
9. UNDISTURBED NATIVE SOIL.
10. FERTILIZER TABLETS (MAX 3" DEEP)

NOTES:

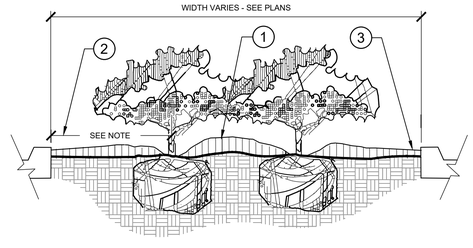
A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING AREAS PRIOR TO INSTALLATION.

B. WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.

C. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY PROJECT LANDSCAPE ARCHITECT.

D. PRE-EMERGENT HERBICIDE TO BE APPLIED PRIOR TO PLANT INSTALLATION.

2 14 SHRUB/GROUNDCOVER PLANTING
SECTION / PLAN NTS



1. CROWN ISLANDS @ 5:1 SLOPES (OR AS SPECIFIED ON THE LANDSCAPE PLANS).
2. CLEAR ZONE: 36" MIN. FROM BACK OF CURB TO CENTER OF NEAREST SHRUB. CLEAR ZONE SHALL CONTAIN 4" CONTINUOUS MULCH OR TURF. SEE PLANS.
3. 2" MIN VERTICAL CLEARANCE, TOP OF CURB TO TOP OF MULCH.

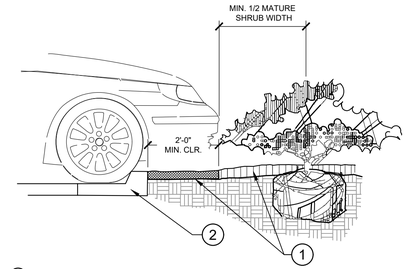
NOTES:

A. EXCAVATE A CONTINUOUS 24" DEEP PIT (FROM TOP OF CURB) FOR ENTIRE LENGTH AND WIDTH OF ISLAND & BACKFILL WITH APPROVED PLANTING MIX.

B. PROTECT AND RETAIN ALL CURBS AND BASE. COMPACTED SUBGRADE TO REMAIN FOR STRUCTURAL SUPPORT OF CURB SYSTEM (TYP).

C. ALL ISLANDS SHALL UTILIZE POOR DRAINAGE DETAIL WHEN PERCOLATION RATES ARE 2" PER HOUR OR LESS.

3 14 PLANTED PARKING LOT ISLANDS/MEDIANS
SECTION NTS



1. INSTALL CONTINUOUS MULCH BED ADJACENT TO PARKING SPACES AS SHOWN. MULCH SHALL BE MIN. 4" DEEP. NO POP-UP IRRIGATION HEADS SHALL BE LOCATED WITHIN 24" OF A PARKING SPACE ON ANY SIDE.
2. CURB / PARKING LOT EDGE.

4 14 PARKING SPACE/CURB PLANTING
SECTION NTS

5 14 METAL EDGER AT PLANTING BED
1" = 1"
068-910-607-21

1. FIRE HYDRANT.
2. NO PLANT EXCEEDING 12" MATURE HEIGHT MATERIAL SHALL BE PLACED WITHIN SHOWN RADIUS OF ALL PROPOSED OR EXISTING FIRE HYDRANTS. CONTRACTOR SHALL ADJUST PLANT MATERIAL SO THAT NO CONFLICTS WITH FIRE HYDRANTS OCCUR ON SITE.
3. FRONT OF HYDRANT (TOWARD CURB)

6 14 SHRUB PLANTING AT FIRE HYDRANT
SECTION / PLAN NTS

LANDSCAPE CODE TABLE

	REQUIRED	PROVIDED
LANDSCAPE AREA		
TOTAL GROSS LOT AREA	352,836 SF	
TOTAL BLDG AREA (EXST & PROPOSED)	109,118 SF	
NET LOT AREA	243,718 SF	
14-5-5-6(C) REQUIRED LANDSCAPE COVERAGE		102,508 LANDSCAPE EXST. TO REMAIN
TOTAL NET LOT AREA	243,718 SF	11,775 LANDSCAPE PROPOSED
TOTAL LANDSCAPE REQ. 15%	36,558 SF	114,283 TOTAL LANDSCAPE PROVIDED
LANDSCAPE COVERAGE REQ. 75%	85,712 SF	106,109 TOTAL LANDSCAPE COVERAGE
GROUND LEVEL PLANT COVERAGE REQ.25%	21,428 SF	49,709* GROUND LEVEL PLANT COVERAGE
* CALCULATION ASSUMES 20 SF PER PROPOSED GROUND PLANT & 45% OF EXST PLANT COVERAGE ON SITE.		
14-6-5-6(F) PARKING LOT LANDSCAPING		(4) @18 CREDITS TREES EXST. TO REMAIN
(2) SIDE W EST EDGE - 6 FT BUFFER/ 2 TREES PER 25 LF OF EDGE - 189 LF	15 TREES	0 TREES PROPOSED
		18 TOTAL
(2) SIDE W EST EDGE - 6 FT BUFFER/ 6 SHRUBS/ PER 25 LF OF EDGE	46 SHRUBS	46 SHRUBS PROPOSED
		46 TOTAL
10% OF PARKING AREA TO BE LANDSCAPED (158 REQ. / 194 PROP. PARKING STALLS) *1 TREE / PER 10 PARKING STALLS REQ.*	*19 TREES*	(36) @99 CREDITS TREES EXST. TO REMAIN 0 TREES PROPOSED
		99 TOTAL
14-6-5-6(D) STREET FRONTAGE LANDSCAPING		(6) @19 CREDITS TREES EXST. TO REMAIN
650 LF OF STREET FRONTAGE *1 TREE / PER 25 LF OF STREET FRONTAGE - 650 LF*	*26 TREES*	7 TREES PROPOSED
		26 TOTAL
14-6-5-6(E) EDGE BUFFER LANDSCAPING		(2) 8 CREDITS TREES EXST. TO REMAIN
1 TREE PER 15 LF OF SITE PERIMETER 924 LF OF PERIMETER - SOUTH - 924 LF**	62 *TREES*	15 TREES PROPOSED
		23 TOTAL
126 LF OF PERIMETER - EAST - 126 LF**	9 *TREES*	0 TREES EXST. TO REMAIN 0 TREES PROPOSED
		0 TOTAL

*** DUE TO EXISTING NON-CONFORMING CONDITION, AND EXISTING OVERHEAD UTILITIES AND UTILITY EASEMENTS, TREES HAVE NOT BEEN PROVIDED. SCREENING SHRUBS HAVE BEEN PROVIDED IN PLACE OF THE TREES.

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STATE OF NEW MEXICO
CHRISTOPHER PEARCE HEPLER
LA002
REGISTERED LANDSCAPE ARCHITECT

KHA PROJECT	068910607
DATE	AUGUST 2025
SCALE	AS SHOWN
DESIGNED BY	JNL
DRAWN BY	JNL
CHECKED BY	CPH

LANDSCAPE DETAILS

ALBUQUERQUE SCHOOL OF EXCELLENCE
PREPARED FOR
BUILDING HOPE

SHEET NUMBER
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ENAHNCED PLANTING SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	HYDROZONE
TREES								
	CL	2	CHILOPSIS LINEARIS 'LUCRETIA HAMILTON'	LUCRETIA HAMILTON DESERT WILLOW	B & B	1.5" CAL MIN		

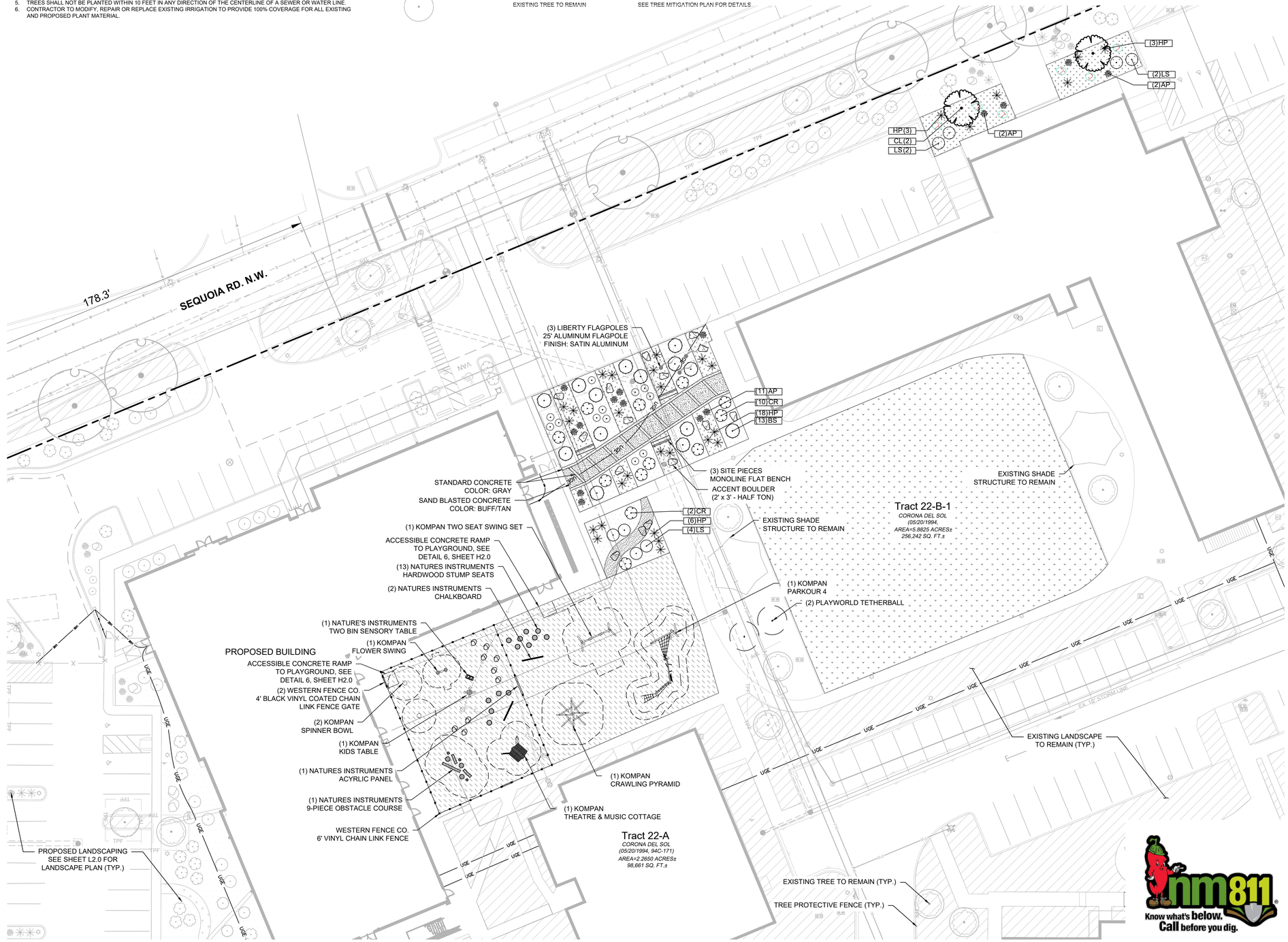
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	SIZE	HYDROZONE
SHRUBS								
	AP	15	AGAVE PARRYI	PARRY'S AGAVE	5 GAL	SEE PLAN	18" FULL	L
	AL	12	AMORPHA CANESCENS	LEADPLANT	5 GAL	SEE PLAN	18" FULL	VL
			EXISTING TREE TO REMAIN	SEE TREE MITIGATION PLAN FOR DETAILS				
	CR	12	CHRYSOTHAMNUS NAUSEOSUS	RUBBER RABBITBRUSH	5 GAL			
	HP	30	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL			
	LS	8	LEUCOPHYLLUM FRUTESCENS 'COMPACTA'	COMPACT TEXAS RANGER	5 GAL			

SYMBOL	CODE	QTY	REMARKS	BOTANICAL NAME	COMMON NAME	CONT
GROUND COVERS						
	XE2	7,898 SF		--- ---	ENGINEERED WOOD FIBER MULCH	MULCH
	X2	182 SF		2-4" GRAY RIVER ROCK COBBLE	RIVER ROCK COBBLE	ROCK
	G3	2,349 SF		3/4-1" ROCK MULCH	3/4-1" ROCK MULCH - TO MATCH EXISTING	ROCK
	XE	2,341 SF		GRAY CRUSHER FINES	GRAY CRUSHER FINES	FLAT
	X9	13,296 SF		TIFWAY 419 BERMUDA GRASS SOD	BERMUDA GRASS SOD	SOD

CONTRACTOR NOTE
1. CONTRACTOR TO PRUNE EXISTING VEGETATION AS NEEDED POST CONSTRUCTION.
2. CONTRACTOR TO REPAIR AND REPLACE ANY MULCH OR DAMAGED EXISTING SHRUBS IN LIKE-KIND UP TO THE LIMITS OF DISTURBANCE.

CONSTRUCTION BID NOTES:
1. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.
2. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO FIELD ADJUST ALL PLANT MATERIAL.
3. ALL QUANTITIES PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR SHALL CONFIRM ALL QUANTITIES PER PLAN PRIOR TO BIDDING AND CONSTRUCTION. PLANS TAKE PRECEDENT OVER PLANT SCHEDULE FOR PLANT QUANTITY COUNT.

LANDSCAPE NOTES:
1. TREE CANOPIES AND GROUND-LEVEL PLANTS SHALL COVER A MINIMUM OF 75 PERCENT OF THE TOTAL LANDSCAPE AREA AS MEASURED BY CANOPY WIDTH OR THE AREA BENEATH THE DRIPLINE OF THE MATURE SIZE OF THE ACTUAL VEGETATION.
2. NO MORE THAN 10 PERCENT OF REQUIRED LANDSCAPE AREAS SHALL BE TURF GRASS SPECIES REQUIRING IRRIGATION FOR SURVIVAL AFTER THE FIRST 2 GROWING SEASONS.
3. THE USE OF GRAVEL OR CRUSHER FINES AS GROUND COVER IS LIMITED TO A MAXIMUM OF 75 PERCENT OF ANY LANDSCAPED AREA.
4. VEGETATION REQUIRED BY THIS SECTION 14-16-5-6 SHALL BE LOCATED AT LEAST 3 FEET IN ANY DIRECTION FROM ANY FIRE HYDRANTS, VALVE VAULTS, HOSE BIBS, MANHOLES, HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS.
5. TREES SHALL NOT BE PLANTED WITHIN 10 FEET IN ANY DIRECTION OF THE CENTERLINE OF A SEWER OR WATER LINE.
6. CONTRACTOR TO MODIFY, REPAIR OR REPLACE EXISTING IRRIGATION TO PROVIDE 100% COVERAGE FOR ALL EXISTING AND PROPOSED PLANT MATERIAL.



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STATE OF NEW MEXICO
CHRISTOPHER PEARCE HEPLER
LA602
REGISTERED LANDSCAPE ARCHITECT

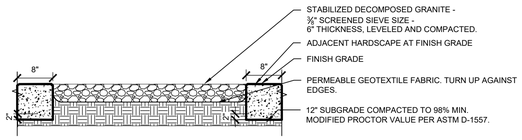
KHA PROJECT 068910607
DATE AUGUST 2025
SCALE AS SHOWN
DESIGNED BY JNL
DRAWN BY JNL
CHECKED BY CPH

ENHANCED LANDSCAPE PLAN

ALBUQUERQUE SCHOOL OF EXCELLENCE

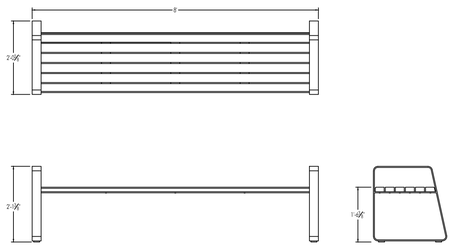
PREPARED FOR
BUILDING HOPE

SHEET NUMBER
H1.0

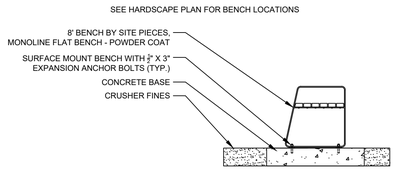


NOTES:
1. DECOMPOSED GRANITE ¾" INCH PERCENT PASSING:
   ⅜" = 100%
   ¼" = 50-60%
2. CONTRACTOR TO SUBMIT DECOMPOSED GRANITE SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL.
3. STABILIZER SHALL BE PACIFIC ENZYMES, INC. OR APPROVED EQUAL.

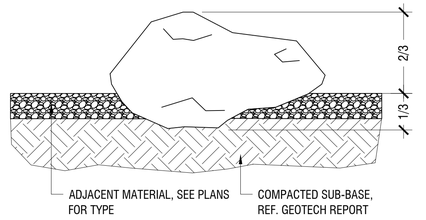
1 H2.0 DECOMPOSED GRANITE — NTS — 068-910-607-58



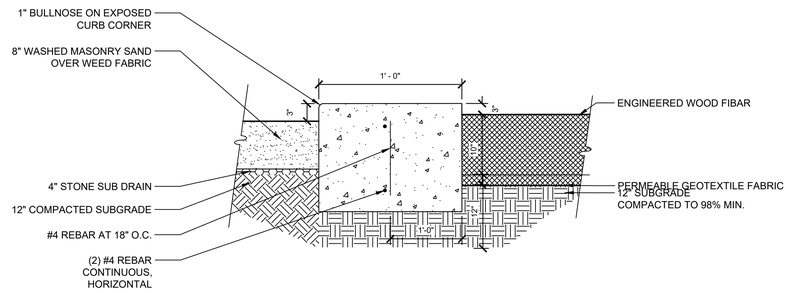
2 H2.0 MONOLINE FLAT BENCH — NTS — 068-910-607-95



3 H2.0 BENCH ON CRUSHER FINES — NTS

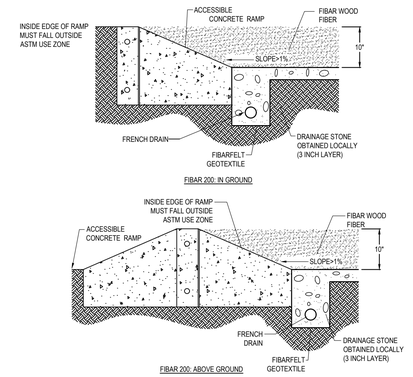


4 H2.0 LANDSCAPE BOULDER — 2" = 1'-0" — 068-910-607-94



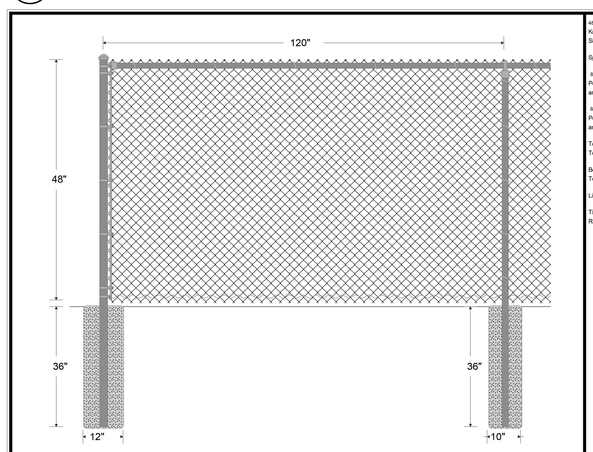
NOTES:
1. POURED IN PLACE (PIP) SURFACING TO BE PLACED OVER AGGREGATE SUBBASE.
2. SLOPE OF SUBBASE SHOULD BE DIRECTED TOWARDS DRAINAGE SUBDRAINS OR FOR GENERAL SITE POSITIVE DRAINAGE.
3. REFER TO GRADING AND LAYOUT PLANS FOR FINISHED GRADES AND MATERIALS INFORMATION.
4. SURFACING TO MEET REQUIRED USE ZONE DEPTHS. SURFACING TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS FOR CRITICAL FALL HEIGHTS.

5 H2.0 SAND PLAY SURFACE AT EWF — 1" = 1" — 068-910-607-06



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS, FOR ILLUSTRATION PURPOSES ONLY.
3. THE FIBAR SYSTEM IS PROTECTED BY US PATENTS 4679963, 8026207, 5076726 AND PATENTS PENDING.
4. AWARD CONTRACTORS MUST OBTAIN A LICENSE FROM FIBAR, INC. PRIOR TO CONSTRUCTION.
5. FIBARMAT WEAR MATS MUST BE INSTALLED UNDER ALL SWINGS, TIRE SWINGS & SLIDE EXITS TO PRESERVE WARRANTY. SEE 312-002.
6. CONTRACTORS NOTE: FOR PRODUCT AND PURCHASING INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 312-003.

6 H2.0 ENGINEERED WOOD FIBER PLAYGROUND SAFETY SURFACING — 068-910-607-25



48" tall Chainlink Fabric with Knuckle / Barb Selvage and 2" Mesh Size.

Specifications:

64" tall, 2 3/8" diameter Terminal Post with 12" post footing diameter and 36" post footing depth.

54" tall, 1 7/8" diameter Line Post with 10" post footing diameter and 36" post footing depth.

Top of Fence has 1 5/8" diameter Top Rail.

Bottom of Fence has Coil Spring Tension Wire.

Line Post Spacing: 120"

Tie Wire Spacing is every 24" on Rails.

Western Fence Co.

WESTERN FENCE CO., INC.
6020 SOUTH 300 WEST
MURRAY, UTAH 84107
1-888-GET-FENCE

48" Chainlink Line of Fence Black Vinyl Coated

Drawn: 4/13/2020
File:

Know what's below. Call before you dig. nm811

CAUTION!!!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

No.	REVISIONS	DATE	BY

Kimley»Horn
13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

STATE OF NEW MEXICO
CHRISTOPHER PEARCE HEPLER
LA002
REGISTERED LANDSCAPE ARCHITECT

KHA PROJECT 068910607
DATE AUGUST 2025
SCALE AS SHOWN
DESIGNED BY JNL
DRAWN BY JNL
CHECKED BY CPH

HARDSCAPE DETAILS

ALBUQUERQUE SCHOOL OF EXCELLENCE
PREPARED FOR
BUILDING HOPE

SHEET NUMBER
H2.0

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

IMAGES
None
LAST SAVED
8/21/2025 9:30 AM
PLOTTED BY
PETER WEE
DRAWING PATH
S:\Fence_Obstacle_Course-1 ... acrylic panel.jpg ... Chalkboard-3.jpg ... Hedge NM Seal Signed-... Two-Bin-Sensory-Table-3 ...
Active Files\Fence_Obstacle_Course-1.dwg ... 2.5x+ey ... Fire mitigation ... KUB ... 42inch_Bollard ... Arial/Grade ... 4_Landscape ... 4_Landscape_Enhanced

PROPOSED PLAYGROUND EQUIPMENT

AGES 2 - 5 YEAR OLD

FLOWER SWING
2-5 YEAR OLD
KOMPAN - NR0916

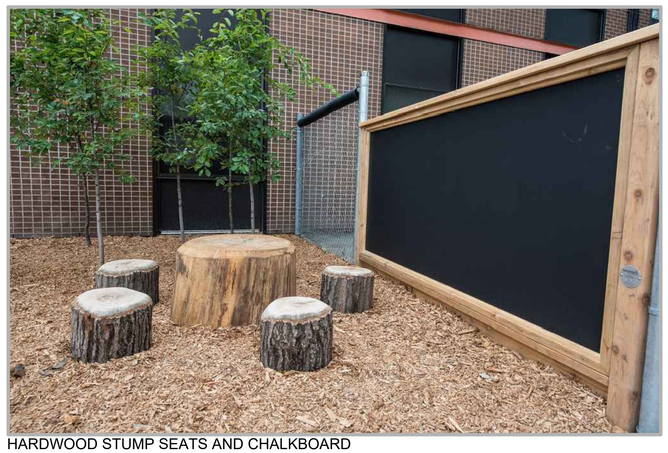
SPINNER BOWL
2-5 YEAR OLD
KOMPAN - ELE400024

THEATRE & MUSIC COTTAGE
2-5 YEAR OLD
KOMPAN - NRO60601

ACRYLIC PANEL
INCLUSIVE PLAY
NATURES INSTRUMENTS

TWO BIN SENSORY TABLE
2-5 YEAR OLD
NATURES INSTRUMENTS

KID'S TABLE
2-5 YEAR OLD
KOMPAN - NRO0212



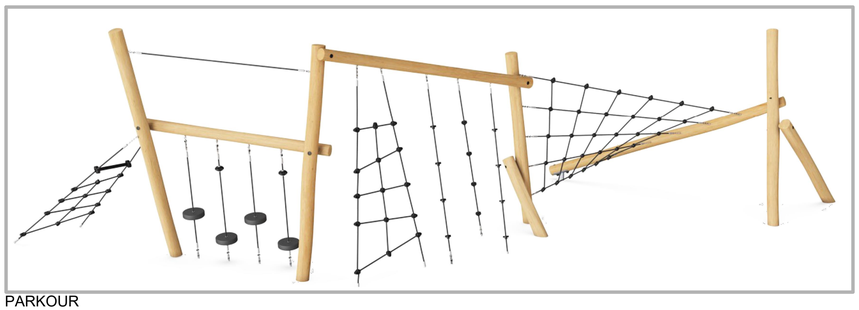
HARDWOOD STUMP SEATS AND CHALKBOARD
INCLUSIVE PLAY
NATURES INSTRUMENTS

9 PIECE OBSTACLE COURSE
INCLUSIVE PLAY
NATURES INSTRUMENTS

AGES 5 - 12 YEAR OLD

CRAWLING PYRAMID
5-12 YEAR OLD
KOMPAN - NR0826

TWO SEAT SWING SET
5-12 YEAR OLD
KOMPAN - NR0910



PARKOUR
5-12 YEAR OLD
KOMPAN - NRO854

nm811 Know what's below. Call before you dig.

CAUTION!!
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IMAGES 9-Piece-Obstacle-Course-1 - acrylic panel.jpeg Chalkboard-3.jpeg Hedge NM Seat Signed - Two-Bin-Sensory-Table-3
XREFS kh_logo_2color.dwg Survey X-Tree Irrigation X30 24X36_SIM_Border ShadeScape - ALandscape_Enhanced
LAST SAVED 8/21/2025 8:32 AM
PLOTTED BY HEFFLER, CHRISTOPHER
PLOTTED ON 8/22/2025 9:11 AM
PW Survey

No.	REVISIONS	DATE	BY

Kimley»Horn
13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM
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PROPOSED PLAYGROUND

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SHEET NUMBER
H3.0

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SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS

3.1 Endangered Species Protection

Eligibility Criterion

Under which criterion listed in CGP Parts 1.1.5, 7.2.9.a, Appendix D are you eligible for coverage under this permit?

☒ **Criterion A**: No ESA-listed species and/or designated critical habitat present in action area. Using the process outlined in Appendix D of this permit, you certify that ESA-listed species and designated critical habitat(s) under the jurisdiction of the USFWS or NMFS are not likely to occur in your site's "action area" as defined in Appendix A of this permit.

Basis statement content/Supporting documentation: A basis statement supporting the selection of Criterion A should identify the USFWS and NMFS information sources used. Attaching aerial image(s) of the site to your NOI is helpful to EPA, USFWS, and NMFS in confirming eligibility under this criterion. Please Note: NMFS' jurisdiction includes ESA-listed marine and estuarine species that spawn in inland rivers. Check the applicable source(s) of information you relied upon:

See Endangered / Historical tab for supporting documentation.

☐ **Criterion B:** Eligibility requirements met by another operator under the 2017 CGP. The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your "action area" under eligibility Criterion A, C, D, E, or F of the 2017 CGP and you have confirmed that no additional ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS not considered in the that certification may be present or located in the "action area." To certify your eligibility under this criterion, there must be no lapse of NPDES permit coverage in the other CGP operator's certification. By certifying eligibility under this criterion, you agree to comply with any conditions upon which the other CGP operator's certification was based. You must include in your NOI the NPDES ID from the other 2017CGP operator's notification of authorization under this permit. If your certification is based on another 2017 CGP operator's certification under criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in criterion C in your NOI form.

Basis statement content/Supporting documentation: A basis statement supporting the selection of Criterion B should identify the eligibility criterion of the other CGP NOI, the authorization date, and confirmation that the authorization is effective.

- ✓ Provide the 9-digit NPDES ID number from the other operator's NOI under the 2017 CGP: _ _ _ _ _ _ _ _ _

- ✓ Authorization date of the other 2017 CGP operator: INSERT AUTHORIZATION DATE OF OTHER OPERATOR
- ✓ Eligibility criterion of the other 2017 CGP operator: ☐A ☐C ☐D ☐E ☐F
- ✓ Provide a brief summary of the basis the other operator used for selecting criterion A, C, D, E, or F: INSERT TEXT HERE

☐ **Criterion C:** Discharges not likely to adversely affect ESA-listed species and/or designated critical habitat. ESA-listed species and/or designated critical habitat(s) under the jurisdiction of the USFWS and/or NMFS are likely to occur in or near your site's "action area," and you certify to EPA that your site's discharges and discharge-related activities are not likely to adversely affect ESA-listed threatened or endangered species and/or designated critical habitat. This certification may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat. To certify your eligibility under this criterion, indicate 1) the ESA-listed species and/or designated habitat located in your "action area" using the process outlined in Appendix D of this permit; 2) the distance between the site and the listed species and/or designated critical habitat in the action area (in miles); and 3) a rationale describing specifically how adverse effects to ESA-listed species will be avoided from the discharges and discharge-related activities. You must also include a copy of your site map from your SWPPP showing the upland and in-water extent of your "action area" with this NOI.

Basis statement content/Supporting documentation: A basis statement supporting the selection of Criterion C should identify the information resources and expertise (e.g., state or federal biologists) used to arrive at this conclusion. Any supporting documentation should explicitly state that both ESA-listed species and designated critical habitat under the jurisdiction of the USFWS and/or NMFS were considered in the evaluation.

- ✓ Resources used to make determination: INSERT RESOURCES YOU USED TO DETERMINE THAT DISCHARGES ARE NOT LIKELY TO ADVERSELY AFFECT ESA-LISTED SPECIES OR DESIGNATED CRITICAL HABITAT
- ✓ ESA-listed Species/Critical Habitat in action area: INSERT LIST OF ESA-LISTED SPECIES OR DESIGNATED CRITICAL HABITAT LOCATED IN YOUR ACTION AREA
- ✓ Distance between site and ESA-listed Species/Critical Habitat: INSERT DISTANCE BETWEEN YOUR SITE AND THE ESA-LISTED SPECIES OR CRITICAL HABITAT (in miles)
- ✓ How adverse effects will be avoided: DESCRIBE SPECIFICALLY HOW ADVERSE EFFECTS TO ESA-LISTED SPECIES WILL BE AVOIDED FROM THE DISCHARGES AND DISCHARGE-RELATED ACTIVITIES

☐ **Criterion D**: Coordination with USFWS and/or NMFS has successfully concluded. Coordination between you and the USFWS and/or NMFS has concluded. The

coordination must have addressed the effects of your site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS, and resulted in a written concurrence from USFWS and/or NMFS that your site's discharges and discharge-related activities are not likely to adversely affect listed species and/or critical habitat. You must include copies of the correspondence with the participating agencies in your SWPPP and this NOI.

Basis statement content/Supporting documentation: A basis statement supporting the selection of Criterion D should identify whether USFWS or NMFS or both agencies participated in coordination, the field office/regional office(s) providing that coordination, and the date that coordination concluded.

- ✓ Agency coordinated with: ☐USFWS ☐ NMFS
- ✓ Field/regional office(s) providing coordination: INSERT FIELD/REGIONAL OFFICE(S) PROVIDING COORDINATION
- ✓ Date coordination concluded: INSERT DATE COORDINATION CONCLUDED
- ✓ Attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service concluding coordination activities.

☐ **Criterion E:** ESA Section 7 consultation has successfully concluded. Consultation between a Federal Agency and the USFWS and/or NMFS under section 7 of the ESA has concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS. To certify eligibility under this criterion, Indicate the result of the consultation:

- ☐ Biological opinion from USFWS and/or NMFS that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or
- ☐ Written concurrence from USFWS and/or NMFS with a finding that the site's discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat. You must include copies of the correspondence between yourself and the USFWS and/or NMFS in your SWPPP and this NOI.

Basis statement content/Supporting documentation: A basis statement supporting the selection of Criterion E should identify the federal action agency involved, the field office/regional office(s) providing that consultation, any tracking numbers of identifiers associated with that consultation (e.g., IPaC number, PCTS number), and the date the consultation was completed.

- ✓ Federal agency involved: INSERT FEDERAL AGENCY(IES) INVOLVED

- ✓ Field/regional office(s) providing consultation: INSERT FIELD/REGIONAL OFFICE(S) PROVIDING CONSULTATION
- ✓ Tracking numbers associated with consultation: INSERT CONSULTATION TRACKING NUMBER(S)
- ✓ Date consultation completed: INSERT DATE CONSULTATION COMPLETED
- ✓ Attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service concluding consultation.

☐ **Criterion F:** Issuance of section 10 permit. Potential take is authorized through the issuance of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of the site's discharges and discharge-related activities on ESA-listed species and designated critical habitat. You must include copies of the correspondence between yourself and the participating agencies in your SWPPP and your NOI.

Basis statement content/Supporting documentation: A basis statement supporting the selection of Criterion F should identify whether USFWS or NMFS or both agencies provided a section 10 permit, the field office/regional office(s) providing permit(s), any tracking numbers of identifiers associated with that consultation (e.g., IPaC number, PCTS number), and the date the permit was granted.

- ✓ Agency providing section 10 permit: ☐USFWS ☐NMFS
- ✓ Field/regional office(s) providing permit: INSERT FIELD/REGIONAL OFFICE(S) PROVIDING PERMIT
- ✓ Tracking numbers associated with consultation: INSERT CONSULTATION TRACKING NUMBER(S)
- ✓ Date permit granted: INSERT DATE PERMIT GRANTED
- ✓ Attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service.

3.2 Historic Preservation

Appendix E, Step 1 (see CGP Part 1.1.6, 7.2.9.b and the "Historic Preservation" section of the NOI form):

Do you plan on installing any of the following stormwater controls at your site? Check all that apply below, and proceed to Appendix E, Step 2.

- ☐ Dike
- ☐ Berm
- ☐ Catch Basin
- ☐ Pond
- ☐ Stormwater Conveyance Channel (e.g., ditch, trench, perimeter drain, swale, etc.)
- ☐ Culvert
- ☐ Other type of ground-disturbing stormwater control: INSERT SPECIFIC TYPE OF STORMWATER CONTROL

(Note: If you will not be installing any ground-disturbing stormwater controls, no further documentation is required for Section 3.2 of the Template.)

Appendix E, Step 2

If you answered yes in Step 1, have prior surveys or evaluations conducted on the site already determined that historic properties do not exist, or that prior disturbances at the site have precluded the existence of historic properties? ☐ YES ☐ NO

- If yes, no further documentation is required for Section 3.2 of the Template.
- If no, proceed to Appendix E, Step 3.

Appendix E, Step 3

If you answered no in Step 2, have you determined that your installation of subsurface earth-disturbing stormwater controls will have no effect on historic properties? ☐ YES ☐ NO

If yes, provide documentation of the basis for your determination. INSERT REFERENCES TO DOCUMENTS, STUDIES, OR OTHER SOURCES RELIED UPON

If no, proceed to Appendix E, Step 4.

Appendix E, Step 4

If you answered no in Step 3, did the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Office (THPO), or other tribal representative (whichever applies) respond to you within 15 calendar days to indicate whether the subsurface earth

disturbances caused by the installation of stormwater controls affect historic properties?
☐ YES ☐ NO

If no, no further documentation is required for Section 3.2 of the Template.

If yes, describe the nature of their response:

- ☐ Written indication that no historic properties will be affected by the installation of stormwater controls. INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE APPLICABLE SHPO, THPO, OR OTHER TRIBAL REPRESENTATIVE

- ☐ Written indication that adverse effects to historic properties from the installation of stormwater controls can be mitigated by agreed upon actions. INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE APPLICABLE SHPO, THPO, OR OTHER TRIBAL REPRESENTATIVE

- ☐ No agreement has been reached regarding measures to mitigate effects to historic properties from the installation of stormwater controls. INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE APPLICABLE SHPO, THPO, OR OTHER TRIBAL REPRESENTATIVE

- ☐ Other: INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE APPLICABLE SHPO, THPO, OR OTHER TRIBAL REPRESENTATIVE

3.3 Safe Drinking Water Act Underground Injection Control Requirements

Do you plan to install any of the following controls? Check all that apply below.

☐ Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

☐ Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow

☐ Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

IF YES, INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE STATE AGENCY OR EPA REGIONAL OFFICE

3.4 Applicable Federal, Tribal, State or Local Programs

This Stormwater Pollution Prevention Plan (SWPPP) is prepared in compliance with the requirements of the National Pollutant Discharge Elimination System(NPDES) New Mexico Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities and the Clean Water Act (CWA). This SWPPP is consistent with applicable state and local environmental regulations and codes. This SWPPP was developed and implemented before submitting a NOI for coverage under the General Permit. The NOI was submitted to NPDES at least 14 days before commencing construction activities. If the Operator changes, or an additional Operator is added after the initial NOI is submitted, the new Operator will submit a NOI at least 2 days before assuming operational control of the site. A copy of the signed NOI will be provided to the Operator of any MS4 receiving the discharge. The SWPPP will be updated as necessary to remain consistent with any changes to site plans and permits approved by state and local officials. The SWPPP must be retained on the construction site if possible. If the SWPPP is retained off-site it shall be made available as soon as reasonable, preferably within 24 hours. Permit requirements for this SWPPP are provided in Appendix G.

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SECTION 4: EROSION AND SEDIMENT CONTROLS

Implementation of all control measures (BMPs) will be the responsibility of HB Construction, Inc.. The following subsections apply to erosion and sediment controls for the major construction activities onsite. The schedule of inspections for these measures is discussed as appropriate in Section 6.

The following goals and criteria will be accomplished with regard to erosion and sediment control:

1. All control measures have been designed to retain sediment on the property and prevent sediment from entering the municipal separate storm sewer system and surface waters (Rio Grande Segment #) to the maximum extent possible.
2. All control measures will be selected, installed, and maintained in accordance with the manufacturers' specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the Operator will replace or modify the control for site situations.
3. If sediment escapes the property, offsite accumulations of sediment will be removed at a frequency sufficient to minimize offsite impacts.
4. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges.
5. If offsite material storage areas, to be used solely by this project, are added to the project plan they will be considered a part of the project and will be added to the SWPPP.

Construction specifications and details for debris and trash management, chemical management, and sanitary facilities are provided in Appendix E.

Any discharge regulated under this SWPPP must achieve, at a minimum, effluent limitations representing the degree of effluent reduction attainable by application of the best practicable control technology currently available (BPT). This will be done by using:

a. Erosion and Sediment controls
b. Soil Stabilization
c. Dewatering
d. Pollution prevention measures
e. Prohibiting certain discharges
f. Surface outlets

These measures will be included in Sections 4 & 5 of the SWPPP.

4.1 Natural Buffers or Equivalent Sediment Control

Are there any surface waters within 50 feet of your project's earth disturbances?

☐ YES ☒ NO

If yes, check the compliance alternative that you have chosen

- ☐ I will provide and maintain a 50-foot undisturbed natural buffer.
- ☐ I will provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
- ☐ It is infeasible to provide and maintain an undisturbed natural buffer of any size; therefore, I will implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
- ☐ I qualify for one of the exceptions below.

Buffer Exceptions

Which of the following exceptions to the buffer requirements applies to your site?

- ☐ There is no discharge of stormwater to the surface water that is located less than 50 feet from my construction disturbances.
- ☐ No natural buffer exists due to preexisting development disturbances that occurred prior to the initiation of planning for this project.
- ☐ "Linear project" site constraints (e.g., limited right-of-way) make it infeasible for me to meet any of the CGP Part 2.1.2.1.a compliance alternatives.
- ☐ The project qualifies as "small residential lot" construction.
- ☐ Buffer disturbances will occur for the construction of a water-dependent structure or water access area (e.g., pier, boat ramp, and trail).

4.2 Erosion and Sediment Control BMPs

Design, install and maintain effective **erosion and sediment controls** to minimize the discharge of pollutants. **Install sediment controls along any perimeter areas of the site that will receive pollutant discharge.** At a minimum, the controls shall control stormwater volume and velocity within the site to minimize soil erosion; control peak flow rates and total stormwater volume if stormwater is channelized; minimize the amount of soil exposed during construction activity and the disturbance of steep slopes; as well as minimize sediment discharge from the site. If earth disturbances are close to surface water, provide and maintain appropriate natural buffers if feasible. If it is infeasible, document the reason and implement additional erosion and sediment controls. Preserve native topsoil if feasible and minimize soil compaction in post-construction pervious areas.

	Best Management Practice	Expected Use?	
		Yes/No	If **Yes**, describe **where** it will be utilized.
1.	Silt Fence	Yes	Silt fence to be installed around the perimeter of the site.
2.	Inlet Protection	Yes	At inlets as shown on the erosion control
3.	Stabilized Construction Entrance	Yes	Construction entrance will be located off Sequoia Rd N.W.
4.	Rock Berm	No	Not currently scheduled.
5.	Check Dam	No	Not currently scheduled.
6.	Filter / Diversion Berm	No	Not currently scheduled.
7.	Sediment Trap	No	Not currently scheduled.
8.	Temporary Sediment Basin	No	Not currently scheduled.
9.	Curb Cut Back	No	Not currently scheduled.
10.	Geotextiles / Grass Mesh / Curlex	No	Not currently scheduled.
11.	Tree Protection	Yes	There are existing trees; protect any trees marked for preservation and remove only trees marked for removal as shown on the Tree Mitigation Plan.

	Best Management Practice	Expected Use?	
		Yes/No	If **Yes**, describe **where** it will be utilized.
12.	Vegetation Filter / Buffer Strips	No	Not currently scheduled.
13.	Rock Rip Rap	No	Not currently scheduled.
14.	Straw Wattle / Mulch Berm	Yes	Filterexx Siltsoxx installed throughout the site as indicated on the Erosion Control Plan.
15.	Fiber Roll / Hay Bale	No	Not currently scheduled.
16.	Wind Fence / Orange Mesh Fence	No	Not currently scheduled.
17.	Maintain Vegetation	No	Not currently scheduled.

1. **Silt Fence –** consists of filter fabric stretched between support posts to catch sheet flow drainage from disturbed areas. Silt fence, typically used around the perimeter of the site, prevents sediment discharges.
2. **Inlet Protection** – include a variety of methods to prevent soil and debris from entering the storm sewer. Inlet protection techniques provide detention or filtration of particulates by intercepting sediment using stone, concrete blocks, filter fabric and/or wire mesh. Inlet protection will be removed in cases where significant rainfall is interpreted to prevent flooding. MS4's will often not allow Inlet Protection to prevent damage to property and flooding.
3. **Stabilized Construction Entrance –** is used to facilitate the removal of sediment and other debris from construction equipment prior to exiting the construction site or when exiting an access area within the site. This method consists of a pad of bull rock typically on top of geotextile material. Size of pad may vary depending on site conditions.
4. **Rock Berm –** is used to treat concentrated amounts of stormwater and act as a filter reducing the velocity of the discharge. Sediment settles out on the receiving side of the rock berm. Rock berms consist of different size rock bound by wire mesh.
5. **Check Dams –** are small barriers placed across a drainage swale or ditches that reduce the velocity of stormwater flows thereby reducing potential erosion. Check dams can be made from a variety of materials including rock, earthen berms, or silt fence.
6. **Filter/Diversion Berms –** are used to direct or contain flows on construction sites to sediment basins or stabilized areas for filtration thereby preventing soil loss. Earthen Dikes and Diversion Berms consist of elevated compacted soil.
7. **Sediment Traps –** are small impoundments that detain sediment from runoff water to protect receiving areas downstream. They are formed by excavating an area or by placing an earthen berm across a low-lying area in a drainage easement.

8. **Temporary Basin –** is an excavated or natural depression which allows for a shallow pool of stormwater to promote settling of suspended solids. Water can be released in a controlled manner by dewatering with appropriate controls.
9. **Curb Cut Back –** is a sediment trap located at the back of curb. Its function is to allow sediment to settle out of stormwater discharging off a disturbed lot. This technique can be utilized if the slopes are minimal. This technique is often used during flatwork preparation and as a temporary control in other cases.
10. **Geotextile/Grass Mesh/Curlex –** are porous fabrics placed over disturbed areas to limit the effect of erosion and runoff by providing immediate protection. They come in a wide variety and can be constructed from synthetic or organic material. Geotextiles can aid plant growth by holding seeds, fertilizers, and topsoil in place.
11. **Tree Protection –** usually consists of a fence located around the tree's drip line. Protecting existing vegetation prevents erosion and protects wildlife habitat. Tree protection typically needs to be installed and maintained during all phases of construction.
12. **Vegetation Filter / Buffer Strips –** are designed to intercept upstream flow and decrease the velocity, diffuse water as sheet flow, promote filtration and infiltration by the vegetation.
13. **Rock Rip Rap –** is an erosion control technique that consists of a permanent erosion-resistant layer, which is typically constructed of stones. The purpose of the rock rip rap is to protect soil from erosion in areas of concentrated runoff. The rock rip rap can also be utilized to stabilize slopes. (See engineer plans for specific dimensions.)
14. **Straw Wattle / Mulch Berm –** consist of a biodegradable tube filled with mulch or straw which slow, filter, and spread overland water. This type of control can be used to aid re-vegetation and slope stabilization by preventing rill and gully erosion.
15. **Fiber Roll / Hay Bale –** can be used to temporarily stabilize the sediment and also as a filter in some drainage areas. (Note: Some local regulations may prohibit use of hay bales onsite.)
16. **Wind Fence / Orange Mesh Fence –** can be used for multiple reasons. Fencing materials can slow the velocity of wind across disturbed soils allowing sediment to be settled out. Fencing can also be used to protect special critical features onsite and to delineate the project boundary to prevent construction vehicles from working outside the limits of construction.
17. **Maintain Vegetation**-When practicable, leave natural vegetation established until ready for construction. Leave vegetation in areas that are not to be disturbed.

4.3 Good Housekeeping BMPs

Non-structural BMPs include practices such as education, spill prevention planning, street sweeping, material planning/scheduling, hazardous material management, solid and liquid waste management, and dust control to name a few. Non-structural BMPs have typically been considered "Good Housekeeping" practices as they refer to the regular ongoing maintenance of the site **Prohibit discharges from wastewater from washout of concrete trucks unless managed appropriately; wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials; fuels, oils or other pollutants used in vehicle and equipment operation and maintenance; soaps or solvents used in vehicle and equipment washing; as well as toxic or hazardous substances from a spill or other release**. Also prohibited, toxic or hazardous spills. Construction specifications and details for debris and trash management and sanitary facilities are provided in Appendix E.

	Best Management Practice	Expected Use?	
		Yes/No	If **Yes**, describe **where** it will be utilized.
1.	Street Sweeping, Vacuuming, or Scraping	Yes	In front of active lots as needed.
2.	Stockpile Management of Sediment or Soil	Yes	Onsite management program on lots as needed.
3.	Material Staging Area	Yes	Construction equipment, non-hazardous building materials such as packing material (wood, plastic, and glass), construction scrap material (brick, wood, steel, metal scraps, and pipe cuttings), and maintenance materials will be stored on lots or adjacent lots. Large items, such as framing materials and stockpiled lumber, will be stored in the open in the storage area. Such material will be elevated on wood blocks to minimize contact with runoff.
4.	Solid Waste Management	Yes	Onsite management in bins and collected regularly. At the end of the work day all waste containers will be covered. This cover will either be a lid, tarp, plastic sheeting or a temporary cover.
5.	Hazardous Waste Management	Yes	All hazardous waste materials such as oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed containers under cover within a separate hazardous material storage area.
6.	Sanitary Waste Management	Yes	Onsite management of portable toilets.

	Best Management Practice	Expected Use?	
		Yes/No	If **Yes**, describe **where** it will be utilized.
7.	Concrete Residuals & Washout Management	Yes	Onsite management of concrete washouts in designated areas. Ensure wastewater is properly contained and there is no discharge to surface waters.
8.	Vehicle and Equipment Management	Yes	Onsite management
9.	Dust Control	Yes	Water trucks will be used to spray unvegetated soil as necessary to control dust until land is seeded and vegetated.

1. **Street Sweeping/Vacuuming/Scraping** – activities will occur as necessary to ensure street surfaces are clear of soil and debris. Ingress and Egress access points will be inspected often and swept as needed. Street sweeping will occur on all paved streets within the project and adjacent to the project throughout the duration of the project as needed.
2. **Stockpile Management** – prevents pollution of stormwater during the import, export, and stockpiling of earth material by: planning operations that will minimize the need for import/export, diverting stormwater around stockpiles, placing piles at least 10 feet away from drainage areas and discharge points placing proper erosion and sediment controls around the pile. Stockpile Management will occur throughout the duration of the project and can involve diversions, berms, ditches or storage basins.
3. **Material Delivery, Storage, and Use** – Material Safety Data Sheets (MSDS) and associated spill response/clean up materials will be stored onsite. All chemicals need to be in sealed and labeled containers away from exposure to stormwater and ground water throughout the duration of the project.

4. **Solid Waste Management –** All solid waste (trash and debris) associated with construction activities shall be collected onsite in proper receptacles and disposed of properly by the waste management provider to an appropriate regulated landfill or recycling facility. No excess waste shall be buried onsite. Contractors shall be responsible for insuring that these solid waste management practices are followed throughout the duration of the project. All waste containers must have lids and the lids must be kept closed when not in use. If the waste container does not have a lid provide cover or a similarly effective means to minimize the discharge of pollutants.
5. **Hazardous Waste Management –** All hazardous waste shall be disposed of in the manner specified by the manufacturer or federal, state, and local regulations. A separate permit may be required to transport and dispose of hazardous waste. General Practices used to reduce the risk associated with hazardous materials include: keeping products in original containers when applicable, ensuring all chemical containers are labeled and MSDS sheets are retained onsite, and surplus product/waste must be

disposed of by the manufacturers' or local and state recommended methods throughout the duration of the project.

6. **Sanitary Waste Management –** Portable sanitary facilities shall be provided in convenient areas. A company shall be hired to clean the units, inspect for deficiencies, and maintain the units in good working order regularly or as required by local regulations. Contractors will be responsible for notifying their staff to utilize the sanitary facilities and insure that these practices are followed the duration of the project.
7. **Concrete Residuals and Washout Management –** Washout areas will be designated onsite. All excess concrete and concrete washout slurries will be discharged to the washout area for drying. All washout areas shall be located away from any storm drain opening, drainage structure, and water ways associated with the site. Once dried the material will be hauled away by a contractor. No washout material will be buried onsite.
8. **Vehicle and Equipment Management –** Vehicles entering the construction site shall be maintained in a manner that prevents leaks and spills of fluids and to prevent offsite tracking of sediment. Vehicles will be inspected often for leaks. Drip pans or absorbent pads will be used for vehicle and equipment maintenance activities that involve grease, oil, solvents, or other fluids. The vehicle operator will be responsible for any cleanup. These management practices will continue throughout the duration of the project. Vehicle wash-down will be performed only in a controlled location and runoff from that location will be controlled so as to not reach any surface water.
9. **Dust Control –** Measures that help reduce the surface movement of soil and particles from disturbed surfaces into the air. If water is used to prevent dust, it shall be applied in a manner that does not create runoff and minimizes vehicle tracking.

4.4 Minimize Dust

Water trucks will be used to spray unvegetated soil as necessary to control dust until land is seeded and vegetated.

4.5 Minimize Disturbed Area/Steep Slopes and Protect Natural Features and Topsoil

The site is part of a commercial development that will be disturbed by excavation, grading, or other activities including off-site borrow and fill areas. Fill areas located onsite will have temporary vegetation established if the fill pile would be left for over 21 days without being disturbed. Measures taken to minimize disturbed areas and protect natural features are best described in the following subsection.

Slopes:
The property on which construction will occur will be sloped toward the adjoining streets of the development (Erosion Control Plan). After grading, on-site slopes will consist of a slope from 1 to 3%.

Vegetation:
Albuquerque School of Excellence has existing vegetation; maintain existing vegetation until soil disturbing activities commence. Disturbed areas shall be minimized and the existing vegetation shall be preserved to the maximum extent practicable. Following construction, any open areas will be landscaped with grass to prevent erosion.

4.6 Sediment Basins

This project disturbs 10 or more acres but a sediment/detention basin is not feasible due to available area. Equivalent control measures are utilized which include silt fence, grass mesh and storm inlet protection. The site will be monitored during construction and additional controls will be installed, if needed.

At a minimum, you must comply with following requirement in CGP Part 2.2.12.f: Remove accumulated sediment to maintain at least one-half of the design capacity and conduct all other appropriate maintenance to ensure the basin or impoundment remains in effective operating condition.

4.7 Soil Type and Chemical Treatment

Soil type (s):
The soil designation within the site is described by U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soil Survey 07/02/25. The soil classification onsite is:

Type of Soil	K Factor/	Erosion Rating/	Percent
Madurez-Wink associatin, gently sloping	.24	Moderate	100%

Treatment Chemicals
The following measures will be taken to manage chemicals onsite:

1. HB Construction, Inc. will compile the Material Safety Data Sheets (MSDS) for each chemical used at the site and will keep them in an appropriate location on site to be determined by the Operator.

2. All chemicals will be used as described by manufacturers' instructions. Excess chemicals will be removed from the site and disposed of properly, recycled, or used elsewhere.

Details for chemical management are provided in Appendix E.

Treatment Chemicals
List all treatment chemicals that will be used at the site and explain why these chemicals are suited to the soil characteristics: N/A
Describe the dosage of all treatment chemicals you will use at the site or the methodology you will use to determine dosage: N/A

Provide information from any applicable Safety Data Sheets (SDS): N/A
Describe how each of the chemicals will stored: N/A

Include references to applicable state or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer's specifications regarding the use of your specific treatment chemicals and/or chemical treatment systems: N/A

Special Controls for Cationic Treatment Chemicals (if applicable)
If the applicable EPA Regional Office authorized you to use cationic treatment chemicals, include the official EPA authorization letter or other communication, and identify the specific controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to an exceedance of water quality standards:
NOT Applicable

Schematic Drawings of Stormwater Controls/Chemical Treatment Systems
Provide schematic drawings of any chemically-enhanced stormwater controls or chemical treatment systems to be used for application of treatment chemicals: N/A

Training
Describe the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to the use of treatment chemicals: N/A

4.8 Dewatering Practices

If construction dewatering activities are anticipated at a site, the permittee must complete these steps:

1. Investigative information must be documented in the facility SWPPP.

2. Refer to the GWQB Mapper at https://gis.web.env.nm.gov/GWQB/ AND the PSTB Mapper (Go Mapper) at https://gis.web.env.nm.gov/GoNM/ and check if the following sources are located within the noted distance from your anticipated construct site groundwater dewatering activity:

Project Location Relative to a Source of Potential Groundwater Contamination	***Constituents likely to be required for testing***
Within 0.5 mile of an open Leaking Underground Storage Tank (LUST) site	*BTEX (Benzene, Toluene, Ethylbenzene, and Xylene) plus additional parameters depending on site conditions*
Within 0.5 mile of an open Voluntary Remediation site	*All parameters listed in Appendix A (or an alternate list approved by the NMED SWQB)***
Within 0.5 mile of an open RCRA Corrective Action Site	*All parameters listed in Appendix A (or an alternate list approved by the NMED SWQB)***
Within 0.5 mile of an open Abatement Site	*All parameters listed in Appendix A (or an alternate list approved by the NMED SWQB)***
Within 0.5 mile of an open Brownfield Site	*All parameters listed in Appendix A (or an alternate list approved by the NMED SWQB)***
Within 1.0 mile or *more of a Superfund site or National Priorities List (NPL) site with associated groundwater contamination.*	*All parameters listed in Appendix A (or an alternate list approved by the NMED SWQB)***

2. If dewatering activities are anticipated, information on flow and potential to encounter impacted groundwater must be provided directly to NMED at the following address:

   Program Manager, Point Source Regulation Section NMED Surface
   Water Quality Bureau

   PO Box 5469, Santa Fe, NM 87502

   Information may also be emailed - the contact information for the program manager is located on the website at: www.env.nm.gov/swqb/PSR.

3. Permittee must test the quality of the water being considered for discharge. Permittees must contact the Point Source Regulation Section Program Manager for information on constituents that must be monitored.
4. Permittee must send test result data to EPA Region 6 and the NMED Surface Water Quality Bureau. If the test data exceed standards, it cannot be discharged from the construction site into surface waters under this permit. Discharge to surface waters must be conducted under a separate NPDES individual permit to ensure proper treatment and disposal.
5. If disposal will be to the ground surface or in an unlined pond, the permittee must submit an NOI/ to the NMED Ground Water Quality Bureau.

4.9 Site Stabilization/ Temporary & Permanant Controls

The CGP requires you to immediately initiate stabilization when work in an area of your site has permanently or temporarily stopped, and to complete certain stabilization activities within prescribed deadlines. Construction projects disturbing more than 5 acres at any one time have a different deadline than projects disturbing 5 acres or less at any one time. See CGP Part 2.2.14.a. Construction projects in arid, semi-arid, and drought-stricken areas during the seasonally dry period and projects discharging to a sediment- or nutrient-impaired water or a Tier 2, 2.5, or 3 water have different stabilization deadlines.

Total Amount of Land Disturbance Occurring at Any One Time

- Five Acres or less (Stabilization must be done in 14 days)
- More than Five Acres (Stabilization must be done in 7 days)

Stormwater Controls

The following measures will be installed and designed during construction to control runoff after construction is complete:

1. Seeding, sodding, or hydromulch will be installed after final grading phase where soil has been disturbed to control erosion.
2. Landscaped areas within all unpaved disturbed areas will continue to provide soil stabilization.
3. A storm drain system may be completed at the completion of the project, as noted in Civil Plans, to collect storm runoff.
4. Vegetated swales, diversion dikes, or natural depressions may be established at the completion of the project, per the Civil Plans, to divert run-off from the site.
5. Soil will be stabilized if construction on that portion of the site will not be disturbed for a period exceeding 14 calendar days (or 7 days if over 5 acres disturbed) as stated in Section 2.4 of the SWPPP.

	Best Management Practice	Expected Use? Yes/No	If **Yes**, describe **where** it will be utilized.
1	Water Quality Pond	No	Not currently scheduled.
2	Detention Pond /Retention Pond	No	Not currently scheduled.
3	Velocity Dissipaters /Outlet Structures	No	Not currently scheduled.
4	Level Spreader	No	Not currently scheduled.
5	Gabion	No	Not currently scheduled.
6	Drainage Channel / Swale /Easement	No	Not currently scheduled.
7	Sequential Systems	No	Not currently scheduled.

8	Outfall Protection	No	Not currently scheduled.
9	Retaining Wall	No	Not currently scheduled.

1. **Water Quality Pond –** Wet ponds are constructed basins that treat incoming stormwater runoff by algal uptake and settling. These ponds have a constant pool of water at least through the wet season if not the entire year. Water quality ponds are also known as retention ponds or wet ponds.
2. **Detention Ponds –** constructed basin which provides pollutant removal by detaining stormwater runoff for some defined period of time to allow sediments to settle. Detention Ponds provide limited flood control and reduces downstream erosion by releasing a controlled amount of stormwater at a time.
   Retention Ponds – constructed basin which provides flood control and pollutant removal by retaining stormwater runoff. Retention ponds are designed to hold a specific amount of water indefinitely. Usually the pond is designed to have drainage leading to another location when the water level gets above the pond capacity, but still maintains a certain capacity.
3. **Velocity Dissipaters –** Slows the velocity of discharge from an outlet or outfall structure to reduce erosion downstream. Velocity dissipaters usually consist of concrete blocks on the concrete pad of headwalls or other discharge structures.
4. **Level Spreaders –** convert concentrated stormwater runoff to sheet flow and releases it uniformly over a stabilized slope to prevent erosion. Level spreaders are usually located at the overflow structure of a pond.
5. **Gabion –** are constructed of rock or stone material bound by heavy wire or fencing material. Gabions are used in areas where there is a high potential for erosion. Gabions treat water and allow sediment to settle out of the stormwater.
6. **Concrete Drainage Channel –** Impervious channel used to channel large quantities of water without causing erosion.
7. **Natural Vegetation Drainage Channel –** Pervious channel consisting of native vegetation used to channel large quantities of water while promoting infiltration and slowing the velocity of the runoff.
8. **Sequential Systems –** System of drainage patterns consisting of, but not limited to, storm sewers, drainage channels, a pond, and outlet protection to facilitate stormwater treatment prior to discharging offsite.
9. **Outfall Protection –** can be constructed of many different materials and forms. Outfall protection consists of concrete structures designed to withstand impacts of stormwater runoff and thereby preventing erosion.
10. **Retaining Walls –** hold sediment in place on steep slopes when stabilization is not feasible and erosion is probable. Retaining walls are used to retain sediment onsite and prevent erosion.

4.10 Final Stabilization

Use this template box if you are located in an arid, semi-arid, or drought-stricken area. Albuquerque, New Mexico is considered a mild arid or semi-arid area.

Vegetative and permanent: ground cover, shrubs, trees; Non-Vegetative: decorative gravel; Temporary: temporary seeding, hay, geotextiles, mulches	
[X] *Vegetative* [X] *Non-Vegetative* [X] *Temporary* [X] *Permanent*	
Description: ▪ Permanent stabilization in areas as shown on the Erosion Control Plan Ph. 2 Sheet C3.1. ▪ Permanent stabilization will be accomplished by using stabilization by planting groundcover, shrubs and using gravel.	
Dry Period	▪ Beginning month of seasonally dry period: 9/4/2025 ▪ Ending month of seasonally dry period: 7/5/2026 ▪ Site conditions during this period: During the dry period the rainfall will average just under an inch to just little over an inch with August being the wettest month at an average of 1.57 inches of precipitation to January being the driest month at an average of 0.39 inches of precipitation.
Installation and completion schedule	▪ For disturbance of 5 acres or less, if construction ceases for longer than 14 days, temporary or permanent stabilization practices, which may include temporary seeding, hay, geotextiles, mulches, and other techniques, will be employed immediately for all graded and other disturbed portions of the site. Immediately means as soon as practicable but no later than the end of the next work day. As disturbed areas are completed temporary stabilization practices will be ongoing. Final stabilization of the entire site by completion of the construction. ▪ Approximate installation date: 10/1/2025 ▪ Approximate completion date: 3/1/2027
Maintenance Requirements	Maintain existing temporary stabilization controls and permanent stabilization throughout the project.
Design Specifications	See the Landscape Plans Sheet L2.01 and L2.02 for detailed specifications for the permanent stabilization of the site and the Erosion Control Plan Ph. 2 Sheet C3.1.

[Repeat as needed for additional stabilization practices.]

Use this template box if you are <u>not</u> located in an arid, semi-arid, or drought-stricken area and are not discharging to a sediment- or nutrient-impaired water or Tier 2, Tier 2.5, or Tier 3 water.
Not applicable to this site.

Insert name of site stabilization practice	
☐ *Vegetative* ☐ *Non-Vegetative* ☐ *Temporary* ☐ *Permanent*	
Description: ▪ Insert description of stabilization practice to be installed ▪ Note how design will meet requirements of Part 2.2.14.b.iii	
Installation	Insert approximate date of installation
Completion	*(Must be completed as soon as practicable, but no later than seven calendar days after stabilization has been initiated)* Insert approximate completion date
Maintenance Requirements	Insert maintenance requirements for the stabilization practice
Design Specifications	Include copies of design specifications here

[Repeat as needed for additional stabilization practices.]

Use this template box if you are discharging to a sediment- or nutrient-impaired water or to a water that is identified by your State, Tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes.

Insert name of site stabilization practice	
☐ *Vegetative* ☐ *Non-Vegetative* ☐ *Temporary* ☐ *Permanent*	
Description: ▪ Insert description of stabilization practice to be installed ▪ Note how design will meet requirements of Part 2.2.14.b.iii	
Installation	Insert approximate date of installation
Completion	*(Must be completed as soon as practicable, but no later than seven calendar days after stabilization has been initiated)* Insert approximate completion date
Maintenance Requirements	Insert maintenance requirements for the stabilization practice
Design Specifications	Include copies of design specifications here

[Repeat as needed for additional stabilization practices.]

Use this template box if unforeseen circumstances have delayed the initiation and/or completion of vegetative stabilization. Note: You will not be able to include this information in your initial SWPPP. If you are affected by circumstances such as those described in CGP Part 2.2.14.b.ii, you will need to modify your SWPPP to include this information. ***Not applicable to this site.***

Insert name of site stabilization practice	
☐ *Vegetative* ☐ *Non-Vegetative* ☐ *Temporary* ☐ *Permanent*	
Description: ▪ Insert description of stabilization practice to be installed ▪ Note how design will meet requirements of Part 2.2.14.b.ii	
Justification	Insert description of circumstances that prevent you from meeting the deadlines required in CGP CGP Parts 2.2.14.a
Installation and completion schedule	**Vegetative Measures:** Describe the schedule you will follow for initiating and completing vegetative stabilization ▪ Approximate installation date: Insert approximate date ▪ Approximate completion date: Insert the approximate date
	Non-Vegetative Measures: *(Must be completed within 14 days of the cessation of construction if disturbing 5 acres or less; within 7 days if disturbing more than 5 acres)* ▪ Approximate installation date: Insert the approximate date ▪ Approximate completion date: Insert the approximate date
Maintenance Requirements	Insert maintenance requirements for the stabilization practice
Design Specifications	Include copies of design specifications here

[Repeat as needed for additional stabilization practices.]

Unpaved portions of the site will be landscaped with trees, shrubs, and grass to control erosion once construction has ceased. See landscaping plan in the civil engineering documents for specifics on final stabilization.

Unless otherwise noted in the Engineer Plans**:**
The site is in Final Stabilization when:

(a) All soil disturbing activities at the site have been completed and a uniform (i.e., evenly distributed, without large bare areas) perennial vegetative cover, with a density of at least 70% of the native background vegetative cover for the area, has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

(b) For construction activities on land used for agricultural purposes (e.g. pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface water and areas that are not being returned to their preconstruction agricultural use, must meet the final stabilization conditions of condition (a) above.

(c) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:
(1) Temporary erosion control measures (e.g., degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and
(2) The temporary erosion control measures are selected, designed, and installed to achieve 70 percent vegetative coverage within three years.

SECTION 5: POLLUTION PREVENTION STANDARDS

5.1 Potential Sources of Pollution

Potential sources of sediment to stormwater runoff:

- Grading and excavation of individual lots
- Vehicle tracking
- Landscape operations

Design, install, implement, and maintain effective Pollution Prevention Measures to minimize the discharge of pollutants by minimizing discharge from equipment, vehicle washing and other wash waters; minimize the exposure of building materials, trash, and all other materials present on the site to precipitation and to stormwater; and minimize discharge of pollutants from spills and leaks. Potential sources of pollution that could potentially be released into the environment may include:

Stormwater Pollutants	Onsite	Notes
Concrete Curing Compound	Yes	Curing compound will be used as needed and concrete contractor will remove remaining compound from the site.
Concrete Wash Water	Yes	Wash water resulting from concrete trucks will be washed out at a designated site, away from storm drains. Wastewater is properly contained and there is no discharge to surface waters.
Excavation Pump Out Water	Yes	Pump on vegetated area or through filter bag to contain sediment.
Fertilizer	No	Fertilizer is seldom used during final site preparation when vegetated areas are sodded or seeded. Fertilizer will not be applied just before a storm event and will not be stored on the site for any length of time.
Fuels	Yes	Used by vehicles performing dirt work and construction activities. Secondary containment will be utilized to contain leaks and spills.
Glue/Adhesives	Yes	Used in flooring and other similar functions. Empty containers will be disposed of properly.
Joint Compound	Yes	Joint compound will be used to adhere wallboard joints. Empty containers will be disposed of properly.
Oils/Grease	Yes	Used by vehicles performing dirt work and construction activities. Drip pans will be used when changing oil.
Painting and Brick Wash Waters	Yes	Contained on the site in designated areas where possible.
Paving	Yes	Paving operations will not be performed immediately before an anticipated major storm event. Excess chemical from paving will be removed.

Stormwater Pollutants (cont.)	Onsite	Notes
Pesticides	Yes	Pesticides may be used as a preparation before the foundation is poured and for pest control during construction to control fire ants, etc. Pesticides will be used according to the manufacturer's labeled instructions, and will not be applied just before a storm event. Excess pesticides will be removed from the site once application is complete.
Refrigerants	Yes	Refrigerants will be used in the AC units. Any AC servicing will be performed by HVAC trained technicians.
Roofing Tar	Yes	Roofing tar will be used to seal flashing during the construction. Waste tar will be disposed of in covered container and the roofing contractor will remove excess tar from the site.
Sanitary/Septic Waste Management	Yes	Portable toilets will be contained on the site in designated areas. Licensed sanitary services will ensure facilities are in working order at all times. Portable toilets shall not be located on or near curb inlets. Installation of wattles or acceptable devices/methods is needed to contain any chemical spill.
Sediment	Yes	Erosion from area where soil is disturbed due to construction has a high potential of sediment. Sediment and erosion control measures are included in this SWPPP.
Soil Stabilization Material	No	Contained on the site and not applied just before a storm event.
Solvents	Yes	Used by utility and painting contractors and will be removed from the site by contractors.
Stains, Paints	Yes	Used by painting contractor. Paints and stains may be stored inside the structure and the contractor will remove waste paints and stains from the site.
Trash	Yes	Trash will be properly contained on the site and removed frequently for off-site disposal. All waste containers must have lids and the lids must be kept closed when not in use. If the waste container does not have a lid provide cover or a similarly effective means to minimize the discharge of pollutants.
Wood Preservatives	Yes	Used by painting contractor. Wood preservatives may be stored inside the structure and contractor will remove waste wood preservatives from the site.

Stormwater Pollutants (cont.)	Onsite	Notes
Water Injection	No	Water injection is used to stabilize expansive clay soil. After injection, the area is capped with select fill. BMPs will be placed on the downslope boundary of the lot prior to starting the injection. Adjacent storm sewer inlets will be protected during the process. Ongoing maintenance of these BMPs are required due to the volume of water flowing from the injection area.
Soil Conditioning	No	Soil Conditioning is used to stabilize weak soil. Chemical lime is mixed slowly into the soil and the soil is compacted. BMPs will be placed on the downslope boundary of the lot prior to starting the conditioning. Adjacent storm sewer inlets will be protected during the process.

*5.2 Spill Prevention and Response (*See Tab 'Spill Response' for greater detail)*

The following spill prevention and control measures will be taken to minimize exposure of the materials to stormwater:

1. Paints, solvents, fuel (small containers), and any other stored chemical substance (small containers) will be kept covered or within an enclosure to protect the containers and the floor of the enclosure from wind, precipitation, and runoff. Runoff containing such materials will be collected, removed from the site and disposed of in accordance with the federal, state, and local regulations.
2. All chemicals will be used as described by manufacturers' instructions. Excess chemicals will be removed from the site and disposed of properly, recycled, or used elsewhere.
3. In the event of a spill of hazardous, toxic, or radiological waste (HTRW), the operator will cease work, contain the spill, and notify the designated personnel.
4. Spill response materials will be located in the spill response kit in an appropriate location on site to be determined by the Operator.
5. Spill response materials will be located on the earth-moving equipment on site.

Spills of toxic or hazardous material will be reported to the State of New Mexico Spill-Reporting Hotline at 1-505-827-9329. In the event of a release of a chemical in an amount that exceeds the Reportable Quantity (RQ), the National Response Center will also be contacted immediately at (800) 424-8802. A list of RQs is included as Appendix A.

5.3 Fueling and Maintenance of Equipment or Vehicles

A contractor will be used to fuel vehicles onsite as needed. Secondary containment (drip pans) will be utilized to contain spills or leaks. Absorbent pads will also be used onsite and kept in the spill kit. The vehicle operator will be responsible for any cleanup. Spills and leaks will be properly cleaned

5.4 Washing of Equipment and Vehicles

If used, locating activities away from waters of the U.S. and stormwater inlets or conveyances and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls.

Vehicle wash-down will not be performed.

5.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes

Exposure of construction products and materials will be minimized during construction. All waste containers must have lids and the lids must be kept closed when not in use. If the waste container does not have a lid provide cover or a similarly effective means to minimize the discharge of pollutants. Materials will be stored in a specified material storage area away from any stormwater flow. All materials shall be collected in proper receptacles and disposed of properly. Disposal of materials will be taken away by a contractor or the operator offsite.

5.6 Washing of Applicators and Containers used for Paint, Concrete, or Other Materials

Exposure of construction products and materials will be minimized during construction. Materials will be stored in a specified material storage area away from any stormwater flow. All materials shall be collected in proper receptacles and disposed of properly. Disposal of materials will be taken away by a contractor or the operator offsite.

During commercial development, construction material will be stored behind a BMP and trash/extra will be hauled off weekly. Paint brushes, if used, will be cleaned at the side of the building and contained on the lot. Residue will be contained and removed. Paint will be dried out under cover. Once dry, the paint will be disposed of in a trash bin. Construction material will be stored behind a BMP and trash/extra will be hauled off weekly. A concrete washout area will be set up and maintained as needed.

5.7 Fertilizers

Fertilizer will not be used during Commercial construction.

5.8 Other Pollution Prevention Practices

Street sweeping will be used as an as needed BMP on streets adjacent to public roads to contain sediment.

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SECTION 6: INSPECTION, MAINTENANCE, AND CORRECTIVE ACTION

6.1 Inspection Personnel and Procedures

Personnel Responsible for Inspections
HB Construction, Inc. will be responsible for implementing, maintaining, revising and amending, and managing the practices of the SWPPP. HB Construction, Inc. will assign each subcontractor the responsibility to implement and maintain best management practices, structural controls, and other controls during their onsite activities. HB Construction, Inc. is designated accountable for inspection activities at the site (Table 1). They will either conduct inspections themselves or authorize another qualified individual to complete the inspections. A form delineating responsibilities for the designated inspector is included in the Delineation Tab. The inspector's qualifications are provided in Appendix B.

Inspection Schedule
Inspections will occur on a schedule of once every seven (7) calendar days on a specifically defined day, regardless of whether not there has been a rainfall event since the previous inspection. The inspections will include disturbed areas of the construction site owned or under operational control of HB Construction, Inc. that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, and structural controls for evidence of, or potential for, pollutants entering the drainage system.

If rain events are conducted you must either keep a properly maintained rain gage on your site or obtain the storm event information from a weather station that is representative of your location. For any rainfall during normal business hours that measures 0.25 inches or grater, the total rainfall must be measured. This chart is located behind the Inspection Report Tab of the SWPPP.

If there is any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is a Tier 2, Tier 2.5 or Tier 3 Water, instead of the normal frequency inspections will be every 7 days and within 24 hours of a 0.25" rain event.
Where areas have been finally or temporarily stabilized or where runoff is unlikely due to winter, inspections will be conducted twice during the first month no more than 14 calendar days apart; then once per month after the first month. Frozen conditions need to be inspected once per month.
If this is a Linear Construction Site that is stabilized inspections will be twice the first month no more than 14 calendar days apart and then once more within 24 hours of a 0.25" rain.
Where areas have been finally or temporarily stabilized or where runoff is unlikely due to arid or drought stricken areas, inspections will be conducted once per month and within 24 hours of a 0.25" rain.

All erosion and sediment control measures and other protective measures identified in this SWPPP will be maintained in effective operating condition. If through inspections the permittee identifies that BMPs are not operating effectively, maintenance will be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of stormwater controls. If maintenance prior to the

next anticipated storm event is impracticable, you must document why this is the case and why the repair or other upkeep should still be considered routine maintenance in your inspection report under Part 4.7.1.c and complete the work no later than 7 calendar days from the time of discovery.. Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

Based on the results of the inspection, the SWPPP will be revised as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP will be completed within seven (7) calendar days following the inspection. If existing BMPs need to be modified, or if additional BMPs are necessary, implementation of these changes will be completed before the next anticipated storm event. If implementation before the next anticipated storm event is impracticable, an implementation schedule will be established and executed as soon as possible.

Inspection Report Forms

A site-specific Inspection Report (Appendix C) will be completed during inspections. All deficiencies will be recorded on the inspection reports and retained as part of the SWPPP for at least three years from the date that the site is finally stabilized. Inspection observations will include, at a minimum:

- The locations of discharges of sediment or other pollutants from the site.
- Locations of all BMPs, especially those that failed to operate as designed or proved inadequate for a particular location.
- Locations where additional BMPs are needed that did not exist at the time of inspection.
- Incidence of non-compliance with the SWPPP.

6.2 Corrective Action

A Corrective Action Log will be generated with the inspection report. Where no incidents of non-compliance are found, a certification will be signed by the Operator that the facility is in compliance with the SWPPP and the General Permit. A blank copy is located in the Inspection report tab.

6.3 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

See Tab – Delegation Letter at the front of the SWPPP

See Tab – Delineation of Responsibilities after the SWPPP

SECTION 7: TRAINING

Individual(s) Responsible for Training:

Jesse Duarte's responsibility is to establish that all the subcontractors/vendors are aware of their stormwater responsibilities.

General stormwater and BMP awareness training has been conducted for the operator representative. Training includes the following:

- The location of all stormwater controls on the site required by this permit and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions.

Name	Describe Training	Date Training Completed

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SECTION 8: RECORDKEEPING

The Operator will retain copies of this SWPPP, all reports required by the General Permit, and records of all data used for coverage under this General Permit for a period of at least three years from the date that the site has achieved final stabilization. The Operator will retain a copy of the SWPPP at the construction site from the date of project initiation to the date of final stabilization, except for periods when no continuous site presence (construction office or personnel) is maintained. Modifications or updates to the SWPPP will be made directly to the affected page(s).

This SWPPP was developed and implemented before submitting a NOI for coverage under the General Permit. The NOI was submitted to EPA at least fourteen days before commencing construction activities. If the Operator changes, or an additional Operator is added after the initial NOI is submitted, the new Operator will submit a NOI at least seven days before assuming operational control of the site. The NOI and acknowledgement letter are included before the SWPPP at the NOI tab.

A Construction Site Notice (CSN) was developed for the site. The Operator will post a copy of the CSN near the main entrance of the construction site prior to commencing construction activities and maintain the notice in that location until completion of the construction activity. The CSN is included before the SWPPP at the Construction Site Notice tab.

A secondary operator is not required to submit a NOI, provided that a primary operator has submitted the NOI, but a copy of the signed and certified Subcontractor Certification page must be included in the SWPPP.

A Change NOI (NOC) will be submitted using NeT if any relevant facts were omitted from or incorrect information was submitted in the NOI. The Change NOI will provide the correct information to the Director within 7 days after discovery. The following modifications to an NOI form will result in a 14-day review process:

- Changes to the name of the operator;
- Changes to the project or site name;
- Changes to the estimated area to be disturbed;
- Changes to the name of the receiving water or additions to the applicable receiving waters;
- Changes to the eligibility information related to endangered species protection or historic preservation;
- Changes to information provided related to the use of chemical treatment at your site; and
- Changes to answers provided regarding the demolition of structures over 10,000 square feet of floor space built or renovated before January 1, 1980.

During the 14 day review process, you may continue to operate based on the information provided in your original NOI, but you must wait until the review period has ended before you may commence or continue activities on any portion of your site that would be affected by any of the above modifications, unless EPA notifies you that the authorization is delayed or denied.

An NOT will be submitted to NPDES, and to the Operator of any MS4 receiving the discharge (City of Albuquerque), within 30 days after:

- Final stabilization has been achieved on all portions of the site (when 70% density of the native ground cover is established) that are the responsibility of the permittee (Operator); or
- Another permitted Operator has assumed control over all areas of the site that have not been finally stabilized; and
- All silt fences and other temporary erosion controls have been removed, scheduled for removal as defined in the SWPPP, or transferred to a new Operator if the new Operator has sought permit coverage. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal.

Authorization to discharge under the General Permit terminates at midnight on the day the NOT is postmarked for delivery to NPDES. The NOT is included in Appendix D.

A responsible corporate officer of the Operator will sign all reports required by the General Permit, including this SWPPP, unless the Operator duly authorizes a representative that is not a corporate officer. The authorized representative may be either a named individual or any individual occupying a named position. A Delegation Letter is provided before the SWPPP at the Delegation Letter tab.

The date(s) when construction activities temporarily or permanently cease on a portion of the site will be recorded in the Construction Activities Record (Map Tab of the SWPPP). The date when an area is either temporarily or permanently stabilized will also be recorded in the Construction Activities Record (Map Tab of the SWPPP).

DELINEATION OF RESPONSIBILITES FOR POLLUTION PREVENTION PERSONNEL

Albuquerque School of Excellence
Coors Blvd & Sequoia Rd. NW, Albuquerque, NM 87120

Responsibility	Name
Operator with Control Over Construction Plans and Specifications	Building Hope Sequoia Road NW, LLC
Operator with Day-to-Day Operational Control (maintaining, revising, amending, managing practices and implementation of the SWPPP)	HB Construction, Inc.
Delegate authority to appropriate individuals/companies/subcontractors	Building Hope Sequoia Road NW, LLC and HB Construction, Inc.
File Notice of Intent (NOI) with the EPA	HB Construction, Inc.
Ensure copies of all signed documents and the permit are retained with the SWPPP and all Operators are included in SWPPP	Building Hope Sequoia Road NW, LLC and HB Construction, Inc.
Install and Maintain Structural Best Management Practices (BMPs)	HB Construction, Inc.
Perform Procedural BMPs	HB Construction, Inc.
Responsible for **WEEKLY** Inspection Practices for the SWPPP	HB Construction, Inc.
Responsible for Rain Event Inspection Practices for the SWPPP	N/A
Update SWPPP as necessary	HB Construction, Inc.
Install Stabilization Practices	HB Construction, Inc.
Removal of temporary BMPs once complete	HB Construction, Inc.
File Notice of Termination (NOT)	HB Construction, Inc.
Retain SWPPP records for 3 years after the NOT submittal date	HB Construction, Inc.

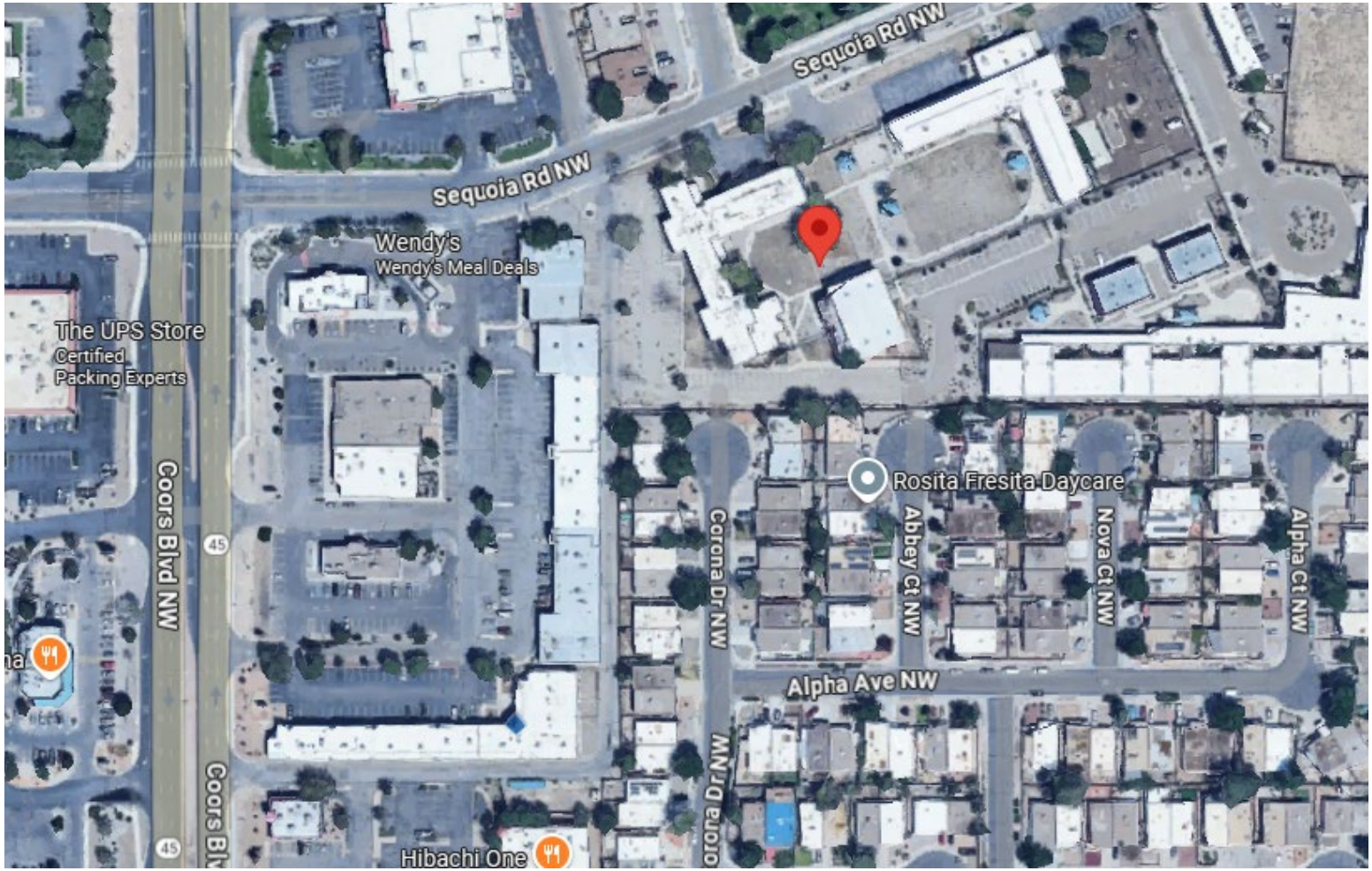
MAPS

Albuquerque School of Excellence

Coors Blvd & Sequoia Rd. NW

Albuquerque, NM, 87120

35.121128, -106.699230



An official website of the United States government

How's My Waterway?

Explore, Discover and Learn about your water.

Waterbody Report

Rio Grande (Tijeras Arroyo to Alameda Bridge)

Assessment Unit ID: NM-2105_51

Waterbody Condition: Impaired (Issues Identified)

Existing Plans for Restoration: Yes

303(d) Listed: Yes

Year Reported: 2024

303(d) List Status: EPA Final Action

Other Years Reported:
2018 <https://epa.gov/waterbody-report/21nmex/nm-2105_51/2018>, 2020 <https://epa.gov/waterbody-report/21nmex/nm-2105_51/2020>, 2022 <https://epa.gov/waterbody-report/21nmex/nm-2105_51/2022> (opens new browser tab)

Organization Name (ID): New Mexico (21NMEX)

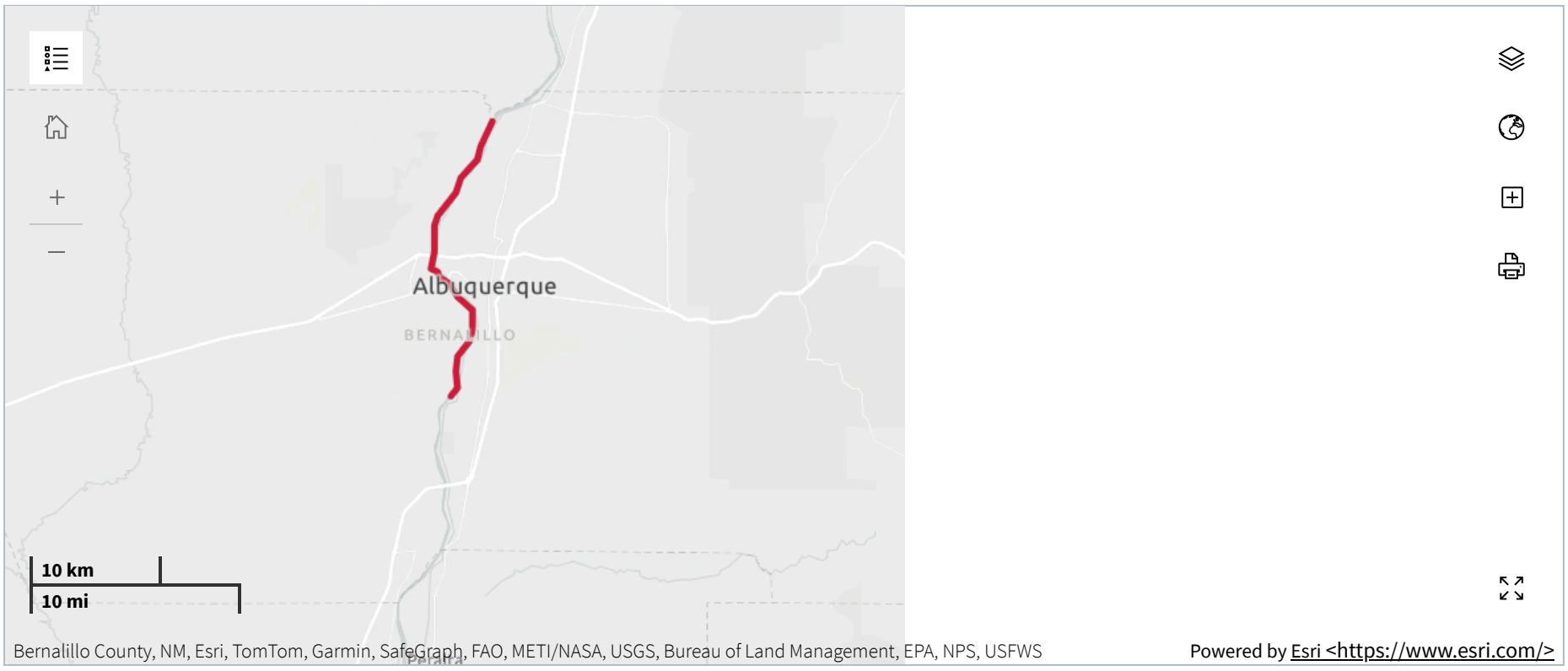
What type of water is this?

River (15.6 Miles)

Where is this water located?

Rio Grande (Tijeras Arroyo to Alameda Bridge)

Advanced Filtering (opens new browser tab) **Download Waterbody Data (2024)**



Assessment Information from 2024

State or Tribal Nation specific designated uses:

Information on Water Quality Standards <https://www.epa.gov/wqs-tech/state-specific-water-quality-standards-effective-under-clean-water-act-cwa> Collapse All

Irrigation

Good

Identified Issues for Use

No impairments evaluated for this use.

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Livestock Watering

Good

Identified Issues for Use

No impairments evaluated for this use.

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Marginal Warmwater Aquatic Life

Impaired

Identified Issues for Use

Impaired Parameters	Plan in Place
Dissolved Oxygen	No
Mercury - Fish Consumption Advisory	No
Pcbs - Fish Consumption Advisory	No
Temperature	No

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Primary Contact

Impaired

Identified Issues for Use

Impaired Parameters	Plan in Place
Escherichia Coli (E. coli)	Yes

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Public Water Supply

Not Assessed

Identified Issues for Use

No impairments evaluated for this use.

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Wildlife Habitat

Good

Identified Issues for Use

No impairments evaluated for this use.

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Probable sources contributing to impairment from 2024:

No probable sources of impairment identified for this waterbody.

Assessment Documents

No documents are available

Plans to Restore Water Quality

What plans are in place to protect or restore water quality?

Links below open in a new browser tab.

Plan	Impairments	Type	Completion Date
Rio Grande River 2105_50 E. Coli Tmdl <https://epa.gov/plan-summary/21nmex/38855>	Escherichia Coli (E. coli), Fecal Coliform, Pathogens	TMDL	2010-06-30

Discover.

Accessibility Statement <https://www.epa.gov/accessibility/epa-accessibility-statement>

Budget & Performance <https://www.epa.gov/planandbudget>

Contracting <https://www.epa.gov/contracts>

EPA www Web Snapshot <https://www.epa.gov/home/wwwepagov-snapshots>

Grants <https://www.epa.gov/grants>

No FEAR Act Data <https://www.epa.gov/ocr/whistleblower-protections-epa-and-how-they-relate-non-disclosure-agreements-signed-epa>

Plain Writing <https://www.epa.gov/web-policies-and-procedures/plain-writing>

Privacy <https://www.epa.gov/privacy>

Privacy and Security Notice <https://www.epa.gov/privacy/privacy-and-security-notice>

Connect.

Data <https://www.epa.gov/data>

Inspector General <https://www.epaoig.gov>

Jobs <https://www.epa.gov/careers>

Newsroom <https://www.epa.gov/newsroom>

Regulations.gov <https://www.regulations.gov/>

Subscribe <https://www.epa.gov/newsroom/email-subscriptions-epa-news-releases>

USA.gov <https://www.usa.gov/>

White House <https://www.whitehouse.gov/>

Ask.

Contact EPA <https://www.epa.gov/aboutepa/forms/contact-epa>

EPA Disclaimers <https://www.epa.gov/web-policies-and-procedures/epa-disclaimers>

Hotlines <https://www.epa.gov/aboutepa/epa-hotlines>

FOIA Requests <https://www.epa.gov/foia>

Frequent Questions <https://www.epa.gov/aboutepa/frequent-questions-specific-epa-programstopics>

Follow.

CONSTRUCTION ACTIVITIES RECORD		
Sequence	**Start Date**	**Completion Date**
Install structural controls as directed by the city; • Install silt fencing around the perimeter of the site. • Install stabilized construction entrance off Sequoia Rd N.W. • Install curb and area inlet protection devices, where appropriate. • Install filtered siltsoxx throughout the site as indicated on the Erosion Control Plan. • Install debris containment area on site as shown on the Erosion Control Plan. • Maintain vegetation.		
Minor demo as shown on the Demolition Plan.		
Site preparation, clearing, grading		
Excavation of storm sewer, water and wastewater utility, gas, utility, cable, electric excavation,		
Grade and prepare streets and parking areas; pour slab		
Building Construction; • Construction of Structure(s) according to the pollutant control requirements of this SWPPP.		
Grade • Perform final grading according to the pollutant control requirements in this SWPPP.		
Install permanent stormwater controls; and • Landscape open areas. • Seed all disturbed unpaved areas.		
Add and maintain permanent stormwater controls and remove any temporary BMPs. • Add and maintain existing vegetation and seeded areas		

APPENDIX A

LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES

117.14 Demonstration projects.

Subpart C—Notice of Discharge of a Reportable Quantity

117.21 Notice.
117.23 Liabilities for removal.

AUTHORITY: 33 U.S.C. 1251 *et seq.*, and Executive Order 11735, superseded by Executive Order 12777, 56 FR 54757.

SOURCE: 44 FR 50776, Aug. 29, 1979, unless otherwise noted.

Subpart A—General Provisions

§ 117.1 Definitions.

As used in this part, all terms shall have the meanings stated in 40 CFR part 116.

(a) *Reportable quantities* means quantities that may be harmful as set forth in §117.3, the discharge of which is a violation of section 311(b)(3) and requires notice as set forth in §117.21.

(b) *Administrator* means the Administrator of the Environmental Protection Agency (''EPA'').

(c) *Mobile source* means any vehicle, rolling stock, or other means of transportation which contains or carries a reportable quantity of a hazardous substance.

(d) *Public record* means the NPDES permit application or the NPDES permit itself and the materials comprising the administrative record for the permit decision specified in §124.18 of this chapter.

(e) *National Pretreatment Standard* or *Pretreatment Standard* means any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307 (b) and (c) of the Act, which applies to industrial users of a publicly owned treatment works. It further means any State or local pretreatment requirement applicable to a discharge and which is incorporated into a permit issued to a publicly owned treatment works under section 402 of the Act.

(f) *Publicly Owned Treatment Works* or *POTW* means a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any sewers that convey wastewater to such a treatment works, but does not include pipes, sewers or other conveyances not connected to a facility providing treatment. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

(g) *Remove* or *removal* refers to removal of the oil or hazardous substances from the water and shoreline or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare, including, but not limited to, fish, shellfish, wildlife, and public and private property, shorelines, and beaches.

(h) *Contiguous zone* means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and Contiguous Zone.

(i) *Navigable waters* means ''waters of the United States, including the territorial seas,'' as defined in §120.2 of this chapter.

(j) *Process waste water* means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

[44 FR 50776, Aug. 29, 1979, as amended at 58 FR 45039, Aug. 25, 1993; 65 FR 30904, May 15, 2000; 80 FR 37112, June 29, 2015; 83 FR 5208, Feb. 6, 2018; 84 FR 56668, Oct. 22, 2019; 85 FR 22340, Apr. 21, 2020]

§ 117.2 Abbreviations.

NPDES equals National Pollutant Discharge Elimination System. RQ equals reportable quantity.

§ 117.3 Determination of reportable quantities.

Each substance in Table 117.3 that is listed in Table 302.4, 40 CFR part 302, is assigned the reportable quantity listed in Table 302.4 for that substance.

TABLE 117.3—REPORTABLE QUANTITIES OF HAZARDOUS SUBSTANCES DESIGNATED PURSUANT TO SECTION 311 OF THE CLEAN WATER ACT

NOTE: The first number under the column headed ''RQ'' is the reportable quantity in pounds. The number in parentheses is the

metric equivalent in kilograms. For convenience, the table contains a column headed ''Category'' which lists the code letters ''X'', ''A'', ''B'', ''C'', and ''D'' associated with reportable quantities of 1, 10, 100, 1000, and 5000 pounds, respectively.

TABLE 117.3—REPORTABLE QUANTITIES OF HAZARDOUS SUBSTANCES DESIGNATED PURSUANT TO SECTION 311 OF THE CLEAN WATER ACT

Material	Category	RQ in pounds (kilograms)
Acetaldehyde	C	1,000 (454)
Acetic acid	D	5,000 (2,270)
Acetic anhydride	D	5,000 (2,270)
Acetone cyanohydrin	A	10 (4.54)
Acetyl bromide	D	5,000 (2,270)
Acetyl chloride	D	5,000 (2,270)
Acrolein	X	1 (0.454)
Acrylonitrile	B	100 (45.4)
Adipic acid	D	5,000 (2,270)
Aldrin	X	1 (0.454)
Allyl alcohol	B	100 (45.4)
Allyl chloride	C	1,000 (454)
Aluminum sulfate	D	5,000 (2,270)
Ammonia	B	100 (45.4)
Ammonium acetate	D	5,000 (2,270)
Ammonium benzoate	D	5,000 (2,270)
Ammonium bicarbonate	D	5,000 (2,270)
Ammonium bichromate	A	10 (4.54)
Ammonium bifluoride	B	100 (45.4)
Ammonium bisulfite	D	5,000 (2,270)
Ammonium carbamate	D	5,000 (2,270)
Ammonium carbonate	D	5,000 (2,270)
Ammonium chloride	D	5,000 (2,270)
Ammonium chromate	A	10 (4.54)
Ammonium citrate dibasic	D	5,000 (2,270)
Ammonium fluoborate	D	5,000 (2,270)
Ammonium fluoride	B	100 (45.4)
Ammonium hydroxide	C	1,000 (454)
Ammonium oxalate	D	5,000 (2,270)
Ammonium silicofluoride	C	1,000 (454)
Ammonium sulfamate	D	5,000 (2,270)
Ammonium sulfide	B	100 (45.4)
Ammonium sulfite	D	5,000 (2,270)
Ammonium tartrate	D	5,000 (2,270)
Ammonium thiocyanate	D	5,000 (2,270)
Amyl acetate	D	5,000 (2,270)
Aniline	D	5,000 (2,270)
Antimony pentachloride	C	1,000 (454)
Antimony potassium tartrate	B	100 (45.4)
Antimony tribromide	C	1,000 (454)
Antimony trichloride	C	1,000 (454)
Antimony trifluoride	C	1,000 (454)
Antimony trioxide	C	1,000 (454)
Arsenic disulfide	X	1 (0.454)
Arsenic pentoxide	X	1 (0.454)
Arsenic trichloride	X	1 (0.454)
Arsenic trioxide	X	1 (0.454)
Arsenic trisulfide	X	1 (0.454)
Barium cyanide	A	10 (4.54)
Benzene	A	10 (4.54)
Benzoic acid	D	5,000 (2,270)
Benzonitrile	D	5,000 (2,270)
Benzoyl chloride	C	1,000 (454)
Benzyl chloride	B	100 (45.4)
Beryllium chloride	X	1 (0.454)
Beryllium fluoride	X	1 (0.454)
Beryllium nitrate	X	1 (0.454)
Butyl acetate	D	5,000 (2,270)
Butylamine	C	1,000 (454)
n-Butyl phthalate	A	10 (4.54)
Butyric acid	D	5,000 (2,270)
Cadmium acetate	A	10 (4.54)
Cadmium bromide	A	10 (4.54)
Cadmium chloride	A	10 (4.54)
Calcium arsenate	X	1 (0.454)
Calcium arsenite	X	1 (0.454)
Calcium carbide	A	10 (4.54)
Calcium chromate	A	10 (4.54)
Calcium cyanide	A	10 (4.54)
Calcium dodecylbenzenesulfonate	C	1,000 (454)
Calcium hypochlorite	A	10 (4.54)
Captan	A	10 (4.54)
Carbaryl	B	100 (45.4)
Carbofuran	A	10 (4.54)
Carbon disulfide	B	100 (45.4)
Carbon tetrachloride	A	10 (4.54)
Chlordane	X	1 (0.454)
Chlorine	A	10 (4.54)
Chlorobenzene	B	100 (45.4)
Chloroform	A	10 (4.54)
Chlorosulfonic acid	C	1,000 (454)
Chlorpyrifos	X	1 (0.454)
Chromic acetate	C	1,000 (454)
Chromic acid	A	10 (4.54)
Chromic sulfate	C	1,000 (454)
Chromous chloride	C	1,000 (454)
Cobaltous bromide	C	1,000 (454)
Cobaltous formate	C	1,000 (454)
Cobaltous sulfamate	C	1,000 (454)
Coumaphos	A	10 (4.54)
Cresol	B	100 (45.4)
Crotonaldehyde	B	100 (45.4)
Cupric acetate	B	100 (45.4)
Cupric acetoarsenite	X	1 (0.454)
Cupric chloride	A	10 (4.54)
Cupric nitrate	B	100 (45.4)
Cupric oxalate	B	100 (45.4)
Cupric sulfate	A	10 (4.54)
Cupric sulfate, ammoniated	B	100 (45.4)
Cupric tartrate	B	100 (45.4)
Cyanogen chloride	A	10 (4.54)
Cyclohexane	C	1,000 (454)
2,4-D Acid	B	100 (45.4)
2,4-D Esters	B	100 (45.4)
DDT	X	1 (0.454)
Diazinon	X	1 (0.454)
Dicamba	C	1,000 (454)
Dichlobenil	B	100 (45.4)
Dichlone	X	1 (0.454)
Dichlorobenzene	B	100 (45.4)
Dichloropropane	C	1,000 (454)
Dichloropropene	B	100 (45.4)
Dichloropropene-Dichloropropane (mixture).	B	100 (45.4)
2,2-Dichloropropionic acid	D	5,000 (2,270)
Dichlorvos	A	10 (4.54)
Dicofol	A	10 (4.54)
Dieldrin	X	1 (0.454)
Diethylamine	B	100 (45.4)
Dimethylamine	C	1,000 (454)
Dinitrobenzene (mixed)	B	100 (45.4)
Dinitrophenol	A	10 (45.4)
Dinitrotoluene	A	10 (4.54)
Diquat	C	1,000 (454)
Disulfoton	X	1 (0.454)
Diuron	B	100 (45.4)
Dodecylbenzenesulfonic acid	C	1,000 (454)

TABLE 117.3—REPORTABLE QUANTITIES OF HAZARDOUS SUBSTANCES DESIGNATED PURSUANT TO SECTION 311 OF THE CLEAN WATER ACT—Continued

Material	Category	RQ in pounds (kilograms)
Endosulfan	X	1 (0.454)
Endrin	X	1 (0.454)
Epichlorohydrin	B	100 (45.4)
Ethion	A	10 (4.54)
Ethylbenzene	C	1,000 (454)
Ethylenediamine	D	5,000 (2,270)
Ethylenediamine-tetraacetic acid (EDTA).	D	5,000 (2,270)
Ethylene dibromide	X	1 (0.454)
Ethylene dichloride	B	100 (45.4)
Ferric ammonium citrate	C	1,000 (454)
Ferric ammonium oxalate	C	1,000 (454)
Ferric chloride	C	1,000 (454)
Ferric fluoride	B	100 (45.4)
Ferric nitrate	C	1,000 (454)
Ferric sulfate	C	1,000 (454)
Ferrous ammonium sulfate	C	1,000 (454)
Ferrous chloride	B	100 (45.4)
Ferrous sulfate	C	1,000 (454)
Formaldehyde	B	100 (45.4)
Formic acid	D	5,000 (2,270)
Fumaric acid	D	5,000 (2,270)
Furfural	D	5,000 (2,270)
Guthion	X	1 (0.454)
Heptachlor	X	1 (0.454)
Hexachlorocyclopentadiene	A	10 (4.54)
Hydrochloric acid	D	5,000 (2,270)
Hydrofluoric acid	B	100 (45.4)
Hydrogen cyanide	A	10 (4.54)
Hydrogen sulfide	B	100 (45.4)
Isoprene	B	100 (45.4)
Isopropanolamine dodecylbenzenesulfonate.	C	1,000 (454)
Kepone	X	1 (0.454)
Lead acetate	A	10 (4.54)
Lead arsenate	X	1 (0.454)
Lead chloride	A	10 (4.54)
Lead fluoborate	A	10 (4.54)
Lead fluoride	A	10 (4.54)
Lead iodide	A	10 (4.54)
Lead nitrate	A	10 (4.54)
Lead stearate	A	10 (4.54)
Lead sulfate	A	10 (4.54)
Lead sulfide	A	10 (4.54)
Lead thiocyanate	A	10 (4.54)
Lindane	X	1 (0.454)
Lithium chromate	A	10 (4.54)
Malathion	B	100 (45.4)
Maleic acid	D	5,000 (2,270)
Maleic anhydride	D	5,000 (2,270)
Mercaptodimethur	A	10 (4.54)
Mercuric cyanide	X	1 (0.454)
Mercuric nitrate	A	10 (4.54)
Mercuric sulfate	A	10 (4.54)
Mercuric thiocyanate	A	10 (4.54)
Mercurous nitrate	A	10 (4.54)
Methoxychlor	X	1 (0.454)
Methyl mercaptan	B	100 (45.4)
Methyl methacrylate	C	1,000 (454)
Methyl parathion	B	100 (45.4)
Mevinphos	A	10 (4.54)
Mexacarbate	C	1,000 (454)
Monoethylamine	B	100 (45.4)
Monomethylamine	B	100 (45.4)
Naled	A	10 (4.54)
Naphthalene	B	100 (45.4)
Naphthenic acid	B	100 (45.4)

TABLE 117.3—REPORTABLE QUANTITIES OF HAZARDOUS SUBSTANCES DESIGNATED PURSUANT TO SECTION 311 OF THE CLEAN WATER ACT—Continued

Material	Category	RQ in pounds (kilograms)
Nickel ammonium sulfate	B	100 (45.4)
Nickel chloride	B	100 (45.4)
Nickel hydroxide	A	10 (4.54)
Nickel nitrate	B	100 (45.4)
Nickel sulfate	B	100 (45.4)
Nitric acid	C	1,000 (454)
Nitrobenzene	C	1,000 (454)
Nitrogen dioxide	A	10 (4.54)
Nitrophenol (mixed)	B	100 (45.4)
Nitrotoluene	C	1,000 (454)
Paraformaldehyde	C	1,000 (454)
Parathion	A	10 (4.54)
Pentachlorophenol	A	10 (4.54)
Phenol	C	1,000 (454)
Phosgene	A	10 (4.54)
Phosphoric acid	D	5,000 (2,270)
Phosphorus	X	1 (0.454)
Phosphorus oxychloride	C	1,000 (454)
Phosphorus pentasulfide	B	100 (45.4)
Phosphorus trichloride	C	1,000 (454)
Polychlorinated biphenyls	X	1 (0.454)
Potassium arsenate	X	1 (0.454)
Potassium arsenite	X	1 (0.454)
Potassium bichromate	A	10 (4.54)
Potassium chromate	A	10 (4.54)
Potassium cyanide	A	10 (4.54)
Potassium hydroxide	C	1,000 (454)
Potassium permanganate	B	100 (45.4)
Propargite	A	10 (4.54)
Propionic acid	D	5,000 (2,270)
Propionic anhydride	D	5,000 (2,270)
Propylene oxide	B	100 (45.4)
Pyrethrins	X	1 (0.454)
Quinoline	D	5,000 (2,270)
Resorcinol	D	5,000 (2,270)
Selenium oxide	A	10 (4.54)
Silver nitrate	X	1 (0.454)
Sodium	A	10 (4.54)
Sodium arsenate	X	1 (0.454)
Sodium arsenite	X	1 (0.454)
Sodium bichromate	A	10 (4.54)
Sodium bifluoride	B	100 (45.4)
Sodium bisulfite	D	5,000 (2,270)
Sodium chromate	A	10 (4.54)
Sodium cyanide	A	10 (4.54)
Sodium dodecylbenzenesulfonate	C	1,000 (454)
Sodium fluoride	C	1,000 (454)
Sodium hydrosulfide	D	5,000 (2,270)
Sodium hydroxide	C	1,000 (454)
Sodium hypochlorite	B	100 (45.4)
Sodium methylate	C	1,000 (454)
Sodium nitrite	B	100 (45.4)
Sodium phosphate, dibasic	D	5,000 (2,270)
Sodium phosphate, tribasic	D	5,000 (2,270)
Sodium selenite	B	100 (45.4)
Strontium chromate	A	10 (4.54)
Strychnine	A	10 (4.54)
Styrene	C	1,000 (454)
Sulfuric acid	C	1,000 (454)
Sulfur monochloride	C	1,000 (454)
2,4,5-T acid	C	1,000 (454)
2,4,5-T amines	D	5,000 (2,270)
2,4,5-T esters	C	1,000 (454)
2,4,5-T salts	C	1,000 (454)
TDE	X	1 (0.454)
2,4,5-TP acid	B	100 (45.4)
2,4,5-TP acid esters	B	100 (45.4)

TABLE 117.3—REPORTABLE QUANTITIES OF HAZARDOUS SUBSTANCES DESIGNATED PURSUANT TO SECTION 311 OF THE CLEAN WATER ACT—Continued

Material	Category	RQ in pounds (kilograms)
Tetraethyl lead	A	10 (4.54)
Tetraethyl pyrophosphate	A	10 (4.54)
Thallium sulfate	B	100 (45.4)
Toluene	C	1,000 (454)
Toxaphene	X	1 (0.454)
Trichlorfon	B	100 (45.4)
Trichloroethylene	B	100 (45.4)
Trichlorophenol	A	10 (4.54)
Triethanolamine dodecylbenzenesulfonate.	C	1,000 (454)
Triethylamine	D	5,000 (2,270)
Trimethylamine	B	100 (45.4)
Uranyl acetate	B	100 (45.4)
Uranyl nitrate	B	100 (45.4)
Vanadium pentoxide	C	1,000 (454)
Vanadyl sulfate	C	1,000 (454)
Vinyl acetate	D	5,000 (2,270)
Vinylidene chloride	B	100 (45.4)
Xylene (mixed)	B	100 (45.4)
Xylenol	C	1,000 (454)
Zinc acetate	C	1,000 (454)
Zinc ammonium chloride	C	1,000 (454)
Zinc borate	C	1,000 (454)
Zinc bromide	C	1,000 (454)
Zinc carbonate	C	1,000 (454)
Zinc chloride	C	1,000 (454)
Zinc cyanide	A	10 (4.54)
Zinc fluoride	C	1,000 (454)
Zinc formate	C	1,000 (454)
Zinc hydrosulfite	C	1,000 (454)
Zinc nitrate	C	1,000 (454)
Zinc phenolsulfonate	D	5,000 (2,270)
Zinc phosphide	B	100 (45.4)
Zinc silicofluoride	D	5,000 (2,270)
Zinc sulfate	C	1,000 (454)
Zirconium nitrate	D	5,000 (2,270)
Zirconium potassium fluoride	C	1,000 (454)
Zirconium sulfate	D	5,000 (2,270)
Zirconium tetrachloride	D	5,000 (2,270)

[50 FR 13513, Apr. 4, 1985, as amended at 51 FR 34547, Sept. 29, 1986; 54 FR 33482, Aug. 14, 1989; 58 FR 35327, June 30, 1993; 60 FR 30937, June 12, 1995]

Subpart B—Applicability

§ 117.11 General applicability.

This regulation sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged into or upon the navigable waters of the United States, adjoining shorelines, into or upon the contiguous zone, or beyond the contiguous zone as provided in section 311(b)(3) of the Act, except to the extent that the owner or operator can show such that discharges are made:

(a) In compliance with a permit issued under the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1401 *et seq.*);

(b) In compliance with approved water treatment plant operations as specified by local or State regulations pertaining to safe drinking water;

(c) Pursuant to the label directions for application of a pesticide product registered under section 3 or section 24 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended (7 U.S.C. 136 *et seq.*), or pursuant to the terms and conditions of an experimental use permit issued under section 5 of FIFRA, or pursuant to an exemption granted under section 18 of FIFRA;

(d) In compliance with the regulations issued under section 3004 or with permit conditions issued pursuant to section 3005 of the Resource Conservation and Recovery Act (90 Stat. 2795; 42 U.S.C. 6901);

(e) In compliance with instructions of the On-Scene Coordinator pursuant to 40 CFR part 1510 (the National Oil and Hazardous Substances Pollution Plan) or 33 CFR 153.10(e) (Pollution by Oil and Hazardous Substances) or in accordance with applicable removal regulations as required by section 311(j)(1)(A);

(f) In compliance with a permit issued under § 165.7 of Title 14 of the State of California Administrative Code;

(g) From a properly functioning inert gas system when used to provide inert gas to the cargo tanks of a vessel;

(h) From a permitted source and are excluded by § 117.12 of this regulation;

(i) To a POTW and are specifically excluded or reserved in § 117.13; or

(j) In compliance with a permit issued under section 404(a) of the Clean Water Act or when the discharges are exempt from such requirements by section 404(f) or 404(r) of the Act (33 U.S.C. 1344(a), (f), (r)).

§ 117.12 Applicability to discharges from facilities with NPDES permits.

(a) This regulation does not apply to:

(1) Discharges in compliance with a permit under section 402 of this Act;

APPENDIX B

INSPECTOR QUALIFICATIONS

APPENDIX C

INSPECTION REPORTS

Note: The Completed Inspection Reports **may be** stored in a separate binder that accompanies this SWPPP.

CONSTRUCTION INSPECTION CHECKLIST
Albuquerque School of Excellence
Albuquerque, New Mexico

General Information (see reverse for instructions)					
Name of Project		**NPDES ID No.**		**Inspection Date**	
Weather conditions during inspection		**Inspection start time**		**Inspection end time**	
Inspector Name, Title & Contact Information					
Present Phase of Construction					
Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)					

Inspection Frequency *(Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply)*

Standard Frequency:

☐ Every 7 days

☐ Every 14 days and within 24 hours of a 0.25" rain or the occurrence of runoff from snowmelt sufficient to cause a discharge

Increased Frequency:

☐ Every 7 days and within 24 hours of a 0.25" rain (for areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3)

Reduced Frequency:

☐ Twice during first month, no more than 14 calendar days apart; then once per month after first month; (for stabilized areas)

☐ Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of a 0.25" rain (for stabilized areas on "linear construction sites")

☐ Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)

☐ Once per month (for frozen conditions where earth-disturbing activities are being conducted)

Was this inspection triggered by a 0.25" storm event? ☐ Yes ☐ No

If yes, how did you determined whether a 0.25" storm event has occurred?

☐ Rain gauge on site ☐ Weather station representative of site. Specify weather station source:

Total rainfall amount that triggered the inspection (in inches)**:**

Was this inspection triggered by the occurrence of runoff from snowmelt sufficient to cause a discharge? ☐ Yes ☐ No

Unsafe Conditions for Inspection

Did you determine that any portion of your site was unsafe for inspection per CGP Part 4.5? ☐ Yes ☐ No

If "yes", complete the following:

- Describe the conditions that prevented you from conducting the inspection in this location:

- Location(s) where conditions were found:

Condition and Effectiveness of Erosion and Sediment (E&S) Controls (CGP Part 2.2) (see reverse for instructions)				
Type/Location of E&S Control [Add an additional sheet if necessary]	**Maintenance Needed?***	**Corrective Action Required?***	**Date on Which Maintenance or Corrective Action First Identified?**	**Notes**
1.	☐Yes ☐No	☐Yes ☐No		
2.	☐Yes ☐No	☐Yes ☐No		
3.	☐Yes ☐No	☐Yes ☐No		
4.	☐Yes ☐No	☐Yes ☐No		
5.	☐Yes ☐No	☐Yes ☐No		
6.	☐Yes ☐No	☐Yes ☐No		
7.	☐Yes ☐No	☐Yes ☐No		
8.	☐Yes ☐No	☐Yes ☐No		
9.	☐Yes ☐No	☐Yes ☐No		
10.	☐Yes ☐No	☐Yes ☐No		

Condition and Effectiveness of Pollution Prevention (P2) Practices (CGP Part 2.3) (see reverse for instructions)				
Type/Location of P2 Practices [Add an additional sheet if necessary]	**Maintenance Needed?***	**Corrective Action Required?***	**Date on Which Maintenance or Corrective Action First Identified?**	**Notes**
1.	☐Yes ☐No	☐Yes ☐No		
2.	☐Yes ☐No	☐Yes ☐No		
3.	☐Yes ☐No	☐Yes ☐No		
4.	☐Yes ☐No	☐Yes ☐No		
5.	☐Yes ☐No	☐Yes ☐No		
6.	☐Yes ☐No	☐Yes ☐No		
7.	☐Yes ☐No	☐Yes ☐No		
8.	☐Yes ☐No	☐Yes ☐No		
9.	☐Yes ☐No	☐Yes ☐No		
10.	☐Yes ☐No	☐Yes ☐No		

Stabilization of Exposed Soil (CGP Part 2.2.14) (see reverse for instructions)			
Stabilization Area **[Add an additional sheet if necessary]**	**Stabilization Method**	**Have You Initiated Stabilization?**	**Notes**
1. **2.** **3.** **4.** **5.**		☐ YES ☐ NO If yes, provide date: ☐ YES ☐ NO If yes, provide date: ☐ YES ☐ NO If yes, provide date: ☐ YES ☐ NO If yes, provide date: ☐ YES ☐ NO If yes, provide date:	

Description of Discharges (CGP Part 4.6.6) (see reverse for instructions)	
Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? ☐ Yes ☐ No **If "yes", provide the following information for each point of discharge:**	
Discharge Location **[Add an additional sheet if necessary]**	**Observations**
1.	Describe the discharge: At points of discharge and the channels and banks of waters of the U.S. in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge: At points of discharge and the channels and banks of waters of the U.S. in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Contractor or Subcontractor Signature and Certification
(see reverse for instructions)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor:
_____ **Date:**

Printed Name and Affiliation: _____

Operator Signature and Certification
(see reverse for instructions)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative":
_____ **Date:**

Printed Name and Affiliation: _____

Section A – Initial Report (CGP Part 5.4.1) (Complete this section within 24 hours of identifying the condition that triggered corrective action)					
Name of Project		**NPDES ID No.**		**Today's Date**	
Date Problem First Discovered		**Time Problem First Discovered**			
Name and Contact Information of Individual Completing this Form					

What site conditions triggered the requirement to conduct corrective action *(check the box that applies)*:

- ☐ A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4)
- ☐ A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly
- ☐ A discharge is causing an exceedance of applicable water quality standards
- ☐ A Part 1.3 prohibited discharge has occurred
- ☐ EPA requires corrective action as a result of permit violations found during an EPA inspection carried out under Part 4.8

Provide a description of the problem:

Deadline for completing corrective action *(check the box that applies)*:

- ☐ Immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events
- ☐ Complete by close of the next business day when problem does not require a new or replacement control or significant repair
- ☐ No later than 7 calendar days from the time of discovery for problems that require a new or replacement control or significant repair
- ☐ Infeasible to complete the installation or repair within 7 calendar days. Explain why it is infeasible and document schedule for installing control:

Enter date of corrective action completion: _____

Section B – Corrective Action Completion (CGP Part 5.4.2) (Complete this section no later than 24 hours after completing the corrective action)			
Section B.1 – Why the Problem Occurred			
Cause(s) of Problem (Add an additional sheet if necessary)		**How You Determined the Cause and the Date You Determined the Cause**	
1. **2.**		**1.** **2.**	
Section B.2 – Stormwater Control Modifications Implemented to Correct the Problem			
List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	**Date of Completion**	**SWPPP Update Necessary?**	**Notes**
1.		☐Yes ☐No If yes, provide date SWPPP modified:	
2.		☐Yes ☐No If yes, provide date SWPPP modified:	

Section C –Signature and Certification (CGP Part 5.4.3)

Section C.1 – Contractor or Subcontractor Signature and Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor:

_____

Date:

Printed Name and Affiliation:

_____

Section C.2 – Operator Signature and Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative":

_____

Date:

Printed Name and Affiliation:

_____

SWPPP AMENDMENT LOG

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

Rainfall Gauge Recording

Use the table below to record the rainfall gauge readings at the beginning and end of each work day. An example table follows.

Month/Year			Month/Year			Month/Year		
Da	Start	End	Da	Start	End	Da	Start time	End time
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
10			10			10		
11			11			11		
12			12			12		
13			13			13		
14			14			14		
15			15			15		
16			16			16		
17			17			17		
18			18			18		
19			19			19		
20			20			20		
21			21			21		
22			22			22		
23			23			23		
24			24			24		
25			25			25		
26			26			26		
27			27			27		
28			28			28		
29			29			29		
30			30			30		
31			31			31		

APPENDIX D

NOTICE OF TERMINATION

NOT INSTRUCTIONS:

When the Site is Complete:

The NOT must be done electronically using EPA's NPDES eReporting Tool (NeT)
https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting

Send a copy of the signed NOI to Merit Professional so that we can make sure it is inserted in your SWPPP and a copy is in our files for future use.

Merit Professional
P.O. Box 271712
Flower Mound, Texas 75027

APPENDIX E

STRUCTURAL CONTROL SPECIFICATIONS/DETAILS AND MECHANICAL PRACTICES (BMPS)

City of Albuquerque Construction Site Manual
2018

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Construction Site Inspection Standards

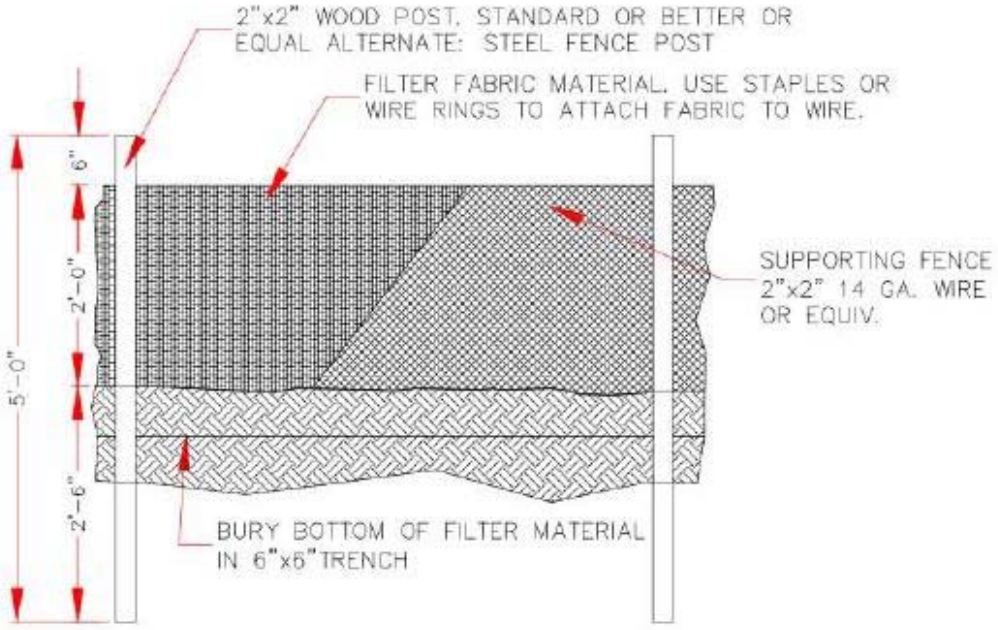
This Construction Site Inspection Manual is meant to set standards for BMPs, maintenance and corrective actions. It will reference the Construction General Permit. The primary objective of this manual is to provide a process for installation design, details and inspection criteria for Best Management Practices (BMP's) in accordance with good engineering practices.

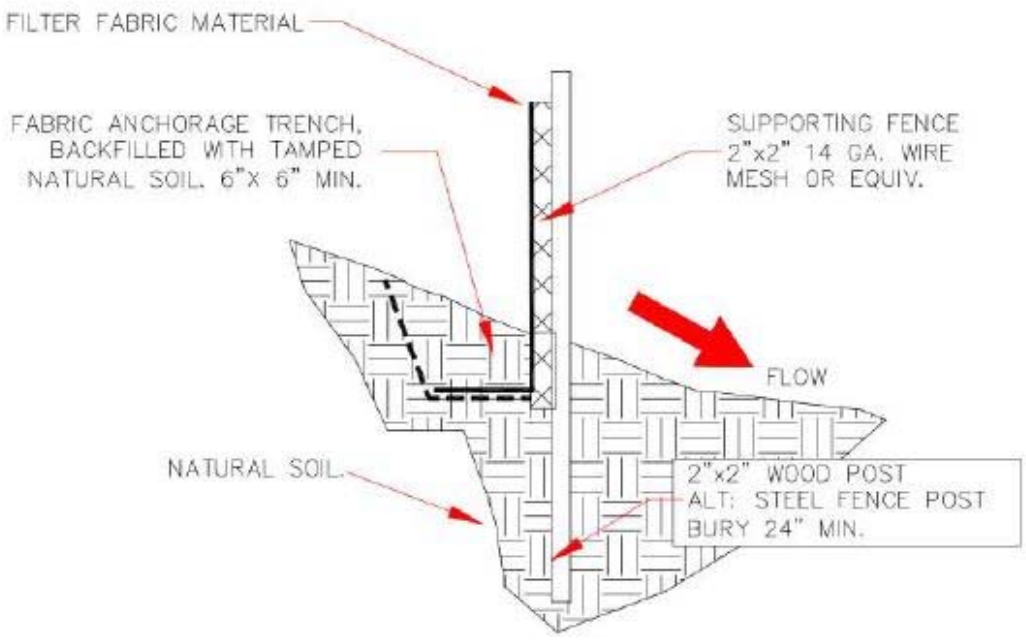
Effective Site Management should be considered prior to beginning a project.

- Clear only what is required for immediate construction activity.
- Mass clearing and grading should be avoided.
- Avoid disturbing sensitive areas such as steep or unstable slopes, surface waters or existing drainage channels.
- Re-stabilize disturbed areas as soon as possible after construction is completed.
- Make sure all workers understand the major provisions of the erosion and sediment control plan.

Sediment BMPs:
The most common sediment BMPs are: silt fence and mulch/filter sock. A sediment BMP is to trap sediment, but let stormwater pass through. Straws wattles are primarily an erosion control BMP, but may be effective for inlet protection in a sump condition as they do not allow water to pass through. The water has to go over the wattle.

Silt fence:
Silt fence is to be installed per the following detail shown on the following page.





Wire mesh is not required, but it is recommended as it will help prevent tearing due to increased wind speed.

Silt fence is to be buried approximately 6 inches. The soil backfill is to be compacted.
Poles are to be 2" X 2" wood or metal "T" or "U" posts. Pole spacing is not to exceed 10 feet between poles in straight-run sheet flow areas. Where the silt fence goes around a corner and if there is a low corner at the site the poles should be spaced approximately 6 feet apart or closer.
If concentrated flow may drain towards the silt fence, then the velocity should be slowed down prior to contacting the fence. Straw wattles, mulch socks, cobbles or a berm can be used to minimize the velocity.
Poles are to be buried approximately 2 feet deep. A deep bury is important to support soil, water and wind loads.

1. Fence is to be installed on the down-slope area of the site or wherever the disturbed grade on-site is higher than the existing grade/top of curb of the adjacent property/street. Silt fence can also be installed along streams, channels, and perimeters of projects.
2. Silt fence is required to be buried. Pull up on the silt fence. It should not move more than ½ inch. It should not lift out of the soil.
3. Silt Fence is not created for use in high velocity situations where flow is heavily concentrated such as a channel.

Gap between silt fence and the ground. Sometimes placing a mulch sock in this location is the easiest way to mitigate this condition.

Silt fence is not buried.

4. There should be no tears or holes in the bottom ½ of the silt fence.

Silt fence torn below half the height.

5. The grade shall not be higher than halfway up the silt fence and the silt fence shall not be bulging regardless of sediment height against the silt fence.

Silt fence is too full. Dirt is to be removed from behind the fence.

Silt fence is too full. Dirt is to be removed from behind the fence.

6. There shall be no gaps in the silt fence. The silt fence is to be continuous.

Silt fence is not continuous.

Gap in silt fence. Silt fence should have been extended to the block wall. This corner is a drainage outfall for the site.

7. If silt fence is run across an impervious surface (e.g. concrete or asphalt) an additional BMP is to be laid at the bottom of the silt fence to seal the bottom of the fence with the impervious surface.

Silt fence installed across an impervious surface.

8. Check the stability of the poles by applying a light (5 to 10 pounds) force to them. The pole should not move at all.

Silt fence installed with ¾" x ¾" poles that are not strong and these poles were not adequately buried.

Typical result when silt fence is installed with small (3/4" x ¾") poles spaced too far apart.

Silt fence installation with numerous issues: not buried, poles are not strong enough, fence is not taught and it is not buried. Reinstallation of this silt fence or installation of another sediment BMP is required.

Mulch Socks/Filter Socks:
Mulch socks and filter socks are the same thing. In general, they are sock material filled with wood chips. They can also be filled with gravel, in which they are called rock socks.

1. The sock is to be set in the ground and sometimes staked so that it will not move when the stormwater drains into it. Socks on grades steeper than 2.0% are to be staked.
2. Sediment shall not be higher than halfway up the sock.
3. Debris shall not be higher than the top of the sock.
4. Flow shall not go under or around a sock.

Flow undercutting beneath the filter sock. Sock was not staked down.

Flow under rock sock at joint. If it was turned uphill and overlapped the silt fence, it may not have leaked.

The following photos show acceptable examples of installing this type of BMP.

Mulch sock installed around a gravel pile in the street.

Mulch sock installed in front of a pipe that drains out of a pond.

Mulch socks installed to catch sediment draining downhill behind the curb and to reduce the velocity of the water. This area should have been stabilized.

Filter socks installed on a slope to prevent erosion. This area should have been stabilized.

Mulch sock installed at bottom of silt fence to “seal” on an impervious surface.

Vehicle Tracking Control:
Vehicle tracking control is a BMP installed to prevent sediment from being tracked offsite/into the street. Most Operators use an aggregate pad (track-out pad) with geotextile fabric below it to prevent the aggregate from being pushed into the dirt. Geotextile fabric is generally placed 6-12 inches below the top of track-out-pad and with aggregate 3-6 inches in diameter.

Aggregate track-out pad. Note construction fence to prevent bypass.

Metal grate types of this BMP are also effective at removing sediment. They are used in conjunction with an aggregate track-out pad.

1. The grate should cause the vehicle to bounce. Usually these are used in conjunction with an aggregate track-out pad.
2. The grate should not be full of dirt.
3. The grate shall prevent track-out.

Metal grate type of Vehicle tracking control BMP with aggregate.

For aggregate track-out pads:

1. The majority of the aggregate should be visible. The track-out pad is to prevent track-out,

Track-out pad requires maintenance. Not enough aggregate is available for track-out control. Replenish or replace aggregate as it becomes clogged with sediment.

2. There should be no bypass. Bypass is evident if there are tire tracks outside of the aggregate.

Vehicle bypassing track-out pad.

3. Track-out pad shall be long enough to prevent track-out.

Track-out pad is too short. In addition, fine material was tracking-out onto the street.

4. There shall not be a dirt area between the aggregate and the roadway/curb.

5. The track-out pad shall prevent track-out. If track-out exists, the following adjustments are to be made: increase the length of the aggregate and/or change the size of the aggregate. It may help to: drive forward on the track-out pad, back-up, then exit the site. This method increases the effective length of the track-out pad
6. If the site is very muddy and vehicles are causing heavy track-out, then vehicles are to not leave and return repetitively until site conditions improve.
7. Track-out is rated as: none, minor, medium and heavy. There may be a minor amount of track-out even if documented as “none”. All other ratings require removal of the sediment.
8. Track-out is not to be washed into roadway or surrounding inlets/storm drains.

This amount of track-out was rated as minor.

This amount of track-out was rated as medium. Medium track-out will be thicker and be further from the site than minor track-out.

This amount of track-out was rated as heavy. Heavy track-out is thicker, covers most of the roadway and extends further from the site than medium track-out.

The Operator of a site with heavy track-out will receive a Violation Letter. Street should be swept regularly to mitigate excessive track out.

Example of a muddy site, wherein, vehicles shall not be entering the roadway except to leave the job site for the day. The contractor at this project shut down receiving dirt trucks for the day.

Using a paved surface for Vehicle Tracking Control:
1. In some instances, there is a long paved surface to drive on prior to leaving the site. This can be used for track-out as long as it is preventing track-out and it is not downhill to the Public roadway.
2. In general, length of the paved surface should be at least 100 feet long to prevent track-out.
3. The paved surface is to be swept on a regular basis

How much sediment is allowed in a street?

Very little sediment is allowed in a City street, where, when exposed to stormwater can be transported into the City's drainage system.

Too much sediment in the street.

Another photo of too much sediment in the street.

Single family residential project with too much sediment in the street.
The drain to the street is shown in the top of the picture.

If this was the only sediment in the street, it would be acceptable. This does not mean the sediment BMP on the lot is acceptable.

Inlet protection allows the Operator to have more sediment in the street than if there is no inlet protection. The amount allowed is the amount that would not plug the inlet protection in one storm event.
Dirt shall not be taken from the site and placed into the street without a sediment BMP. If there is equal opportunity to place it on a non-impervious surface, this is preferred to placing the dirt in the street with a sediment BMP.

Dirt placed in street when digging around pull boxes.

Dirt Ramps:

Dirt ramps shall not be constructed in a street/gutter where stormwater can transport the material in to the City's drainage system.

Dirt ramp used for access to the site.

If access is required the following methods are acceptable:
1. The preferred method is to cut the curb, so a ramp is not required. If the curb cut is in the same location as the future entrance/exit, this minimizes the amount of work to be done.
2. Place cold-mix asphalt in the gutter. Asphalt is not to extend past the gutter into the paved portion of the roadway.

Cold-mix asphalt ramp used for accessing the site.

3. Lay lumber parallel to the curb. This method is not to be used on high speed (35MPH and greater) roads due to a car may drive into it.

Lumber laid parallel to the curb to create a ramp to access the site.

4. Some contractors have built ramps from lumber that are triangular- shaped.

Ramps constructed of plywood to create a ramp for accessing the site.

Note: Any injury or property damage to a motorist, cyclist or pedestrian due to the installation of a ramp is the responsibility of the contractor/property owner.

Inlet Protection:

The proper inlet protection shall be used and maintained to prevent sediment and wastes from entering the City's drainage system and shall minimize the risk of flooding. The type of inlet protection utilized shall depend on the inlet type, slope and volume of flow.
Inlet protection should be used not only for inlets/storm drains within the construction site/disturbed area but also any inlets/storm drains outside the project area that may receive stormwater discharges from the construction site/disturbed area.

In residential subdivisions where there are inlets internal to the construction site, the style of inlet protection should change as the site is developed. This is due to initially there is less drainage and more exposed dirt, then as streets and houses are constructed, there is more drainage and less exposed dirt.

When the site is mostly dirt (no houses) a more restrictive style of inlet protection shall be used that protects the throat and the grate. As more houses are built and there is less exposed dirt, a

less-restrictive style shall be used that catches sediment in the gutter but does not cover the throat or the grate of the inlet.

1. Straw wattles are only to be used if the inlet is located in a low-spot (sump) and the water can go over the straw wattle and not bypass the inlet.
2. For inlets that are flush with the grade (e.g. Type “D” or area drain) the inlet shall be covered with a mat-type of BMP that is tied to the grate of the inlet.
3. For inlets with a throat opening and a grate, the inlet shall be protected with a BMP that covers the throat and the grate.
4. Rock bags or mulch socks can be placed in the gutter upstream of the inlet when the site meets the criteria to use a less-restrictive style of inlet protection as discussed above.
5. Inlet protection constructed of silt fence surrounding the inlet may be used when the inlet is surrounded by dirt so that the stakes can be pounded in.

Inspection Criteria:
1. The inlet protection shall be able to let water drain through.
2. For mat-type inlets, at least 50% of the mat area must not be covered with sediment and debris.
3. For throat type of inlet protection, the sediment shall not be higher than halfway up the mulch sock.
4. For a one-piece style of BMP, at least 50% of the area must not be covered with sediment and debris.

One-piece inlet protection BMP for an inlet with a grate and a throat.

Cocoa mat grate cover with mulch sock covering the throat. It is working, but the Operator was informed it required maintenance due to the amount of sediment on the mat and upstream of the BMP.

Rock bags used for inlet protection. Photo was taken during a rain event.

Cocoa mat used for grate and throat.

Inlet protection requires maintenance since sediment is to the top of one rock bag and the bags no longer form a “T”.

Open storm drains are considered an inlet and require protection. This also includes storm drains that are not actively being worked on.

Mulch sock used for inlet protection.

Silt fence style of inlet protection. This Operator also used large aggregate to reduce the velocity of the flow.

Another application of using silt fence for inlet protection.

Filter sock is to be replaced since sock is torn.

Filter sock is protecting the grate, but not the throat of the inlet. Basically it is not working.

Inlet protection requires maintenance since grate is more than half-full of sediment.

Berms

Earthen berms can be used to direct or to pond stormwater. If a berm is constructed it is to be compacted. If a berm is not compacted, it will get blown-out and contribute additional sediment into the drainage system. Adequate compaction should be able to be obtained by driving earth-moving equipment on the berm.

Inspection criteria:
The berm should be compacted such that the inspector does not sink into it when walking on it. Uncompacted berms shall not be built.

Uncompacted berm got “Blown-out” during a storm.

Arroyo and Channel Construction:

When working in or adjacent to an arroyo or concrete channel, loose soil shall not be stockpiled or left in the low-flow area of the arroyo or channel. A berm or a similar BMP is to be constructed to divert flow into a low-flow area.

If there are active storm drains in the work zone, an energy dissipator is to be constructed at the pipe outfall to slow the velocity of the stormwater to less than 3 ft/sec at the end of the dissipator. A plunge pool constructed of large aggregate is the most common form of energy dissipation.

If there is an arroyo or channel draining into the work zone, an energy dissipator is to be constructed upstream of the confluence to slow the velocity of the stormwater to less than 3 ft/sec at the end of the dissipator. A plunge pool constructed of large aggregate is the most common form of energy dissipation. There are equations that can be used for sizing the energy dissipator and the aggregate. They are based upon methods provided by the USBR and FHWA.

Energy dissipation (plunge pool) for slowing the velocity of water entering the arroyo under construction. This one could have used more aggregate, but it was still functional.

Energy dissipator for large storm drains

Rasping Styrofoam:

A common construction activity is to place Styrofoam on the exterior of a building prior to applying stucco. The Styrofoam is rasped to level it out and to roughen the surface prior to applying stucco. The rasping process creates lots of small pieces of Styrofoam which are easily transported by wind.
Two BMPs help contain the small pieces of Styrofoam. One is to hang sheathing/plastic on the exterior of the building to help minimize transport of the Styrofoam. The other BMP is to vacuum it after it hits the ground/surface.

Rasped Styrofoam on the ground.

Inspection criteria:
Rasped material is to be removed during the rasping and not it is not allowed to accumulate.
95% of the rasped material is to be removed from the ground/surface by vacuuming.

Rasped Styrofoam is not to leave the site or enter stormwater conveyances of any kind.
If the rasped material is leaving the site by wind, the process should be stopped until the wind subsides.

Plastic sheathing used to contain Styrofoam during rasping.

Painting/Spray Painting:

If items are to be painted outside the building, a tarp or similar is to be used to prevent paint from falling on a surface where it can be transported by stormwater. “Mix paint indoors, or in a containment area. Never clean paintbrushes or rinse paint containers into a street, gutter, storm drain or watercourse.
Dispose of any paint thinners, residue and sludge(s), that cannot be recycled, as hazardous waste. For water-based paint, clean brushes to the extent practical, and rinse to a drain leading to a sanitary sewer where permitted, or into a concrete washout pit. For oil-based paints, clean brushes to the extent practical and filter and reuse thinners and solvents.” (Caltrans 2003)

A tarp or similar shall be used under the item to be painted.

Oiling Forms:

When oiling forms, the process is to be performed inside the building or over a tarp or similar to prevent oil from falling on a surface where it can be transported by stormwater.
General BMP for coatings:
When applying a coating of material this operation is to be performed indoors or over a tarp or similar. The only liquid to contact the ground is clean water.

Wash-out

Designated washout areas should be provided for any concrete, stucco, mortar or paint operations. Washout areas should be designated with signage and located as far away as possible from waters of the U.S., storm water inlets, or conveyances. "Wash-out should be directed to leak-proof containers or leak proof and lined pit designed so that no overflows can occur due to inadequate sizing or precipitation. (CGP, 2017)."

If the stucco/concrete/mortar is firm when it contacts the soil it is not considered wash-out. This is because it is not wet enough to infiltrate into the soil and then be carried away by stormwater. Examples of where this may occur is applying stucco to a building or mortaring joints when constructing a CMU wall.

A centralized wash-out may be effective for concrete trucks. Examples include a lined-pit or roll-off container. Inspect the roll-off container to see if it is leaking. Some have had a long life and leak. A leaking wash-out facility is not acceptable.

All wash-out material is to be inside the pit or roll-off. Missing the pit or roll-off container is the same as not using it.

Lined-pit wash-out.

Roll-off style of wash-out facility. This container also has ramps so the pump can also be discharged into the roll-off.

These roll-off wash-out containers were lowered for easier access.

This wash-out lined pit is too full and is no longer effective.

This wash-out pit is clearly full and requires replacement.

It has been noted on numerous inspections that a centralized wash-out is ineffective for stucco, mortar and paint wash-outs as it is generally too far for the contractor to walk to use the BMP. A local wash-out should be used for these operations. The best BMP for stucco, mortar, paint and grout is for the Operator to have a program in place, including education.

Localized wash-out boxes.

Same area as shown in the photo above prior to installation of localized wash-out boxes and training contractors to use it.

If a wash-out occurs at the site, the Operator is expected to remove it the same day. The wash-out material as well as the wetted soil are to be removed and disposed of appropriately.

Mortar and Stucco mixing.
It is possible to mix stucco or mortar without the wet material contacting the ground, but it takes great care and is rarely observed. If wet stucco or mortar contact the ground near due to mixing, this is considered wash-out.

Mortar towers shall have a liner beneath them to prevent the wet mortar from contacting the soil.

Mortar towers with plastic beneath as a BMP.

Construction Debris and litter

Construction debris is material that is a byproduct of the construction process. Examples include sheetrock and lumber.

Litter (domestic waste) is material that is discarded as the owner of the material did not wish to dispose of the material properly. Examples include: water bottles, soda cans and burrito wrappers. This may be due to a convenient trash receptacle was not provided. In general, a worker will not walk more than 50 feet to dispose of litter properly. Therefore, trash receptacles shall be placed in convenient locations around the construction site. Training may also be required. An example for the single family residential home building is a trash receptacle between each house or at each house.

Some consideration of the Operator's process for handling construction debris may be granted, but no consideration is granted for litter.

Construction and domestic waste are to be placed in a leak-proof container and not exposed to stormwater by means of a tarp of secondary containment may be used.

Tarp partially covering waste container. In case of precipitation, the tarp can be pulled over the entire.

Street Work

Most development projects involve construction in the street or construction of a street. Streets in Albuquerque are designed to be a conveyance of stormwater. In addition they also convey nuisance waters and contractor induced water (fire hydrant testing, etc…). Therefore, a storm is not necessary for drainage to be present in the gutter/street.

Transverse (90 degrees to direction of travel) Street Cuts
It is common to have to cut the street to construct a water or sewer line. The BMP to use for Transverse street cuts is to place the excavated soil on the uphill side of the street cut. If the street is flat (no uphill) a filter sock or similar shall be placed at the toe of the dirt pile, if rain is imminent or water from another source is present.

Longitudinal (in the direction of travel) Street cuts

The project may require a longitudinal street cut. Since most City streets have a cross-slope, the drainage will be towards the gutter pan. A filter sock or rock bag shall be placed in the gutter pan to catch any sediment that may leave the work area.

Constructing a portion of a street.
It is common that the development project will have to construct half a street section along the frontage of the project. The same BMP(s) used for Longitudinal Street Cuts shall be used. (cc)

Cutting Curbs

It is common to have to cut the curb. The cutting machine uses water, so drainage is present. The byproduct of cutting curbs is similar to wash-out and is treated as such. It is to be placed in a wash-out container. (cc)

Wash-out from curb-cutting operation.

Open storm drain pipes during storm drain construction- protect when not actively working on them(cc)

Future Material and Acknowledgements

At the time of publication of this manual, it was known that it is not complete and apparent that it would require updates at regular intervals. Rather than waiting, it seemed prudent to publish the document to help Operators with compliance at their construction sites.

An update will most likely occur an annual basis.

Two topics that will be included in the update(s) are stabilization and covering of building material.

If you have any questions/comments on the material in this document, please contact Curtis Cherne in Stormwater Quality at 924-3420, ccherne@cabq.gov.

I would like to thank the following contributors:

Tim Slatunas	Green Globe Environmental, LLC
Kelley Fetter	E2RC
Lauren Jennings	814 Solutions, LLC
Grant Morrison	Inspections Plus, Inc.

APPENDIX F

Spill Response Plan

Project Name: Albuquerque School of Excellence

Important phone numbers to call in case of a spill:

For spills of any quantity -

- 911 (if immediate danger to life or health)
- Site Superintendent / Emergency Coordinator: Jesse Duarte 575-915-7217
- Qualified Emergency Response Contractor

Spill Response Experts (888) 681-5535 (Nationwide – 24 Hrs. /Emergency)
TAS Environmental Services (888) 654-0111 (all areas - 24 Hrs. /Emergency)

For spills that exceed the reportable quantity (per federal and state regulations), also contact:

EPA National Response Center: (800) 424-8802
New Mexico Emergency Spill Reporting Line: (505) 827-9329
National Pollutant Discharge Elimination System(NPDES) (800) 832-8224

Reportable Quantities		
Material	**Quantity**	**Location**
Diesel fuel, oil, brake fluid	25 gallons	Land
Diesel fuel, oil, brake fluid	Visible Sheen	Water
Concrete mix	Ten 40-lb bags	Land
Paint	Three 5-gallon buckets	Land
Antifreeze, battery acid	100 lbs. (13 gal.)	Land
Refrigerant	1 lb.	Air

Prevention

The following steps will be taken to prevent spills from occurring:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and chemicals will be stored properly when not in use. Fuel tanks shall be located within a properly functioning secondary containment system.

Spill Response and Control

Corrective actions shall take place immediately after a spill occurs or immediately upon discovery by following these steps:

- Assess the spill - Determine the character, exact source, and amount of any released materials and make a determination regarding steps required to safeguard personnel (i.e. evacuation, personal protection equipment, etc.)
- Stop the flow at the source - After all required safety-related measures have been implemented, steps will be implemented to prevent further releases to the extent possible by cutting off the flow at the source. This may simply require shutting off a valve or the righting of a drum.
- Spill containment – Implement containment procedures by using portable booms, sand bags, and absorbent material around the spill to prevent discharges from contaminating a larger area and/or entering storm drains and outfalls.

Spill Cleanup

Refer to the Material Safety Data Sheets for specific cleanup and removal recommendations. Depending upon the nature and extent of the release, the following procedures will be utilized:

- Where applicable spilled material should be retrieved, and stored in leak-proof containers until proper disposal may be accomplished.
- Whenever possible, dry cleanup methods, such as sweeping and absorbents will be utilized.
- If dry cleanup methods are not practicable, booms will be used to prevent the release of the substance to the storm sewer system.
- If appropriate, liquids generated by spills and cleanup activities will divert to the sanitary sewer system. If the substance is inappropriate for the sanitary sewer system, a contractor will be employed to remove the substance.
- Contaminated equipment should be properly decontaminated or properly disposed.
- Dispose of contaminated material - Contaminated material shall be disposed of in accordance with all federal, state, and local regulations. Exact means of disposal will depend upon the nature & volume of the contaminated material.

APPENDIX G

NPDES GENERAL PERMIT NUMBER RELATING TO DISCHARGES FROM CONSTRUCTION ACTIVITIES

National Pollutant Discharge Elimination System (NPDES)
Construction General Permit (CGP) for Stormwater Discharges from Construction Activities

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et. seq., (hereafter CWA), as amended by the Water Quality Act of 1987, P.L. 100-4, "operators" of construction activities (defined in Appendix A) that meet the requirements of Part 1.1 of this National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP), are authorized to discharge pollutants in accordance with the effluent limitations and conditions set forth herein. Permit coverage is required from the "commencement of construction activities" (see Appendix A) until one of the conditions for terminating CGP coverage has been met (see Part 8.2).

This permit becomes effective on 12:00 am, February 17, 2022.

This permit and the authorization to discharge expire at 11:59pm, February 16, 2027.

Signed and issued this 18 day of January 2022

DEBORAH SZARO
Digitally signed by DEBORAH SZARO
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Deborah Szaro,
Acting Regional Administrator, EPA Region 1.

Signed and issued this 18 day of January 2022

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CHARLES MAGUIRE
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1 HOW TO OBTAIN COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT (CGP)

To be covered under this permit, you must meet the eligibility conditions and follow the requirements for obtaining permit coverage in this Part.

1.1 ELIGIBILITY CONDITIONS

1.1.1 You are an "operator" of a construction site for which discharges will be covered under this permit. For the purposes of this permit and in the context of stormwater discharges associated with construction activity, an "operator" is any party associated with a construction project that meets either of the following two criteria:

a. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

b. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Where there are multiple operators associated with the same project, all operators must obtain permit coverage.[1] Subcontractors generally are not considered operators for the purposes of this permit.

1.1.2 Your site's construction activities:

a. Will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale (as defined in Appendix A) that will ultimately disturb one or more acres of land; or

b. Have been designated by EPA as needing permit coverage under 40 CFR § 122.26(a)(1)(v) or 40 CFR § 122.26(b)(15)(ii);

1.1.3 Your site is located in an area where EPA is the permitting authority and where coverage under this permit is available (see Appendix B);

1.1.4 Discharges from your site are not:

a. Already covered by a different NPDES permit for the same discharge; or

b. In the process of having coverage under a different NPDES permit for the same discharge denied, terminated, or revoked.[2, 3]

1.1.5 You can demonstrate you meet one of the criteria in the Endangered Species Protection section of the Notice of Intent (NOI) that you submit for coverage under this permit, per Part 1.4, with respect to the protection of Federally listed endangered or threatened species and Federally designated critical habitat under the Endangered Species Act

[1] If the operator of a "construction support activity" (see Part 1.2.1c) is different than the operator of the main site, that operator must also obtain permit coverage. See Part 7.1 for clarification on the sharing of permit-related functions between and among operators on the same site and for conditions that apply to developing a SWPPP for multiple operators associated with the same site.

[2] Parts 1.1.4a and 1.1.4b do not include sites currently covered under the 2017 CGP that are in the process of obtaining coverage under this permit, nor sites covered under this permit that are transferring coverage to a different operator.

[3] Notwithstanding a site being made ineligible for coverage under this permit because it falls under the description of Parts 1.1.4a or 1.1.4b, above, EPA may waive the applicable eligibility requirement after specific review if it determines that coverage under this permit is appropriate.

(ESA). If the EPA Regional Office grants you a waiver from electronic reporting per Part 1.4.2, you must complete the ESA worksheet in Appendix D to demonstrate you meet one of the criteria and submit it with your paper NOI (Appendix I).

1.1.6 You have completed the screening process in Appendix E relating to the protection of historic properties; and

1.1.7 You have complied with all requirements in Part 9 imposed by the applicable State, Indian Tribe, or Territory in which your construction activities and/or discharge will occur.

1.1.8 For "new sources" (as defined in Appendix A) only:

a. EPA has not, prior to authorization under this permit, determined that discharges from your site will not meet applicable water quality standards. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures designed to bring your discharge into compliance with this permit, specifically the requirement to meet water quality standards. In the absence of information demonstrating otherwise, EPA expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part 3, will result in discharges that meet applicable water quality standards.

b. Discharges from your site to a Tier 2, Tier 2.5, or Tier 3 water[4] will not lower the water quality of the applicable water. In the absence of information demonstrating otherwise, EPA expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part 3.2, will result in discharges that will not lower the water quality of such waters.

1.1.9 If you plan to add "cationic treatment chemicals" (as defined in Appendix A) to stormwater and/or authorized non-stormwater prior to discharge, you may not submit your NOI until you notify your applicable EPA Regional Office (see Appendix J) in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will result in discharges that meet applicable water quality standards.

[4] Note: Your site will be considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first receiving water to which you discharge is identified by a State, Tribe, or EPA as a Tier 2, Tier 2.5, or Tier 3 water. For discharges that enter a storm sewer system prior to discharge, the first receiving water to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system. The current list of Tier 2, Tier 2.5, and Tier 3 waters located in the areas eligible for coverage under this permit can be found at https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates. You can also use EPA's Discharge Mapping Tool (https://www.epa.gov/npdes/epas-stormwater-discharge-mapping-tools) to assist you in identifying whether any receiving waters to which you discharge are listed as impaired (and the pollutant for which it is impaired) and whether an approved total maximum daily load (TMDL) exists for that waterbody.

1.2 TYPES OF DISCHARGES AUTHORIZED[5]

1.2.1 The following stormwater discharges are authorized under this permit provided that appropriate stormwater controls are designed, installed, and maintained (see Parts 2 and 3):

- **a.** Stormwater discharges, including stormwater runoff, snowmelt runoff, and surface runoff and drainage, associated with construction activity under 40 CFR § 122.26(b)(14) or § 122.26(b)(15)(i);
- **b.** Stormwater discharges designated by EPA as needing a permit under 40 CFR §122.26(a)(1)(v) or § 122.26(b)(15)(ii);
- **c.** Stormwater discharges from on or off-site construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided that:
  - **i.** The support activity is directly related to the construction site required to have permit coverage for stormwater discharges;
  - **ii.** The support activity is not a commercial operation, nor does it serve multiple unrelated construction sites;
  - **iii.** The support activity does not continue to operate beyond the completion of the construction activity at the site it supports; and
  - **iv.** Stormwater controls are implemented in accordance with Part 2 and Part 3 for discharges from the support activity areas; and
- **d.** Stormwater discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining.

1.2.2 The following non-stormwater discharges associated with your construction activity are authorized under this permit provided that, with the exception of water used to control dust and to irrigate vegetation in stabilized areas, these discharges are not routed to areas of exposed soil on your site and you comply with any applicable requirements for these discharges in Parts 2 and 3:

- **a.** Discharges from emergency fire-fighting activities;
- **b.** Fire hydrant flushings;
- **c.** Landscape irrigation;
- **d.** Water used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes;
- **e.** Water used to control dust;
- **f.** Potable water including uncontaminated water line flushings;

[5] See "Discharge" as defined in Appendix A. Note: Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA Section 402(k) by disclosure to EPA, State, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the SWPPP, or during an inspection.

g. External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (as defined in Appendix A) (e.g., paint or caulk containing polychlorinated biphenyls (PCBs));

h. Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used. You are prohibited from directing pavement wash waters directly into any receiving water, storm drain inlet, or constructed or natural site drainage features, unless the feature is connected to a sediment basin, sediment trap, or similarly effective control;

i. Uncontaminated air conditioning or compressor condensate;

j. Uncontaminated, non-turbid discharges of ground water or spring water;

k. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated ground water; and

l. Uncontaminated construction dewatering water[6] discharged in accordance with Part 2.4.

1.2.3 Also authorized under this permit are discharges of stormwater listed above in Part 1.2.1, or authorized non-stormwater discharges listed above in Part 1.2.2, commingled with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

1.3 PROHIBITED DISCHARGES[7]

The discharges listed in this Part are prohibited outright or authorized only under the identified conditions. To prevent the discharges in Parts 1.3.1 through 1.3.5, operators must comply with the applicable pollution prevention requirements in Part 2.3 or ensure the discharge is authorized by another NPDES permit consistent with Part 1.2.3 for commingled discharges.

1.3.1 Wastewater from washout of concrete, unless managed by an appropriate control as described in Part 2.3.4;

1.3.2 Wastewater from washout and/or cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;

1.3.3 Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;

1.3.4 Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

1.3.5 Toxic or hazardous substances from a spill or other release.

[6] EPA notes that operators may need to comply with additional procedures to verify that the dewatering discharge is uncontaminated. Operators should review Part 9 to determine if any of these requirements apply to their discharge and should ensure that they have complied with any State, Tribal, or local dewatering requirements that apply.

[7] EPA includes these prohibited non-stormwater discharges here as a reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.2.2. Any unauthorized non-stormwater discharges must be covered under an individual permit or alternative general permit.

1.4 SUBMITTING YOUR NOTICE OF INTENT (NOI)

All "operators" (as defined in Appendix A) associated with your construction site who meet the Part 1.1 eligibility conditions, and who seek coverage under this permit, must submit to EPA a complete and accurate NOI in accordance with the deadlines in Table 1 prior to commencement of construction activities (as defined in Appendix A).

Exception: If you are conducting construction activities in response to a public emergency (e.g., mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services), and the related work requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services, you may discharge on the condition that a complete and accurate NOI is submitted within 30 calendar days after commencing construction activities (see Table 1) establishing that you are eligible for coverage under this permit. You must also provide documentation in your Stormwater Pollution Prevention Plan (SWPPP) to substantiate the occurrence of the public emergency pursuant to Part 7.2.3i.

1.4.1 Prerequisite for Submitting Your NOI

You must develop a SWPPP consistent with Part 7 before submitting your NOI for coverage under this permit.

1.4.2 How to Submit Your NOI

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit your NOI for coverage under the 2022 CGP unless you received a waiver from your applicable EPA Regional Office.

To access NeT, go to https://cdx.epa.gov/cdx.

Waivers from electronic reporting may be granted based on one of the following conditions:

a. If your operational headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission; or

b. If you have limitations regarding available computer access or computer capability.

If the EPA Regional Office grants you approval to use a paper NOI, and you elect to use it, you must complete the form in Appendix H.

1.4.3 Deadlines for Submitting Your NOI and Your Official Date of Permit Coverage

Table 1 provides the deadlines for submitting your NOI and the official start date of your permit coverage, which differ depending on when you commence construction activities.

Table 1 NOI Submittal Deadlines and Official Start Date for Permit Coverage.

Type of Operator	NOI Submittal Deadline[8]	Permit Authorization Date[9]
Operator of a new site (i.e., a site where construction activities commence on or after February 17, 2022)	At least 14 calendar days before commencing construction activities.	14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.
Operator of an existing site (i.e., a site with 2017 CGP coverage where construction activities commenced prior to February 17, 2022)	No later than May 18, 2022.	14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied. Provided you submit your NOI no later than May 18, 2022, your authorization under the 2017 CGP is automatically continued until you have been granted coverage under this permit or an alternative NPDES permit, or coverage is otherwise terminated.
New operator of a permitted site (i.e., an operator that through transfer of ownership and/or operation replaces the operator of an already permitted construction site that is either a "new site" or an "existing site")	At least 14 calendar days before the date the transfer to the new operator will take place.	14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.
Operator of an "emergency-related project" (i.e., a project initiated in response to a public emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services)	No later than 30 calendar days after commencing construction activities.	You are considered provisionally covered under the terms and conditions of this permit immediately, and fully covered 14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.

[8] If you miss the deadline to submit your NOI, any and all discharges from your construction activities will continue to be unauthorized under the CWA until they are covered by this or a different NPDES permit. EPA may take enforcement action for any unpermitted discharges that occur between the commencement of construction activities and discharge authorization.

[9] Discharges are not authorized if your NOI is incomplete or inaccurate or if you are not eligible for permit coverage.

1.4.4 Modifying your NOI

If after submitting your NOI you need to correct or update any fields, you may do so by submitting a "Change NOI" form using NeT. Waivers from electronic reporting may be granted as specified in Part 1.4.2. If the EPA Regional Office has granted you approval to submit a paper NOI modification, you may indicate any NOI changes on the same NOI form in Appendix H.

When there is a change to the site's operator, the new operator must submit a new NOI, and the previous operator must submit a Notice of Termination (NOT) form as specified in Part 8.3.

The following modifications to an NOI form will result in a 14-day review process:

- Changes to the name of the operator;
- Changes to the project or site name;
- Changes to the estimated area to be disturbed;
- Changes to the name of the receiving water[10], or additions to the applicable receiving waters;
- Changes to eligibility information related to endangered species protection or historic preservation;
- Changes to information provided related to the use of chemical treatment at your site; and
- Changes to answers provided regarding the demolition of structures over 10,000 square feet of floor space built or renovated before January 1, 1980.

During the 14-day review process, you may continue to operate based on the information provided in your original NOI, but you must wait until the review period has ended before you may commence or continue activities on any portion of your site that would be affected by any of the above modifications, unless EPA notifies you that the authorization is delayed or denied.

1.4.5 Your Official End Date of Permit Coverage

Once covered under this permit, your coverage will last until the date that:

a. You terminate permit coverage consistent with Part 8; or

b. You receive permit coverage under a different NPDES permit or a reissued or replacement version of this permit after expiring on February 16, 2027; or

c. You fail to submit an NOI for coverage under a reissued or replacement version of this permit before the deadline for existing construction sites where construction activities continue after this permit has expired.

1.5 REQUIREMENT TO POST A NOTICE OF YOUR PERMIT COVERAGE

You must post a sign or other notice of your permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice must be located so it is visible from the public road that is nearest to the active part of the construction

[10] As defined in Appendix A, a "receiving water" is "a "Water of the United States" as defined in 40 CFR §122.2 into which the regulated stormwater discharges.

site, and it must use a font large enough to be readily viewed from a public right-of-way.[11] At a minimum, the notice must include:

a. The NPDES ID (i.e., permit tracking number assigned to your NOI and the EPA webpage where a copy of the NOI can be found (https://permitsearch.epa.gov/epermit-search/ui/search));

b. A contact name and phone number for obtaining additional construction site information;

c. The Uniform Resource Locator (URL) for the SWPPP (if available), or the following statement: "If you would like to obtain a copy of the Stormwater Pollution Prevention Plan (SWPPP) for this site, contact the EPA Regional Office at [*include the appropriate CGP Regional Office contact information found at* https://www.epa.gov/npdes/contact-us-stormwater#regional];" and

d. The following statement "If you observe indicators of stormwater pollutants in the discharge or in the receiving water, contact the EPA through the following website: https://www.epa.gov/enforcement/report-environmental-violations."

2 TECHNOLOGY-BASED EFFLUENT LIMITATIONS

You must comply with the following technology-based effluent limitations in this Part for all authorized discharges.[12]

2.1 GENERAL STORMWATER CONTROL DESIGN, INSTALLATION, AND MAINTENANCE REQUIREMENTS

You must design, install, and maintain stormwater controls required in Parts 2.2, 2.3, and 2.4 to minimize the discharge of pollutants in stormwater from construction activities.[13] To meet this requirement, you must:

2.1.1 Account for the following factors in designing your stormwater controls:

a. The expected amount, frequency, intensity, and duration of precipitation;[14]

b. The nature of stormwater runoff (i.e., flow) and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. You must design stormwater controls to control stormwater volume, velocity, and peak flow rates to minimize discharges of pollutants in stormwater and to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points; and

c. The soil type and range of soil particle sizes expected to be present on the site.

[11] If the active part of the construction site is not visible from a public road, then place the notice of permit coverage in a position that is visible from the nearest public road and as close as possible to the construction site.

[12] For each of the effluent limits in Part 2, as applicable to your site, you must include in your SWPPP (1) a description of the specific control(s) to be implemented to meet the effluent limit; (2) any applicable design specifications; (3) routine maintenance specifications; and (4) the projected schedule for installation/implementation. See Part 7.2.6.

[13] The permit does not recommend or endorse specific products or vendors.

[14] Stormwater controls must be designed using the most recent data available to account for recent precipitation patterns and trends.

If your site is exposed to or has previously experienced major storms, such as hurricanes, storm surge, extreme/heavy precipitation, and flood events, you should also include consideration of and contingencies for whether implementing structural improvements, enhanced/resilient stormwater controls, and other mitigation measures may help minimize impacts from stormwater discharges from such major storm events.

2.1.2 Design and install all stormwater controls in accordance with good engineering practices, including applicable design specifications.[15]

2.1.3 Complete installation of stormwater controls by the time each phase of construction activities has begun.

a. By the time construction activity in any given portion of the site begins, install and make operational any downgradient sediment controls (e.g., buffers, perimeter controls, exit point controls, storm drain inlet protection) that control discharges from the initial site clearing, grading, excavating, and other earth-disturbing activities.[16]

b. Following the installation of these initial controls, install and make operational all stormwater controls needed to control discharges prior to subsequent earth-disturbing activities.

2.1.4 Ensure all stormwater controls are maintained and remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness.

a. Comply with any specific maintenance requirements for the stormwater controls listed in this permit, as well as any recommended by the manufacturer.[17]

b. If at any time you find that a stormwater control needs routine maintenance (i.e., minor repairs or other upkeep performed to ensure the site's stormwater controls remain in effective operating condition, not including significant repairs or the need to install a new or replacement control), you must immediately initiate the needed work, and complete such work by the close of the next business day. If it is infeasible to complete the routine maintenance by the close of the next business day, you must document why this is the case and why the repair or other upkeep to be performed should still be considered routine maintenance in your inspection report under Part 4.7.1c and complete such work no later than seven (7) calendar days from the time of discovery of the condition requiring maintenance.

c. If you must repeatedly (i.e., three (3) or more times) make the same routine maintenance fixes to the same control at the same location, even if the fix can be completed by the close of the next business day, you must either:

i. Complete work to fix any subsequent repeat occurrences of this same problem under the corrective action procedures in Part 5, including keeping any records

[15] Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practices and must be explained in your SWPPP. You must also comply with any additional design and installation requirements specified for the effluent limits in Parts 2.2, 2.3, and 2.4.

[16] Note that the requirement to install stormwater controls prior to each phase of construction activities for the site does not apply to the earth disturbance associated with the actual installation of these controls. Operators should take all reasonable actions to minimize the discharges of pollutants during the installation of stormwater controls.

[17] Any departures from such maintenance recommendations made by the manufacturer must reflect good engineering practices and must be explained in your SWPPP.

of the condition and how it was corrected under Part 5.4; or

ii. Document in your inspection report under Part 4.7.1c why the specific reoccurrence of this same problem should still be addressed as a routine maintenance fix under this Part.[18]

d. If at any time you find that a stormwater control needs a significant repair or that a new or replacement control is needed, you must comply with the corrective action deadlines for completing such work in in Part 5.2.1c.

2.2 EROSION AND SEDIMENT CONTROL REQUIREMENTS

You must implement erosion and sediment controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater from construction activities.

2.2.1 Provide and maintain natural buffers and/or equivalent erosion and sediment controls for discharges to any receiving waters that is located within 50 feet of the site's earth disturbances.

a. Compliance Alternatives. For any discharges to receiving waters located within 50 feet of your site's earth disturbances, you must comply with one of the following alternatives:

i. Provide and maintain a 50-foot undisturbed natural buffer; or

ii. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve, in combination, the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or

iii. If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

See Appendix F, Part F.2 for additional conditions applicable to each compliance alternative.

b. Exceptions. See Appendix F, Part F.2 for exceptions to the compliance alternatives.

2.2.2 Direct stormwater to vegetated areas and maximize stormwater infiltration and filtering to reduce pollutant discharges, unless infiltration would be inadvisable due to the underlying geology (e.g., karst topography) and ground water contamination concerns, or infeasible due to site conditions.[19]

[18] Such documentation could include, for example, that minor repairs completed within the required timeframe are all that is necessary to ensure that the stormwater control continues to operate as designed and installed and that the stormwater control remains appropriate for the flow reaching it.

[19] Operators should consider whether factors such as specific contaminant concerns from the construction site, the underlying soils or geology, hydrology, depth to the ground water table, or proximity to source water or wellhead protection area(s) make the site unsuitable for infiltrating construction stormwater. Site conditions that may be of particular concern include proximity to: a current or future drinking water aquifer; a drinking water well or spring (including private/household wells); highly conductive geology such as karst; known pollutant hot spots, such as hazardous waste sites, landfills, gas stations, brownfields; an on-site sewage system or underground storage tank; or soils that do not allow for infiltration. Operators may find it helpful to consult EPA's Drinking Water Mapping Application to Protect Source Waters (DWMAPS). DWMAPS is an online mapping tool that can be used to locate drinking water providers, potential sources of contamination, polluted waterways, and information on protection initiatives in the site area.

2.2.3 Install sediment controls along any perimeter areas of the site that are downslope from any exposed soil or other disturbed areas.[20]

a. The perimeter control must be installed upgradient of any natural buffers established under Part 2.2.1, unless the control is being implemented pursuant to Part 2.2.1a.ii-iii;

b. To prevent stormwater from circumventing the edge of the perimeter control, install the perimeter control on the contour of the slope and extend both ends of the control up slope (e.g., at 45 degrees) forming a crescent rather than a straight line;

c. After installation, to ensure that perimeter controls continue to work effectively:

i. Remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control; and

ii. After a storm event, if there is evidence of stormwater circumventing or undercutting the perimeter control, extend controls and/or repair undercut areas to fix the problem.

d. Exception. For areas at "linear construction sites" (as defined in Appendix A) where perimeter controls are infeasible (e.g., due to a limited or restricted right-of-way), implement other practices as necessary to minimize pollutant discharges to perimeter areas of the site.

2.2.4 Minimize sediment track-out.

a. Restrict vehicle use to properly designated exit points;

b. Use appropriate stabilization techniques[21] at all points that exit onto paved roads;

i. Exception: Stabilization is not required for exit points at linear utility construction sites that are used only episodically and for very short durations over the life of the project, provided other exit point controls[22] are implemented to minimize sediment track-out;

c. Implement additional track-out controls[23] as necessary to ensure that sediment removal occurs prior to vehicle exit; and

d. Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out

[20] Examples of perimeter controls include filter berms; different types of silt fence such as wire-backed silt fence, super silt fence, or multi-layer geotextile silt fence; compost filter socks; gravel barriers; and temporary diversion dikes.

[21] Examples of appropriate stabilization techniques include the use of aggregate stone with an underlying geotextile or non-woven filter fabric, and turf mats.

[22] Examples of other exit point controls include preventing the use of exit points during wet periods; minimizing exit point use by keeping vehicles on site to the extent possible; limiting exit point size to the width needed for vehicle and equipment usage; using scarifying and compaction techniques on the soil; and avoiding establishing exit points in environmentally sensitive areas (e.g., *karst areas; steep slopes)*.

[23] Examples of additional track-out controls include the use of wheel washing, rumble strips, and rattle plates.

sediment into any constructed or natural site drainage feature, storm drain inlet, or receiving water.[24]

2.2.5 Manage stockpiles or land clearing debris piles composed, in whole or in part, of sediment and/or soil:[25]

a. Locate the piles outside of any natural buffers established under Part 2.2.1 and away from any constructed or natural site drainage features, storm drain inlets, and areas where stormwater flow is concentrated;

b. Install a sediment barrier along all downgradient perimeter areas of stockpiled soil or land clearing debris piles;[26]

c. For piles that will be unused for 14 or more days, provide cover[27] or appropriate temporary stabilization (consistent with Part 2.2.14);

d. You are prohibited from hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any constructed or natural site drainage feature, storm drain inlet, or receiving water.

2.2.6 Minimize dust. On areas of exposed soil, minimize dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged in stormwater from the site.

2.2.7 Minimize steep slope disturbances. Minimize the disturbance of "steep slopes" (as defined in Appendix A).[28]

2.2.8 Preserve native topsoil, unless infeasible.[29]

2.2.9 Minimize soil compaction.[30] In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed:

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[24] Fine grains that remain visible (e.g., staining) on the surfaces of off-site streets, other paved areas, and sidewalks after you have implemented sediment removal practices are not a violation of Part 2.2.4.

[25] The requirements in Part 2.2.5 do not apply to the storage of rock, such as rip rap, landscape rock, pipe bedding gravel, and boulders. Refer to Part 2.3.3a for the requirements that apply to these types of materials.

[26] Examples of sediment barriers include berms, dikes, fiber rolls, silt fences, sandbags, gravel bags, or straw bale.

[27] Examples of cover include tarps, blown straw and hydroseeding.

[28] Where disturbance to steep slopes cannot be avoided, operators should consider implementing controls suitable for steep slope disturbances that are effective at minimizing erosion and sediment discharge (e.g., preservation of existing vegetation, hydraulic mulch, geotextiles and mats, compost blankets, earth dikes or drainage swales, terraces, velocity dissipation devices). To identify slopes and soil types that are of comparatively higher risk for sediment discharge in areas of the country where the CGP is in effect, operators can use the tables in Appendix F (see Tables F-2 thru F-6).

[29] Stockpiling topsoil at off-site locations, or transferring topsoil to other locations, is an example of a practice that is consistent with the requirements in Part 2.2.8. Preserving native topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed. For example, some sites may be designed to be highly impervious after construction, and therefore little or no vegetation is intended to remain, or may not have space to stockpile native topsoil on site for later use, in which case it may not be feasible to preserve topsoil.

[30] Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted.

a. Restrict vehicle and equipment use in these locations to avoid soil compaction; and

b. Before seeding or planting areas of exposed soil that have been compacted, use techniques that rehabilitate and condition the soils as necessary to support vegetative growth.

2.2.10 Protect storm drain inlets.

a. Install inlet protection measures that remove sediment from discharges prior to entry into any storm drain inlet that carries stormwater from your site to a receiving water, provided you have authority to access the storm drain inlet.[31] Inlet protection measures are not required for storm drain inlets that are conveyed to a sediment basin, sediment trap, or similarly effective control; and

b. Clean, or remove and replace, the inlet protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

2.2.11 Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.[32]

2.2.12 If you install a sediment basin or similar impoundment:

a. Situate the basin or impoundment outside of any receiving water. and any natural buffers established under Part 2.2.1;

b. Design the basin or impoundment to avoid collecting water from wetlands;

c. Design the basin or impoundment to provide storage for either:

i. The calculated volume of runoff from a 2-year, 24-hour storm;[33] or

ii. 3,600 cubic feet per acre drained.

d. Utilize outlet structures that withdraw water from the surface of the sediment basin or similar impoundment, unless infeasible;[34]

e. Use erosion controls and velocity dissipation devices to prevent erosion at inlets and outlets; and

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[31] Inlet protection measures can be removed in the event of flood conditions or to prevent erosion.

[32] Examples of stormwater controls that can be used to comply with this requirement include the use of erosion controls and/or velocity dissipation devices (e.g., check dams, sediment traps), within and along the length of a constructed site drainage feature and at the outfall to slow down stormwater.

[33] Operators may refer to https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates for guidance on determining the volume of precipitation associated with their site's local 2-year, 24-hour storm event.

[34] The circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include areas with extended cold weather, where using surface outlets may not be feasible during certain time periods (although they must be used during other periods). If you determine that it is infeasible to meet this requirement, you must provide documentation in your SWPPP to support your determination, including the specific conditions or time periods when this exception will apply.

f. Remove accumulated sediment to maintain at least one-half of the design capacity and conduct all other appropriate maintenance to ensure the basin or impoundment remains in effective operating condition.

2.2.13 If using treatment chemicals (e.g., *polymers, flocculants, coagulants*):

a. Use conventional erosion and sediment controls before and after the application of treatment chemicals. Chemicals may only be applied where treated stormwater is directed to a sediment control *(e.g., sediment basin, perimeter control)* before discharge.

b. Select appropriate treatment chemicals*.* Chemicals must be appropriately suited to the types of soils likely to be exposed during construction and present in the discharges being treated *(i.e., the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or area)*.

c. Minimize discharge risk from stored chemicals. Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures *(e.g., spill berms, dikes, spill containment pallets),* or provide equivalent measures designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means *(e.g., storing chemicals in a covered area, having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill)*.

d. Comply with State/local requirements. Comply with applicable State and local requirements regarding the use of treatment chemicals.

e. Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier. Use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals, or document in your SWPPP specific departures from these specifications and how they reflect good engineering practice.

f. Ensure proper training. Ensure all persons who handle and use treatment chemicals at the construction site are provided with appropriate, product-specific training prior to beginning application of treatment chemicals. Among other things, the training must cover proper dosing requirements.

g. Perform additional measures specified by the EPA Regional Office for the authorized use of cationic chemicals. If you have been authorized to use cationic chemicals at your site pursuant to Part 1.1.9, you must perform all additional measures as conditioned by your authorization to ensure the use of such chemicals will not result in discharges that do not meet water quality standards.

2.2.14 Stabilize exposed portions of the site. Implement and maintain stabilization measures (*e.g., seeding protected by erosion controls until vegetation is established,*[35] *sodding, mulching, erosion control blankets, hydromulch, gravel*) that minimize erosion from any areas of exposed soil on the site in accordance with Part.

[35] If you will be evaluating the use of some type of erosion control netting to the site as part of your site stabilization, EPA encourages you to consider employing products that have been shown to minimize

a. Stabilization Deadlines:[36]

Table 2 Deadlines for Initiating and Completing Site Stabilization.

Total Amount of Land Disturbance Occurring At Any One Time[37]	**Deadline**
i. Five acres or less (≤5.0) **Note: this includes sites disturbing more than five acres (>5.0) total over the course of a project, but that limit disturbance at any one time (i.e., *phase the disturbance*) to five acres or less (≤5.0)**	• Initiate the installation of stabilization measures immediately[38] in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;[39] and • Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days

impacts on wildlife. For instance, the U.S. Fish & Wildlife Service provides recommendations on the type of netting practices that are considered "wildlife friendly," including those that use natural fiber or 100 percent biodegradable materials and that use a loose weave with a non-welded, movable jointed netting, as well as those products that are not wildlife friendly including square plastic netting that are degradable (e.g., photodegradable, UV-degradable, oxo-degradable), netting made from polypropylene, nylon, polyethylene, or polyester. Other recommendations include removing the netting product when it is no longer needed. See https://www.fws.gov/midwest/eastlansing/library/pdf/WildlifeFriendlyErosionControlProducts_revised.pdf for further information. There also may be State, Tribal, or local requirements about using wildlife friendly erosion control products.

[36] EPA may determine, based on an inspection carried out under Part 4.8 and corrective actions required under Part 5.3, that the level of sediment discharge on the site makes it necessary to require a faster schedule for completing stabilization. For instance, if sediment discharges from an area of exposed soil that is required to be stabilized are compromising the performance of existing stormwater controls, EPA may require stabilization to correct this problem.

[37] Limiting disturbances to five (5) acres or less at any one time means that at no time during the project do the cumulative earth disturbances exceed five (5) acres. The following examples would qualify as limiting disturbances at any one time to five (5) acres or less:

1. The total area of disturbance for a project is five (5) acres or less.
2. The total area of disturbance for a project will exceed five (5) acres, but the operator ensures that no more than five (5) acres will be disturbed at any one time through implementation of stabilization measures. In this way, site stabilization can be used to "free up" land that can be disturbed without exceeding the five (5)-acre cap to qualify for the 14-day stabilization deadline. For instance, if an operator completes stabilization of two (2) acres of land on a five (5)-acre disturbance, then two (2) additional acres could be disturbed while still qualifying for the longer 14-day stabilization deadline.

[38] The following are examples of activities that would constitute the immediate initiation of stabilization:

1. Prepping the soil for vegetative or non-vegetative stabilization as long as seeding, planting, and/or installation of non-vegetative stabilization products takes place as soon as practicable, but no later than one (1) calendar day of completing soil preparation;
2. Applying mulch or other non-vegetative product to the exposed area;
3. Seeding or planting the exposed area;
4. Starting any of the activities in # 1 – 3 on a portion of the entire area that will be stabilized; and
5. Finalizing arrangements to have stabilization product fully installed in compliance with the deadlines for completing stabilization.

[39] The requirement to initiate stabilization immediately is triggered as soon as you know that construction work on a portion of the site is temporarily ceased and will not resume for 14 or more days, or as soon as you know that construction work is permanently ceased. In the context of this provision, "immediately" means as soon as practicable, but no later than the end of the next business day, following the day when the construction activities have temporarily or permanently ceased.

Total Amount of Land Disturbance Occurring At Any One Time[37]	Deadline
	after stabilization has been initiated.[40]
ii. More than five acres (>5.0)	• Initiate the installation of stabilization measures immediately[41] in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;[42] and • Complete the installation of stabilization measures as soon as practicable, but no later than seven (7) calendar days after stabilization has been initiated.[43]

b. Exceptions:

i. Arid, semi-arid, and drought-stricken areas (as defined in Appendix A)**.** If it is the seasonally dry period (as defined in Appendix A)[44] or a period in which drought is occurring, and vegetative stabilization measures are being used:

(a) Immediately initiate and, within 14 calendar days of temporary or permanent cessation of work in any portion of your site, complete the installation of temporary non-vegetative stabilization measures to the extent necessary to prevent erosion;

(b) As soon as practicable, given conditions or circumstances on the site, complete all activities necessary to seed or plant the area to be stabilized; and

(c) If construction is occurring during the seasonally dry period, indicate in your SWPPP the beginning and ending dates of the seasonally dry period and your site conditions. Also include the schedule you will follow for initiating and completing vegetative stabilization.

ii. Unforeseen circumstances. Operators that are affected by unforeseen circumstances[45] that delay the initiation and/or completion of vegetative stabilization:

[40] If vegetative stabilization measures are being implemented, stabilization is considered "installed" when all activities necessary to seed or plant the area are completed, including the application of any non-vegetative protective cover (e.g., mulch, erosion control blanket), if applicable. If non-vegetative stabilization measures are being implemented, stabilization is considered "installed" when all such measures are implemented or applied.

[41] See footnote 38.

[42] See footnote 39.

[43] See footnote 40.

[44] The term "seasonally dry period" as defined in Appendix A refers to a month in which the long-term average total precipitation is less than or equal to 0.5 inches. Refer to EPA's Seasonally Dry Period Locator Tool at https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates and supporting maps for assistance in determining whether a site is operating during a seasonally dry period for the area.

[45] Examples include problems with the supply of seed stock or with the availability of specialized equipment and unsuitability of soil conditions due to excessive precipitation and/or flooding.

(a) Immediately initiate and, within 14 calendar days, complete the installation of temporary non-vegetative stabilization measures to prevent erosion;

(b) Complete all soil conditioning, seeding, watering or irrigation installation, mulching, and other required activities related to the planting and initial establishment of vegetation as soon as conditions or circumstances allow it on your site; and

(c) Document in the SWPPP the circumstances that prevent you from meeting the deadlines in Part 2.2.14a and the schedule you will follow for initiating and completing stabilization.

iii. Discharges to a sediment- or nutrient-impaired water or to a water that is identified by your State, Tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes. Complete stabilization as soon as practicable, but no later than seven (7) calendar days after stabilization has been initiated.

c. Final Stabilization Criteria (for any areas not covered by permanent structures)**:**

i. Establish uniform, perennial vegetation *(*i.e.*, evenly distributed, without large bare areas)* to provide 70 percent or more of the vegetative cover native to local undisturbed areas; and/or

ii. Implement permanent non-vegetative stabilization measures[46] to provide effective cover of any areas of exposed soil.

iii. Exceptions:

(a) **Arid, semi-arid, and drought-stricken areas** (as defined in Appendix A). Final stabilization is met if the area has been seeded or planted to establish vegetation that provides 70 percent or more of the vegetative cover native to local undisturbed areas within three (3) years and, to the extent necessary to prevent erosion on the seeded or planted area, non-vegetative erosion controls have been applied to provide cover for at least three years without active maintenance.

(b) **Disturbed areas on agricultural land that are restored to their preconstruction agricultural use.** The Part 2.2.14c final stabilization criteria do not apply.

(c) **Areas that need to remain disturbed.** In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed, and only the minimum area needed remains disturbed *(*e.g.*, dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, materials)*.

2.3 POLLUTION PREVENTION REQUIREMENTS[47]

You must implement pollution prevention controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater and to prevent the discharge of pollutants from spilled or leaked materials from construction activities.

[46] Examples of permanent non-vegetative stabilization measures include riprap, gravel, gabions, and geotextiles.

[47] Under this permit, you are not required to minimize exposure for any products or materials where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

2.3.1 For equipment and vehicle fueling and maintenance:

a. Provide an effective means of eliminating the discharge of spilled or leaked chemicals, including fuels and oils, from these activities;[48]

b. If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR part 112 and Section 311 of the CWA;

c. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids;

d. Use drip pans and absorbents under or around leaky vehicles;

e. Dispose of or recycle oil and oily wastes in accordance with other Federal, State, Tribal, or local requirements; and

f. Clean up spills or contaminated surfaces immediately, using dry clean up measures (do not clean contaminated surfaces by hosing the area down), and eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

2.3.2 For equipment and vehicle washing:

a. Provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of wash waters;[49]

b. Ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water; and

c. For storage of soaps, detergents, or solvents, provide either (1) cover *(*e.g., *plastic sheeting, temporary roofs)* to minimize the exposure of these detergents to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.

2.3.3 For storage, handling, and disposal of building products, materials, and wastes:[50]

a. *For building materials and building products*,[51] provide either (1) cover (e.g., *plastic sheeting, temporary roofs*) to minimize the exposure of these products to

[48] Examples of effective means include:

- Locating activities away from receiving waters, storm drain inlets, and constructed or natural site drainage feature so that stormwater coming into contact with these activities cannot reach waters of the U.S.;
- Providing secondary containment (e.g., *spill berms, dikes, spill containment pallets*) and cover where appropriate; and
- Having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill.

[49] Examples of effective means include locating activities away from receiving waters and storm drain inlets or constructed or natural site drainage features and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls.

[50] Compliance with the requirements of this permit does not relieve compliance requirements with respect to Federal, State, or local laws and regulations governing the storage, handling, and disposal of solid, hazardous, or toxic wastes and materials.

[51] Examples of building materials and building products typically present at construction sites include asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures, and gravel and mulch stockpiles.

precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.

Exception: Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

b. *For pesticides, herbicides, insecticides, fertilizers, and landscape materials:*

i. In storage areas, provide either (1) cover (e.g., *plastic sheeting, temporary roofs*) to minimize the exposure of these chemicals to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas; and

ii. Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label (see also Part 2.3.5).

c. *For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals:* The following requirements apply to the storage and handling of chemicals on your site. If you are already implementing controls as part of an SPCC or other spill prevention plan that meet or exceed the requirements of this Part, you may continue to do so and be considered in compliance with these provisions provided you reference the applicable parts of the SPCC or other plans in your SWPPP as required in Part 7.2.6b.viii.

i. If any chemical container has a storage capacity of less than 55 gallons:

(a) The containers must be water-tight, and must be kept closed, sealed, and secured when not being actively used;

(b) If stored outside, use a spill containment pallet or similar device to capture small leaks or spills; and

(c) Have a spill kit available on site that is in good working condition (i.e., not damaged, expired, or used up) and ensure personnel are available to respond immediately in the event of a leak or spill.

ii. If any chemical container has a storage capacity of 55 gallons or more:

(a) The containers must be water-tight, and must be kept closed, sealed, and secured when not being actively used;

(b) Store containers a minimum of 50 feet from receiving waters, constructed or natural site drainage features, and storm drain inlets. If infeasible due to site constraints, store containers as far away from these features as the site permits. If site constraints prevent you from storing containers 50 feet away from receiving waters or the other features identified, you must document in your SWPPP the specific reasons why the 50-foot setback is infeasible, and how you will store containers as far away as the site permits;

(c) Provide either (1) cover (e.g., temporary roofs) to minimize the exposure of these containers to precipitation and to stormwater, or (2) secondary containment (e.g., curbing, spill berms, dikes, spill containment pallets, double-wall, above-ground storage tank); and

(d) Have a spill kit available on site that is in good working condition (i.e., not

damaged, expired, or used up) and ensure personnel are available to respond immediately in the event of a leak or spill. Additional secondary containment measures are listed at 40 CFR § 112.7(c)(1).

iii. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. You are prohibited from hosing the area down to clean surfaces or spills. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.

d. *For hazardous or toxic wastes:*[52]

i. Separate hazardous or toxic waste from construction and domestic waste;

ii. Store waste in sealed containers, constructed of suitable materials to prevent leakage and corrosion, and labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable Federal, State, Tribal, or local requirements;

iii. Store all outside containers within appropriately-sized secondary containment (e.g., *spill berms, dikes, spill containment pallets*) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas *(*e.g., *storing chemicals in a covered area, having a spill kit available on site);*

iv. Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended method of disposal and in compliance with Federal, State, Tribal, and local requirements;

v. Clean up spills immediately, using dry clean-up methods, and dispose of used materials properly. You are prohibited from hosing the area down to clean surfaces or spills. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge; and

vi. Follow all other Federal, State, Tribal, and local requirements regarding hazardous or toxic waste.

e. *For construction and domestic wastes:*[53]

i. Provide waste containers *(*e.g., *dumpster, trash receptacle)* of sufficient size and number to contain construction and domestic wastes;

(a) For waste containers with lids, keep waste container lids closed when not in use, and close lids at the end of the business day and during storm events. For waste containers without lids, provide either (1) cover *(*e.g., *a tarp, plastic sheeting, temporary roof)* to minimize exposure of wastes to precipitation, or (2) a similarly effective means designed to minimize the discharge of pollutants *(*e.g., *secondary containment)*;

(b) On business days, clean up and dispose of waste in designated waste

[52] Examples of hazardous or toxic waste that may be present at construction sites include paints, caulks, sealants, fluorescent light ballasts, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids.

[53] Examples of construction and domestic wastes include packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, demolition debris; and other trash or discarded materials.

containers; and

(c) Clean up immediately if containers overflow, and if there is litter elsewhere on the site from escaped trash.

ii. Waste containers are not required for the waste remnant or unused portions of construction materials or final products that are covered by the exception in Part 2.2.3a provided that:

(a) These wastes are stored separately from other construction or domestic wastes addressed by Part 2.3.3e.i (i.e., wastes not covered by the exception in Part 2.3.3a). If the wastes are mixed, they must be stored in waste containers as required in Part 2.3.3e.i; and

(b) These wastes are stored in designated areas of the site, the wastes are described in the SWPPP (see Part 7.2.6b.ix), and identified in the site plan (see Part 7.2.4i).

f. *For sanitary waste*, position portable toilets so they are secure and will not be tipped or knocked over, and are located away from receiving waters, storm drain inlets, and constructed or natural site drainage features.

2.3.4 For washing applicators and containers used for stucco, paint, concrete, form release oils, curing compounds, or other materials:

a. Direct wash water into a leak-proof container or leak-proof and lined pit designed so no overflows can occur due to inadequate sizing or precipitation;

b. Handle washout or cleanout wastes as follows:

i. For liquid wastes:

(a) Do not dump liquid wastes or allow them to enter into constructed or natural site drainage features, storm inlets, or receiving waters;

(b) Do not allow liquid wastes to be disposed of through infiltration or to otherwise be disposed of on the ground;

(c) Comply with applicable State, Tribal, or local requirements for disposal

ii. Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Part 2.3.3e; and

c. Locate any washout or cleanout activities as far away as possible from receiving waters, constructed or natural site drainage features, and storm drain inlets, and, to the extent feasible, designate areas to be used for these activities and conduct such activities only in these areas.

2.3.5 For the application of fertilizers:

a. Apply at a rate and in amounts consistent with manufacturer's specifications, or document in the SWPPP departures from the manufacturer specifications where appropriate in accordance with Part 7.2.6b.x;

b. Apply at the appropriate time of year for your location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;

c. Avoid applying before heavy rains that could cause excess nutrients to be discharged;

d. Never apply to frozen ground;

e. Never apply to constructed or natural site drainage features; and

f. Follow all other Federal, State, Tribal, and local requirements regarding fertilizer application.

2.3.6 Emergency Spill Notification Requirements

Discharges of toxic or hazardous substances from a spill or other release are prohibited, consistent with Part 1.3.5. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR part 110, 40 CFR part 117, or 40 CFR part 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR part 110, 40 CFR part 117, and 40 CFR part 302 as soon as you have knowledge of the release. You must also, within seven (7) calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. State, Tribal, or local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies.

2.4 CONSTRUCTION DEWATERING REQUIREMENTS

Comply with the following requirements to minimize the discharge of pollutants from dewatering[54] operations.

2.4.1 Route dewatering water through a sediment control (e.g., sediment trap or basin, pumped water filter bag) designed to prevent discharges with visual turbidity; [55]

2.4.2 Do not discharge visible floating solids or foam;

2.4.3 The discharge must not cause the formation of a visible sheen on the water surface, or visible oily deposits on the bottom or shoreline of the receiving water. Use an oil-water separator or suitable filtration device (such as a cartridge filter) designed to remove oil, grease, or other products if dewatering water is found to or expected to contain these materials;

2.4.4 To the extent feasible, use well-vegetated (e.g., grassy or wooded), upland areas of the site to infiltrate dewatering water before discharge.[56] You are prohibited from using receiving waters as part of the treatment area;

2.4.5 To prevent dewatering-related erosion and related sediment discharges:

a. Use stable, erosion-resistant surfaces (e.g., well-vegetated grassy areas, clean filter stone, geotextile underlayment) to discharge from dewatering controls;

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[54] "Dewatering" is defined in Appendix A as "the act of draining accumulated stormwater and/or ground water from building foundations, vaults, and trenches, or other similar points of accumulation."

[55] For the purposes of this permit, visual turbidity is present where there is a sediment plume in the discharge or the discharge appears cloudy, or opaque, or has a visible contrast that can be identified by an observer.

[56] See footnote 19.

b. Do not place dewatering controls, such as pumped water filter bags, on steep slopes (as defined in Appendix A); and

c. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 2.2.11.

2.4.6 For backwash water, either haul it away for disposal or return it to the beginning of the treatment process;

2.4.7 Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications; and

2.4.8 Comply with dewatering-specific inspection requirements in Part 4.

3 WATER QUALITY-BASED EFFLUENT LIMITATIONS

3.1 GENERAL EFFLUENT LIMITATION TO MEET APPLICABLE WATER QUALITY STANDARDS

Discharges must be controlled as necessary to meet applicable water quality standards. Discharges must also comply with any additional State or Tribal requirements that are in Part 9.

In the absence of information demonstrating otherwise, EPA expects that compliance with the conditions in this permit will result in stormwater discharges being controlled as necessary to meet applicable water quality standards. If at any time you become aware, or EPA determines, that discharges are not being controlled as necessary to meet applicable water quality standards, you must take corrective action as required in Parts 5.1 and 5.2, and document the corrective actions as required in Part 5.4.

EPA may insist that you install additional controls (to meet the narrative water quality-based effluent limit above) on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI or from other sources indicates that your discharges are not controlled as necessary to meet applicable water quality standards. This includes situations where additional controls are necessary to comply with a wasteload allocation in an EPA-established or approved TMDL.

If during your coverage under a previous permit, you were required to install and maintain stormwater controls specifically to meet the assumptions and requirements of an EPA-approved or established TMDL (for any parameter) or to otherwise control your discharge to meet water quality standards, you must continue to implement such controls as part of your coverage under this permit.

3.2 WATER QUALITY-BASED CONDITIONS FOR SITES DISCHARGING TO CERTAIN IMPAIRED AND HIGH QUALITY RECEIVING WATERS

For any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is identified by your State, Tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes,[57] you must comply with the inspection frequency specified in Part 4.3 and you must comply with the stabilization deadline specified in Part 2.2.14b.iii.[58]

[57] Refer to Appendix A for definitions of "impaired water" and "Tier 2," "Tier 2.5," and "Tier 3" waters. For assistance in determining whether your site discharges to impaired waters, EPA has developed a tool that is available at https://www.epa.gov/npdes/epas-stormwater-discharge-mapping-tools. For assistance in determining whether your site discharges to a Tier 2, 2.5, or 3 water, refer to the list of such waters at https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates.

[58] If you qualify for any of the reduced inspection frequencies in Part 4.4, you may conduct inspections in

If you discharge to a water that is impaired for a parameter other than a sediment-related parameter or nutrients, EPA will inform you if any additional controls are necessary for your discharge to be controlled as necessary to meet water quality standards. These controls might include those necessary for your discharge to be consistent with the assumptions of any available wasteload allocation in any applicable TMDL. In addition, EPA may require you to apply for and obtain coverage under an individual NPDES permit.

In addition, on a case-by-case basis, EPA may notify operators of new sites or operators of existing sites with increased discharges that additional analyses, stormwater controls, and/or other measures are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary.

If you discharge to a water that is impaired for polychlorinated biphenyls (PCBs) and are engaging in demolition of any structure with at least 10,000 square feet of floor space built or renovated before January 1, 1980, you must:

a. Implement controls[59] to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures, to precipitation and to stormwater; and

b. Ensure that disposal of such materials is performed in compliance with applicable State, Federal, and local laws.

3.3 TURBIDITY BENCHMARK MONITORING FOR SITES DISCHARGING DEWATERING WATER TO PROTECT THE WATER QUALITY OF SENSITIVE WATERS

For sites discharging dewatering water to "sensitive waters" (i.e., receiving waters listed as impaired for sediment or a sediment-related parameter (as defined in Appendix A), or receiving waters designated as a Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes) you are required to comply with the benchmark monitoring requirements in this Part and document the procedures you will use at your site in your SWPPP pursuant to Part 7.2.8. A summary of these requirements is included in Table 1.

EPA notes that the benchmark threshold is not an effluent limitation, rather it is an indicator that the dewatering controls may not be working to protect water quality, which the operator must investigate and correct as appropriate. A benchmark exceedance is not a permit violation. However, if a benchmark exceedance triggers corrective action in Part 5.1.5a, failure to conduct any required action is a permit violation.

Where there are multiple operators associated with the same site, the operators may coordinate with one another to carry out the monitoring requirements of this Part in order to avoid duplicating efforts. Such coordinating arrangements must be described in the SWPPP consistent with Part 7.2.8. Regardless of how the operators divide the

accordance with Part 4.4 for any portion of your site that discharges to a sensitive water.

[59] Examples of controls to minimize exposure of PCBs to precipitation and stormwater include separating work areas from non-work areas and selecting appropriate personal protective equipment and tools, constructing a containment area so that all dust or debris generated by the work remains within the protected area, and using tools that minimize dust and heat (<212°F). For additional information, refer to Part 2.3.3 of the CGP Fact Sheet.

responsibilities for monitoring and reporting, each operator remains responsible for compliance with these requirements.[60]

3.3.1 Turbidity monitoring requirements[61]

a. **Sampling frequency.** You must collect at least one turbidity sample from your dewatering discharge each day a discharge occurs.

b. **Sampling location.** Samples must be taken at all points where dewatering water is discharged. Samples must be taken after the dewatering water has been treated by installed treatment devices pursuant to Parts 2.4.1 and 2.4.3 and prior to its discharge off site into a receiving water, constructed or natural site drainage feature, or storm drain inlet.

c. **Representative samples.** Samples taken must be representative of the dewatering discharge for any given day as required in Appendix G (standard permit conditions), Part G.10.2.

d. **Test methods.** Samples must be measured using a turbidity meter that reports results in nephelometric turbidity units (NTUs) and conforms with a Part 136-approved method (e.g., methods 180.1 and 2130). You are required to use the meter, and conduct a calibration verification prior to each day's use, consistent with the manufacturer's instructions.

3.3.2 Turbidity benchmark

a. The benchmark threshold for turbidity for this permit is 50 NTUs (referred to elsewhere in this permit as the "standard 50 NTU benchmark") unless EPA has authorized the use of an alternate benchmark in accordance with Part 3.3.2b.

b. **Request for alternate benchmark threshold.**

i. At any time prior to or during your coverage under this permit, you may request that EPA approve a benchmark for your site that is higher than 50 NTUs if you have information demonstrating the higher number is the same as your receiving water's water quality standard for turbidity. Unless EPA approves an alternate benchmark, you will be required to use the standard 50 NTU benchmark. To request approval of an alternate benchmark, you must submit the following information to your applicable EPA Regional Office (see Appendix K):
(a) The current turbidity water quality standard that applies to your receiving

[60] For instance, if Operator A relies on Operator B to meet the Part 3.3.1 turbidity monitoring requirements, the Part 3.3.4 reporting and recordkeeping requirements, and the Part 5.2.2 corrective action provisions when applicable, Operator A does not have to duplicate these same functions if Operator B is implementing them for both operators to be in compliance with the permit. However, Operator A remains responsible for complying with these permit requirements if Operator B fails to take actions that were necessary for Operator A to comply with the permit. See also footnote 83. EPA notes that both Operator A and B are required to submit turbidity monitoring reports as required under Part 3.3.4, however, Operator A's report does not need to include the data collected by Operator B as long as Operator B submits the required data and Operator A's report indicates that it is relying on Operator B to report the data. See Part 3.3.4a.

[61] Operators may find it useful to consult EPA's *Monitoring and Inspection Guide for Construction Dewatering*, available at https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates, which provides guidelines on how to correctly monitor for turbidity, determine if the weekly average exceeds the benchmark, and, if so, how to proceed with corrective action.

water and the source/citation.[62]

(b) If the applicable turbidity water quality standard requires information on natural or background turbidity levels (e.g., "no more than 10 NTU above natural turbidity levels") to determine the specific standard for the receiving water, include available data that can be used to establish the natural turbidity levels of your receiving water (including literature studies or Federal, State, Tribal, or local government data). Data must be representative of the natural turbidity levels of your specific receiving water. Identify the source(s) of all data provided, including if the data are from samples you collected of the receiving water.

ii. EPA will inform you of its decision on whether to approve the requested alternate benchmark within 30 days. EPA may approve your request, request additional time (e.g., if additional information is needed to substantiate the data you provided), or deny your request. Unless and until EPA approves your request to use an alternate benchmark, you are required to use the standard benchmark of 50 NTUs and take any required corrective actions if an exceedance occurs.

3.3.3 Comparison of turbidity samples to benchmark. Compare the weekly average[63] of your turbidity monitoring results to the standard 50 NTU benchmark, or alternate benchmark if approved by EPA.

a. If the weekly average of your turbidity monitoring results exceeds the standard benchmark (or your approved alternate benchmark), you are required to conduct follow-up corrective action in accordance with Part 5.2.2 and document any corrective action taken in your corrective action log in accordance with Part 5.4.

b. For averaging purposes, a "monitoring week" starts with a Monday and ends on Sunday. Once a new monitoring week starts, you will need to calculate a new average for that week of turbidity monitoring results.[64] A weekly average may consist of one or more turbidity monitoring results.

c. Although you are not required to collect and analyze more than one turbidity sample per day from your dewatering discharge, if you do collect and analyze more than one sample on any given day, you must include any additional results in the

[62] For instance, if your site is located in Washington, DC, and you are discharging to a Class B water, for which the water quality standard is that turbidity may not increase above ambient levels by more than 20 percent, you would reference "Water Quality Standards for the District of Columbia, Chapter 11, Section 1104.8."

[63] A "weekly average" is defined as the sum of all of the turbidity samples taken during a "monitoring week" divided by the number of samples measured during that week. Average values should be calculated to the nearest whole number.

[64] For example, if turbidity samples from your dewatering discharge in week 1 result in values of 30 NTU on Tuesday, 40 NTU on Wednesday, and 45 NTU on Thursday, your weekly average turbidity value would be 38.33 NTU ((30+40+45) ÷ 3 = 38 NTU). If in week 2, your turbidity samples resulted in values of 45 NTU on Monday, 30 NTU on Tuesday, 25 NTU on Wednesday, and 15 NTU on Thursday, you would calculate a new average for that week, which would yield an average turbidity value of 28.75 NTU ((45+30+25+15) ÷ 4 = 29 NTU). By comparison, if your samples on consecutive days from Friday to Monday were 60 NTU, 45 NTU, 40 NTU, and 43 NTU, respectively, and there are no other dewatering discharges for the remainder of the week, you would calculate one weekly average for the Friday to Sunday to be 48 NTU ((60+45+40) ÷ 3 = 48 NTU), and a separate weekly average for the one Monday to be 43 NTU (43 ÷ 1 = 43 NTU).

calculation of your weekly average (i.e., add all individual results for that monitoring week and divide by the total number of samples).[65]

d. If you are conducting turbidity monitoring for more than one dewatering discharge point, you must calculate a weekly average turbidity value for each discharge point and compare each to the turbidity benchmark.

3.3.4 Reporting and recordkeeping.

a. You must submit reports of your weekly average turbidity data to EPA no later than 30 days following the end of each monitoring quarter. If there are monitoring weeks in which there was no dewatering discharge, or if there is a monitoring quarter with no dewatering discharge, indicate this in your turbidity monitoring report. If another operator associated with your same site is conducting turbidity monitoring on your behalf pursuant to Part 3.3, indicate this in your turbidity monitoring report.

b. For the purposes of this permit, the following monitoring quarters and reporting deadlines apply:

Table 3. Monitoring Quarters and Deadlines for Reporting Turbidity Benchmark Monitoring Data.

Monitoring Quarter #	**Months**	**Reporting Deadline** (no later than 30 days after end of the monitoring quarter)
1	January 1 – March 31	April 30
2	April 1 – June 30	July 30
3	July 1 – September 30	October 30
4	October 1 – December 31	January 30

c. You must use EPA's NPDES eReporting Tool (NeT) to electronically submit your quarterly turbidity data, unless, consistent with Part 1.4.2, you received a waiver from your applicable EPA Regional Office. If the EPA Regional Office grants you approval to use a paper turbidity monitoring report form, and you elect to use it, you must complete the form in Appendix K. If EPA approves of your request to use an alternate turbidity benchmark pursuant to Part 3.3.2b, EPA will substitute the alternate benchmark in your NeT account.

d. For each day in which you are required to monitor, you must record the monitoring information required by Appendix G, Parts G.10.2 and G.10.3 and retain all such information for a period of at least three years from the date this permit expires or from the date your authorization is terminated.

[65] For example, if during a monitoring week you take two turbidity samples on Tuesday with a value of 30 NTU and 35 NTU, three samples on Wednesday with a value of 40 NTU, 45 NTU, and 48 NTU, and one sample on Thursday with a value of 45 NTU, your weekly average turbidity value for this week would be 41 NTU ((30+35+40+45+48+45) ÷ 6 = 41 NTU).

Table 4. Summary of Turbidity Benchmark Monitoring Requirements.

Applicability	Sampling Requirement	Turbidity Benchmark	Corrective Action	Reporting
Sites discharging dewatering water to a sediment-impaired water or to a water designated as a Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes.	Collect at least one turbidity sample per day, from each discharge point, on any day there is a dewatering discharge. Use turbidity sampling procedures specified in Part 3.3.1.	Compare the weekly average of your turbidity monitoring results to the 50 NTU benchmark (or alternate benchmark if approved by EPA).	If the weekly average of turbidity monitoring results exceeds the 50 NTU turbidity benchmark (or alternate benchmark if approved by EPA), you are required to take follow-up corrective action in accordance with Part 5.2.2.	Report all weekly average turbidity monitoring results on a quarterly basis via NeT-CGP (unless use of the paper monitoring form in Appendix K is approved by EPA) no later than 30 days following the end of each monitoring quarter.

4 INSPECTION REQUIREMENTS

4.1 PERSON(S) RESPONSIBLE FOR CONDUCTING SITE AND DEWATERING INSPECTIONS

The person(s) inspecting your site may be a person on your staff or a third party you hire to conduct such inspections. You are responsible for ensuring that any person conducting inspections pursuant to this Part is a "qualified person." A qualified person is someone who has completed the training required by Part 6.3.

4.2 FREQUENCY OF INSPECTIONS.[66]

At a minimum, you must conduct a site inspection in accordance with one of the two schedules listed below, unless you are subject to the Part 4.3 site inspection frequency for discharges to sediment or nutrient-impaired or high quality waters, or qualify for a Part 4.4 reduction in the inspection frequency:

4.2.1 At least once every seven (7) calendar days; *or*

4.2.2 Once every 14 calendar days *and* within 24 hours[67] of the occurrence of:

- **a.** A storm event that produces 0.25 inches or more of rain within a 24-hour period.
  - **i.** If a storm event produces 0.25 inches or more of rain within a 24-hour period (including when there are multiple, smaller storms that alone produce less than 0.25 inches but together produce 0.25 inches or more in 24 hours), you are required to conduct one inspection within 24 hours of when 0.25 inches of rain or more has fallen.

[66] Inspections are only required during the site's normal working hours.

[67] For the purposes of the inspection requirements in this Part, conducting an inspection "within 24 hours" means that once either of the two conditions in Parts 4.2.2a or 4.2.2b are met you have 24 hours from that time to conduct an inspection. For clarification, the 24 hours is counted as a continuous passage of time, and not counted by business hours (e.g., 3 business days of 8 hours each). When the 24-hour inspection time frame occurs entirely outside of normal working hours, you must conduct an inspection by no later than the end of the next business day.

ii. If a storm event produces 0.25 inches or more of rain within a 24-hour period on the first day of a storm and continues to produce 0.25 inches or more of rain on subsequent days, you must conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the last day of the storm that produces 0.25 inches or more of rain (i.e., only two inspections would be required for such a storm event).[68]

b. A discharge caused by snowmelt from a storm event that produces 3.25 inches[69] or more of snow within a 24-hour period. You are required to conduct one inspection once the discharge of snowmelt from a 3.25-inch or more snow accumulation occurs. Additional snowmelt inspections are only required if following the discharge from the first snowmelt, there is a discharge from a separate storm event that produces 3.25 inches or more of snow.

4.2.3 To determine whether a storm event meets either of the thresholds in Parts 4.2.2a or 4.2.2b:

a. For rain, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any 24-hour period during which there is 0.25 inches or more of rainfall, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

b. For snow, you must either take measurements of snowfall at your site,[70] or rely on similar information from a local weather forecasting provider that is representative of your location.

4.3 INCREASE IN INSPECTION FREQUENCY FOR CERTAIN SITES.

The increased inspection frequencies established in this Part take the place of the Part 4.2 inspection frequencies for the portion of the site affected.

4.3.1 For any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is identified by your State, Tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes (see Part 3.2), you must conduct an once every seven (7) calendar days *and* within 24 hours of the occurrence of a storm event that produces 0.25 inches or more of rain within a 24-hour period, or within 24 hours of a snowmelt discharge from a storm event that produces 3.25 inches or more of snow within a 24-hour period.

[68] For example, if 0.30 inches of rain falls on Day 1, 0.25 inches of rain falls on Day 2, and 0.10 inches of rain fall on Day 3, you would be required to conduct a first inspection within 24 hours of the Day 1 rainfall and a second inspection within 24 hours of the Day 2 rainfall, but a third inspection would not be required within 24 hours of the Day 3 rainfall.

[69] This is the amount of snow that is equivalent to 0.25 inches of rain, based on information from the National Oceanic and Atmospheric Administration (NOAA) indicating that 13 inches of snow is, on average, equivalent to 1 inch of rain. See https://www.nssl.noaa.gov/education/svrwx101/winter/faq/.

[70] For snowfall measurements, EPA suggests use of NOAA's National Weather Service guidelines at https://www.weather.gov/jkl/snow_measurement. These guidelines recommend use of a "snowboard" (a piece of wood about 16 inches by 16 inches) that is placed in an unobstructed part of the site on a hard surface.

Refer to Parts 4.2.3a and 4.2.3b for the requirements to determine if a storm event produces enough rain or snow to trigger the inspection requirement.

4.3.2 For sites discharging dewatering water, you must conduct an inspection in accordance with Part 4.6.3 during the discharge once per day on which the discharge occurs. The Part 4.2 inspection frequency still applies to all other portions of the site, unless the site is affected by either the increased frequency in Part 4.3.1 or the reduced frequency in Part 4.4.

4.4 REDUCTIONS IN INSPECTION FREQUENCY

4.4.1 Stabilized areas.

a. You may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, then once per month until permit coverage is terminated consistent with Part 8 in any area of your site where the stabilization steps in Part 2.2.14a have been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required in Parts 4.2 and 4.3, as applicable. You must document the beginning and ending dates of this period in your SWPPP.

b. Exception. For "linear construction sites" (as defined in Appendix A) where disturbed portions have undergone final stabilization at the same time active construction continues on others, you may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, in any area of your site where the stabilization steps in Part 2.2.14a have been completed. After the first month, inspect once more within 24 hours of the occurrence of a storm event that produces 0.25 inches of rain or more within a 24-hour period, or within 24 hours of a snowmelt discharge from a storm event that produces 3.25 inches or more of snow within a 24-hour period. If there are no issues or evidence of stabilization problems, you may suspend further inspections. If "wash-out" of stabilization materials and/or sediment is observed, following re-stabilization, inspections must resume at the inspection frequency required in Part 4.4.1a. Inspections must continue until final stabilization is visually confirmed following a storm event that produces 0.25 inches of rain or more within a 24-hour period.

4.4.2 Arid, semi-arid, or drought-stricken areas (as defined in Appendix A). If it is the seasonally dry period[71] or a period in which drought is occurring, you may reduce the frequency of inspections to once per month and within 24 hours of the occurrence of a storm event that produces 0.25 inches of rain or more within a 24-hour period, or within 24 hours of a snowmelt discharge from a storm event that produces 3.25 inches or more of snow within a 24-hour period. You must document that you are using this reduced schedule and the beginning and ending dates of the seasonally dry period in your SWPPP. Follow the procedures in Part 4.2.3a and 4.2.3b, accordingly, to determine if a storm event occurs that produces 0.25 inches or more of rain or 3.25 inches or more of snow within a 24-hour period. For any 24-hour period during which there is 0.25 inches or more of rainfall, or 3.25 inches or more of snow, you must record the total rainfall or snow measured for that day in accordance with Part 4.7.1d.

[71] See footnote 44.

4.4.3 Frozen conditions:

a. If you are suspending construction activities due to frozen conditions, you may temporarily suspend inspections on your site until thawing conditions (as defined in Appendix A) begin to occur if:

i. Discharges are unlikely due to continuous frozen conditions that are likely to continue at your site for at least three (3) months based on historic seasonal averages.[72] If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.2 and 4.3, as applicable;

ii. Land disturbances have been suspended; and

iii. All disturbed areas of the site have been stabilized in accordance with Part 2.2.14a.

b. If you are still conducting construction activities during frozen conditions, you may reduce your inspection frequency to once per month if:

i. Discharges are unlikely due to continuous frozen conditions that are likely to continue at your site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.2 and 4.3, as applicable; and

ii. Except for areas in which you are actively conducting construction activities, disturbed areas of the site have been stabilized in accordance with Part 2.2.14a.

You must document the beginning and ending dates of this period in your SWPPP.

4.5 AREAS THAT MUST BE INSPECTED

During your site inspection, you must at a minimum inspect the following areas of your site:

4.5.1 All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Part 2.2.14a;

4.5.2 All stormwater controls, including pollution prevention controls, installed at the site to comply with this permit;[73]

4.5.3 Material, waste, borrow, and equipment storage and maintenance areas that are covered by this permit;

4.5.4 All areas where stormwater typically flows within the site, including constructed or natural site drainage features designed to divert, convey, and/or treat stormwater;

4.5.5 All areas where construction dewatering is taking place, including controls to treat the dewatering discharge and any channelized flow of water to and from those controls;

[72] Use data sets that include the most recent data available to account for recent precipitation patterns and trends.

[73] This includes the requirement to inspect for sediment that has been tracked out from the site onto paved roads, sidewalks, or other paved areas consistent with Part 2.2.4.

4.5.6 All points of discharge from the site; and

4.5.7 All locations where stabilization measures have been implemented.

You are not required to inspect areas that, at the time of the inspection, are considered unsafe to your inspection personnel.

4.6 REQUIREMENTS FOR INSPECTIONS

4.6.1 During each site inspection, you must at a minimum:

a. Check whether all stormwater controls *(*i.e.*, erosion and sediment controls and pollution prevention controls)* are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges.

b. Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site.

c. Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts 2 and/or 3.

d. Check for signs of visible erosion and sedimentation *(*i.e.*, sediment deposits)* that have occurred and are attributable to your discharge at points of discharge and, if applicable, on the banks of any receiving waters flowing within or immediately adjacent to the site;

e. Check for signs of sediment deposition that are visible from your site and attributable to your discharge (e.g., sand bars with no vegetation growing on top in receiving waters or in other constructed or natural site drainage features, or the buildup of sediment deposits on nearby streets, curbs, or open conveyance channels).

f. Identify any incidents of noncompliance observed.

4.6.2 If a discharge is occurring during your inspection:

a. Identify all discharge points at the site; and

b. Observe and document the visual quality of the discharge, and take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants. Check also for signs of these same pollutant characteristics that are visible from your site and attributable to your discharge in receiving waters or in other constructed or natural site drainage features.

4.6.3 For dewatering inspections conducted pursuant to Parts 4.3.2, record the following in a report within 24 hours of completing the inspection:

a. The inspection date;

b. Names and titles of personnel making the inspection;

c. Approximate times that the dewatering discharge began and ended on the day of inspection;[74]

d. Estimates of the rate (in gallons per day) of discharge on the day of inspection;

[74] If the dewatering discharge is a continuous discharge that continues after normal business hours, indicate that the discharge is continuous.

e. Whether or not any of the following indications of pollutant discharge were observed at the point of discharge to any receiving waters flowing through or immediately adjacent to the site and/or to constructed or natural site drainage features or storm drain inlets:[75]

i. a sediment plume, suspended solids, unusual color, presence of odor, decreased clarity, or presence of foam; and/or

ii. a visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water; and

f. Photographs of (1) the dewatering water prior to treatment by a dewatering control(s) and the final discharge after treatment; (2) the dewatering control(s); and (3) the point of discharge to any receiving waters flowing through or immediately adjacent to the site and/or to constructed or natural site drainage features, storm drain inlets, and other conveyances to receiving waters.

You must also comply with the Part 4.7.2, 4.7.3, and 4.7.4 requirements for signing the reports, keeping them available on site, and retaining copies.

4.6.4 Based on the results of your inspection:

a. Complete any necessary maintenance repairs or replacements under Part 2.1.4 or under Part 5, whichever applies; and

b. Modify your SWPPP site map in accordance with Part 7.4.1 to reflect changes to your stormwater controls that are no longer accurately reflected on the current site map.

4.7 INSPECTION REPORT

4.7.1 You must complete an inspection report within 24 hours of completing any site inspection. Each inspection report (except for dewatering inspection reports, which are covered in Part 4.6.3) must include the following:

a. The inspection date;

b. Names and titles of personnel making the inspection;

c. A summary of your inspection findings, covering at a minimum the observations you made in accordance with Part 4.6, including any problems found during your inspection that make it necessary to perform routine maintenance pursuant to Part 2.1.4b or corrective action pursuant to Part 5. Include also any documentation as to why the corrective action procedures under Part 5 are unnecessary to fix a problem that repeatedly occurs as described in Part 2.1.4c;

d. If you are inspecting your site at the frequency specified in Part 4.2.2, Part 4.3, or Part 4.4.1b, and you conducted an inspection because of a storm event that produced rainfall measuring 0.25 inches or more within a 24-hour period, you must include the applicable rain gauge or weather station readings that triggered the inspection. Similarly, if you conducted an inspection because of a snowmelt discharge from a storm event that produced 3.25 inches or more of snow within a 24-hour period, you must include any measurements taken of snowfall at your site, or weather station information you relied on; and

[75] If the operator observes any of these indicators of pollutant discharge, corrective action is required consistent with Parts 5.1.5b and 5.2.2.

e. If you determined that it is unsafe to inspect a portion of your site, you must describe the reason you found it to be unsafe and specify the locations to which this condition applies.

4.7.2 Each inspection report must be signed by the operator's signatory in accordance with Appendix G, Part G.11 of this permit.

4.7.3 You must keep a copy of all inspection reports at the site or at an easily accessible location, so that it can be made immediately available at the time of an on-site inspection or upon request by EPA.[76]

4.7.4 You must retain all inspection reports completed for this Part for at least three (3) years from the date that your permit coverage expires or is terminated.

4.8 INSPECTIONS BY EPA

You must allow EPA, or an authorized representative of EPA, to conduct the following activities at reasonable times. To the extent that you are utilizing shared controls, that are not on site, to comply with this permit, you must make arrangements for EPA to have access at all reasonable times to those areas where the shared controls are located.

4.8.1 Enter onto all areas of the site, including any construction support activity areas covered by this permit, any off-site areas where shared controls are utilized to comply with this permit, discharge locations, adjoining waterbodies, and locations where records are kept under the conditions of this permit;

4.8.2 Access and copy any records that must be kept under the conditions of this permit;

4.8.3 Inspect your construction site, including any construction support activity areas covered by this permit (see Part 1.2.1c), any stormwater controls installed and maintained at the site, and any off-site shared controls utilized to comply with this permit; and

4.8.4 Sample or monitor for the purpose of ensuring compliance.

5 CORRECTIVE ACTIONS

5.1 CONDITIONS TRIGGERING CORRECTIVE ACTION.

You must take corrective action to address any of the following conditions identified at your site:

5.1.1 A stormwater control needs a significant repair or a new or replacement control is needed, or, in accordance with Part 2.1.4c, you find it necessary to repeatedly (i.e., three (3) or more times) conduct the same routine maintenance fix to the same control at the same location (unless you document in your inspection report under Part 4.7.1c that the specific reoccurrence of this same problem should still be addressed as a routine maintenance fix under Part 2.1.4); or

5.1.2 A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or

[76] Inspection reports may be prepared, signed, and kept electronically, rather than in paper form, if the records are: (a) in a format that can be read in a similar manner as a paper record; (b) legally dependable with no less evidentiary value than their paper equivalent; and (c) immediately accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form. For additional guidance on the proper practices to follow for the electronic retention of inspection report records, refer to the Fact Sheet discussion related to Part 4.7.3.

5.1.3 Your discharges are not meeting applicable water quality standards;

5.1.4 A prohibited discharge has occurred (see Part 1.3); or

5.1.5 During discharge from site dewatering activities:

a. The weekly average of your turbidity monitoring results exceeds the 50 NTU benchmark (or alternate benchmark if approved by EPA pursuant to Part 3.3.2b); or

b. You observe or you are informed by EPA, State, or local authorities of the presence of the conditions specified in Part 4.6.3e.

5.2 CORRECTIVE ACTION DEADLINES

5.2.1 If responding to any of the Part 5.1.1, 5.1.2, 5.1.3, or 5.1.4 triggering conditions, you must:

a. Immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events; and

b. When the problem does not require a new or replacement control or significant repair, the corrective action must be completed by the close of the next business day; or

c. When the problem requires a new or replacement control or significant repair, install the new or modified control and make it operational, or complete the repair, by no later than seven (7) calendar days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7-day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as feasible after the 7-day timeframe. Where these actions result in changes to any of the stormwater controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within seven (7) calendar days of completing this work.

5.2.2 If responding to either of the Part 5.1.5 triggering conditions related to site dewatering activities, you must:

a. Immediately take all reasonable steps to minimize or prevent the discharge of pollutants until you can implement a solution, including shutting off the dewatering discharge as soon as possible depending on the severity of the condition[77] taking safety considerations into account;

b. Determine whether the dewatering controls are operating effectively and whether they are causing the conditions; and

c. Make any necessary adjustments, repairs, or replacements to the dewatering controls to lower the turbidity levels below the benchmark or remove the visible plume or sheen.

[77] For instance, if the weekly average of your turbidity monitoring results or a single sample is extremely high (e.g., a single turbidity sample results in 355 NTUs or higher), you should take action to safely shut off the discharge so that you can evaluate the cause of the high turbidity. Note: A single turbidity sample of 355 NTUs or higher means that the weekly average turbidity value will exceed 50 NTU regardless of the turbidity values the other days during the week.

When you have completed these steps and made any changes deemed necessary, you may resume discharging from your dewatering activities.

5.3 CORRECTIVE ACTION REQUIRED BY EPA

You must comply with any corrective actions required by EPA as a result of permit violations found during an inspection carried out under Part 4.8.

5.4 CORRECTIVE ACTION LOG

5.4.1 For each corrective action taken in accordance with this Part, you must record the following in a corrective action log:

- **a.** Within 24 hours of identifying the corrective action condition, document the specific condition and the date and time it was identified.
- **b.** Within 24 hours of completing the corrective action (in accordance with the deadlines in Part 5.2), document the actions taken to address the condition, including whether any SWPPP modifications are required.

5.4.2 Each entry into the corrective action log, consisting of the information required by both Parts 5.4.1a and 5.4.1b, must be signed by the operator's signatory in accordance with Appendix G, Part G.11.2 of this permit.

5.4.3 You must keep a copy of the corrective action log at the site or at an easily accessible location, so that it can be made immediately available at the time of an on-site inspection or upon request by EPA.[78]

5.4.4 You must retain the corrective action log for at least three (3) years from the date that your permit coverage expires or is terminated.

6 STORMWATER TEAM FORMATION/STAFF TRAINING REQUIREMENTS

6.1 STORMWATER TEAM

Each operator, or group of multiple operators, must assemble a "stormwater team" that will be responsible for carrying out activities necessary to comply with this permit. The stormwater team must include the following people:

- **a.** Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls (including pollution prevention controls);
- **b.** Personnel responsible for the application and storage of treatment chemicals (if applicable);
- **c.** Personnel who are responsible for conducting inspections as required in Part 4.1; and
- **d.** Personnel who are responsible for taking corrective actions as required in Part 5.

Members of the stormwater team must be identified in the SWPPP pursuant to Part 7.2.2.

[78] The corrective action log may be prepared, signed, and kept electronically, rather than in paper form, if the records are: (a) in a format that can be read in a similar manner as a paper record; (b) legally dependable with no less evidentiary value than their paper equivalent; and (c) immediately accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form. For additional guidance on the proper practices to follow for the electronic retention of corrective action log records, refer to the Fact Sheet discussion related to Part 4.7.3.

6.2 GENERAL TRAINING REQUIREMENTS FOR STORMWATER TEAM MEMBERS

Prior to the commencement of construction activities, you must ensure that all persons[79] assigned to the stormwater team understand the requirements of this permit and their specific responsibilities with respect to those requirements, including the following related to the scope of their job duties:

a. The permit requirements and deadlines associated with installation, maintenance, and removal of stormwater controls, as well as site stabilization;

b. The location of all stormwater controls on the site required by this permit and how they are to be maintained;

c. The proper procedures to follow with respect to the permit's pollution prevention requirements; and

d. When and how to conduct inspections, record applicable findings, and take corrective actions. Specific training requirements for persons conducting site inspections are included in Part 6.3.

You are responsible for ensuring that all activities on the site comply with the requirements of this permit. You are not required to provide or document formal training for subcontractors or other outside service providers (unless the subcontractors or outside service providers are responsible for conducting the inspections required in Part 4, in which case you must provide such documentation consistent with Part 7.2.2), but you must ensure that such personnel understand any requirements of this permit that may be affected by the work they are subcontracted to perform.

6.3 TRAINING REQUIREMENTS FOR PERSONS CONDUCTING INSPECTIONS

For projects that receive coverage under this permit on or after February 17, 2023, to be considered a qualified person under Part 4.1 for conducting inspections under Part 4, you must, at a minimum, either:

a. Have completed the EPA construction inspection course developed for this permit and have passed the exam; or

b. Hold a current valid construction inspection certification or license from a program that, at a minimum, covers the following:[80]

- **i.** Principles and practices of erosion and sediment control and pollution prevention practices at construction sites;
- **ii.** Proper installation and maintenance of erosion and sediment controls and pollution prevention practices used at construction sites; and
- **iii.** Performance of inspections, including the proper completion of required reports and documentation, consistent with the requirements of Part 4.

[79] If the person requiring training is a new employee who starts after you commence construction activities, you must ensure that this person has the proper understanding as required above prior to assuming particular responsibilities related to compliance with this permit. For emergency-related projects, the requirement to train personnel prior to commencement of construction activities does not apply, however, such personnel must have the required training prior to NOI submission.

[80] If one of the following topics (e.g., installation and maintenance of pollution prevention practices) is not covered by the non-EPA training program, you may consider supplementing the training with the analogous module of the EPA course (e.g., Module 4) that covers the missing topic.

For projects that receive coverage under this permit prior to February 17, 2023, any personnel conducting site inspections pursuant to Part 4 on your site must, at a minimum, be a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.[81]

6.4 STORMWATER TEAM'S ACCESS TO PERMIT DOCUMENTS

Each member of the stormwater team must have easy access to an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWPPP, and other relevant documents or information that must be kept with the SWPPP.

7 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

7.1 GENERAL REQUIREMENTS

All operators associated with a construction site under this permit must develop a SWPPP consistent with the requirements in Part 7 prior to their submittal of the NOI.[82, 83, 84] The SWPPP must be kept up-to-date throughout coverage under this permit.

If a SWPPP was prepared under a previous version of this permit, the operator must review and update the SWPPP to ensure that this permit's requirements are addressed prior to submitting an NOI for coverage under this permit.

7.2 SWPPP CONTENTS

At a minimum, the SWPPP must include the information specified in this Part and as specified in other parts of this permit.

7.2.1 All Site Operators. Include a list of all other operators who will be engaged in construction activities at the site, and the areas of the site over which each operator has control.

[81] If you receive coverage for a project prior to February 17, 2023, and construction activities for the same project will continue after February 17, 2023, the personnel conducting inspections do not need to take the additional training specified in Parts 6.3a and 6.3b for inspections conducted on the project site. If the same operator obtains coverage for a different project on or after February 17, 2023, personnel conducting inspections would be required to meet the requirements for a qualified person by completing the training in either Part 6.3a or Part 6.3b.

[82] The SWPPP does not establish the effluent limits and/or other permit terms and conditions that apply to your site's discharges; these limits, terms, and conditions are established in this permit.

[83] Where there are multiple operators associated with the same site, they may develop a group SWPPP instead of multiple individual SWPPPs. Regardless of whether there is a group SWPPP or multiple individual SWPPPs, each operator is responsible for compliance with the permit's terms and conditions. In other words, if Operator A relies on Operator B to satisfy its permit obligations, Operator A does not have to duplicate those permit-related functions if Operator B is implementing them such that both operators are in compliance with the permit. However, Operator A remains responsible for permit compliance if Operator B fails to take actions necessary for Operator A to comply with the permit. In addition, all operators must ensure, either directly or through coordination with other operators, that their activities do not cause a violation or compromise any other operators' controls and/or any shared controls. See also footnote 60.

[84] There are a number of commercially available products to assist operators in developing the SWPPP, as well as companies that can be hired to help develop a site-specific SWPPP. The permit does not state which are recommended, nor does EPA endorse any specific products or vendors. Where operators choose to rely on these products or services, the choice of which ones to use to comply with the requirements of this Part is a decision for the operator alone.

7.2.2 Stormwater Team. Identify the personnel (by name and position) that you have made part of the stormwater team pursuant to Part 6.1, as well as their individual responsibilities, including which members are responsible for conducting inspections.

Include verification that each member of the stormwater team has received the training required by Part 6.2. Include documentation that members of the stormwater team responsible for conducting inspections pursuant to Part 4 have received the training required by Part 6.3. If personnel on your team elect to complete the EPA inspector training program pursuant to Part 6.3a, you must include copies of the certificate showing that the relevant personnel have completed the training and passed the exam. If personnel on your team elect to complete a non-EPA inspector training program pursuant to Part 6.3b, you must include documentation showing that these persons have successfully completed the program and their certification or license is still current. You must also confirm that the non-EPA inspector training program satisfies the minimum elements for such programs in Part 6.3b.

7.2.3 Nature of Construction Activities. Include the following:

- **a.** A description of the nature of your construction activities, including the age or dates of past renovations for structures that are undergoing demolition;
- **b.** The size of the property (in acres or length in miles if a linear construction site);
- **c.** The total area expected to be disturbed by the construction activities (to the nearest quarter acre or nearest quarter mile if a linear construction site);
- **d.** A description of any on-site and off-site construction support activity areas covered by this permit (see Part 1.2.1c);
- **e.** The maximum area expected to be disturbed at any one time, including on-site and off-site construction support activity areas;
- **f.** A description and projected schedule for the following:[85]
  - **i.** Commencement of construction activities in each portion of the site, including clearing and grubbing, mass grading, demolition activities, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization;
  - **ii.** Temporary or permanent cessation of construction activities in each portion of the site;
  - **iii.** Temporary or final stabilization of exposed areas for each portion of the site; and
  - **iv.** Removal of temporary stormwater controls and construction equipment or vehicles, and the cessation of construction-related pollutant-generating activities.

[85] If plans change due to unforeseen circumstances or for other reasons, the requirement to describe the sequence and estimated dates of construction activities is not meant to "lock in" the operator to meeting these dates. When departures from initial projections are necessary, this should be documented in the SWPPP itself, or in associated records, as appropriate.

g. A list and description of all pollutant-generating activities[86] on the site. For each pollutant-generating activity, include an inventory of pollutants or pollutant constituents (e.g., *sediment, fertilizers, pesticides, paints, caulks, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels*) associated with that activity, which could be discharged in stormwater from your construction site. You must take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed or removed during construction;

h. Business days and hours for the project;

i. If you are conducting construction activities in response to a public emergency (see Part 1.4), a description of the cause of the public emergency *(*e.g., *mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services)*, information substantiating its occurrence *(*e.g., *State disaster declaration or similar State or local declaration)*, and a description of the construction necessary to reestablish affected public services.

7.2.4 Site Map. Include a legible map, or series of maps, showing the following features of the site:

a. Boundaries of the property;

b. Locations where construction activities will occur, including:

i. Locations where earth-disturbing activities will occur (note any phasing), including any demolition activities;

ii. Approximate slopes before and after major grading activities (note any steep slopes (as defined in Appendix A));

iii. Locations where sediment, soil, or other construction materials will be stockpiled;

iv. Any receiving water crossings;

v. Designated points where vehicles will exit onto paved roads;

vi. Locations of structures and other impervious surfaces upon completion of construction; and

vii. Locations of on-site and off-site construction support activity areas covered by this permit (see Part 1.2.1c).

c. Locations of any receiving waters within the site and all receiving waters within one mile downstream of the site's discharge point(s). Also identify if any of these receiving waters are listed as impaired or are identified as a Tier 2, Tier 2.5, or Tier 3 water;

d. Any areas of Federally listed critical habitat within the action area of the site as defined in Appendix A;

e. Type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures);

f. Drainage patterns of stormwater and authorized non-stormwater before and after major grading activities;

[86] Examples of pollutant-generating activities include paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal; and dewatering activities.

g. Stormwater and authorized non-stormwater discharge locations, including:

i. Locations where stormwater and/or authorized non-stormwater will be discharged to storm drain inlets, including a notation of whether the inlet conveys stormwater to a sediment basin, sediment trap, or similarly effective control;[87]

ii. Locations where stormwater or authorized non-stormwater will be discharged directly to receiving waters (i.e., not via a storm drain inlet); and

iii. Locations where turbidity benchmark monitoring will take place to comply with Part 3.3, if applicable to your site.

h. Locations of all potential pollutant-generating activities identified in Part 7.2.3g;

i. Designated areas where construction wastes that are covered by the exception in Part 2.3.3e.ii because they are not pollutant-generating will be stored;

j. Locations of stormwater controls, including natural buffer areas and any shared controls utilized to comply with this permit; and

k. Locations where polymers, flocculants, or other treatment chemicals will be used and stored.

7.2.5 Non-Stormwater Discharges. Identify all authorized non-stormwater discharges in Part 1.2.2 that will or may occur.

7.2.6 Description of Stormwater Controls.

a. For each of the Part 2.2 erosion and sediment control requirements, Part 2.3 pollution prevention requirements, and Part 2.4 construction dewatering requirements, as applicable to your site, you must include the following:

i. A description of the specific control(s) to be implemented to meet these requirements;

ii. The design specifications for controls described in Part 7.2.6a.i (including references to any manufacturer specifications and/or erosion and sediment control manuals/ordinances relied upon);[88]

iii. Routine stormwater control maintenance specifications; and

iv. The projected schedule for stormwater control installation/implementation.

b. You must also include any of the following additional information as applicable.

i. **Natural buffers and/or equivalent sediment controls** (see Part 2.2.1 and Appendix F). You must include the following:

(a) The compliance alternative to be implemented;

(b) If complying with alternative 2, the width of natural buffer retained;

[87] The requirement to show storm drain inlets in the immediate vicinity of the site on your site map only applies to those inlets that are easily identifiable from your site or from a publicly accessible area immediately adjacent to your site.

[88] Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practice and must be explained in the SWPPP.

(c) If complying with alternative 2 or 3, the erosion and sediment control(s) you will use to achieve an equivalent sediment reduction, and any information you relied upon to demonstrate the equivalency;

(d) If complying with alternative 3, a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size;

(e) For "linear construction sites" where it is infeasible to implement compliance alternative 1, 2, or 3, a rationale for this determination, and a description of any buffer width retained and/or supplemental erosion and sediment controls installed; and

(f) A description of any disturbances that are exempt under Part 2.2.1 that occur within 50 feet of a receiving water.

ii. Perimeter controls for a "linear construction site" (see Part 2.2.3d). For areas where perimeter controls are not feasible, include documentation to support this determination and a description of the other practices that will be implemented to minimize discharges of pollutants in stormwater associated with construction activities.

Note: Routine maintenance specifications for perimeter controls documented in the SWPPP must include the Part 2.2.3c.i requirement that sediment be removed before it has accumulated to one-half of the above-ground height of any perimeter control.

iii. Sediment track-out controls (see Parts 2.2.4b and 2.2.4c). Document the specific stabilization techniques and/or controls that will be implemented to remove sediment prior to vehicle exit.

iv. Inlet protection measures (see Part 2.2.10a). Where inlet protection measures are not required because the storm drain inlets to which your site discharges are conveyed to a sediment basin, sediment trap, or similarly effective control, include a short description of the control that receives the stormwater flow from the site.

v. Sediment basins (see Part 2.2.12). In circumstances where it is infeasible to utilize outlet structures that withdraw water from the surface, include documentation to support this determination, including the specific conditions or time periods when this exception will apply.

vi. Treatment chemicals (see Part 2.2.13), you must include the following:

(a) A listing of the soil types that are expected to be exposed during construction in areas of the project that will drain to chemical treatment systems. Also include a listing of soil types expected to be found in fill material to be used in these same areas, to the extent you have this information prior to construction;

(b) A listing of all treatment chemicals to be used at the site and why the selection of these chemicals is suited to the soil characteristics of your site;

(c) If the applicable EPA Regional Office authorized you to use cationic treatment chemicals for sediment control, include the specific controls and implementation procedures designed to ensure that your use of cationic

treatment chemicals will not lead to a discharge that does not meet water quality standards;

(d) The dosage of all treatment chemicals to be used at the site or the methodology to be used to determine dosage;

(e) Information from any applicable Safety Data Sheet (SDS);

(f) Schematic drawings of any chemically enhanced stormwater controls or chemical treatment systems to be used for application of the treatment chemicals;

(g) A description of how chemicals will be stored consistent with Part 2.2.13c;

(h) References to applicable State or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer's specifications regarding the use of your specific treatment chemicals and/or chemical treatment systems; and

(i) A description of the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to use of the treatment chemicals at your site.

vii. Stabilization measures (see Part 2.2.14). You must include the following:

(a) The specific vegetative and/or non-vegetative practices that will be used;

(b) The stabilization deadline that will be met in accordance with Part 2.2.14;

(c) If complying with the deadlines for sites in arid, semi-arid, or drought-stricken areas, the beginning and ending dates of the seasonally dry period (as defined in Appendix A)[89] and the schedule you will follow for initiating and completing vegetative stabilization; and

(d) If complying with deadlines for sites affected by unforeseen circumstances that delay the initiation and/or completion of vegetative stabilization, document the circumstances and the schedule for initiating and completing stabilization.

viii. Spill prevention and response procedures (see Parts 1.3.5, 2.3.3c, 2.3.3d, and 2.3.6). You must include the following:

(a) Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for detection and response of spills or leaks; and

(b) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 2.3.6 and established under either 40 CFR part 110, 40 CFR part 117, or 40 CFR part 302, occurs

[89] See footnote 44.

during a 24-hour period. Contact information must be in locations that are readily accessible and available to all employees.

You may also reference the existence of SPCC plans developed for the construction activity under Section 311 of the CWA, or spill control programs otherwise required by an NPDES permit for the construction activity, provided that you keep a copy of that other plan on site.[90]

ix. Waste management procedures (see Part 2.3.3). Describe the procedures you will follow for handling, storing, and disposing of all wastes generated at your site consistent with all applicable Federal, State, Tribal, and local requirements, including clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste. You must also include the following additional information:

(a) If site constraints prevent you from storing chemical containers 50 feet away from receiving waters or the other site drainage features as required in Part 2.3.3c.ii(b), document in your SWPPP the specific reasons why the 50-foot setback is not feasible, and how you will store containers as far away as the site permits; and

(b) If there are construction wastes that are subject to the exception in Part 2.3.3e.ii, describe the specific wastes that will be stored on your site.

x. Application of fertilizers (see Part 2.3.5). Document any departures from the manufacturer specifications where appropriate.

7.2.7 Procedures for Inspection, Maintenance, and Corrective Action. Describe the procedures you will follow for maintaining your stormwater controls, conducting site inspections, and, where necessary, taking corrective actions, in accordance with Part 2.1.4, Part 4, and Part 5 of this permit, accordingly. Also include:

a. The inspection schedule you will follow, which is based on whether your site is subject to Part 4.2 or Part 4.3, or whether your site qualifies for any of the reduced inspection frequencies in Part 4.4;

b. If you will be conducting inspections in accordance with the inspection schedule in Part 4.2.2, Part 4.3, or Part 4.4.1b, the location of the rain gauge or the address of the weather station you will be using to obtain rainfall data;

c. If you will be reducing your inspection frequency in accordance with Part 4.4.1b, the beginning and ending dates of the seasonally defined arid period for your area or the valid period of drought;

d. If you will be reducing your inspection frequency in accordance with Part 4.4.3, the beginning and ending dates of frozen conditions on your site; and

e. Any maintenance or inspection checklists or other forms that will be used.

7.2.8 Procedures for Turbidity Benchmark Monitoring from Dewatering Discharges (if applicable). If you are required to comply with the Part 3.3 turbidity benchmark

[90] Even if you already have an SPCC or other spill prevention plan in existence, your plans will only be considered adequate if they meet all of the requirements of this Part, either as part of your existing plan or supplemented as part of the SWPPP.

monitoring requirements, describe the procedures you will follow to collect and evaluate samples, report results to EPA and keep records of monitoring information, and take corrective action when necessary. Include the specific type of turbidity meter you will use for monitoring, as well as any manuals or manufacturer instructions on how to operate and calibrate the meter. Describe any coordinating arrangement you may have with any other permitted operators on the same site with respect to compliance with the turbidity monitoring requirements, including which parties are tasked with specific responsibilities. If EPA has approved of an alternate turbidity benchmark pursuant to Part 3.3.2b, include any data and other documentation you relied on to request use of the specific alternative benchmark.

7.2.9 Compliance with Other Requirements.

a. Threatened and Endangered Species Protection. Include documentation required in the Endangered Species Protection section of the NOI in NeT, or the ESA worksheet in Appendix D, supporting your eligibility with regard to the protection of threatened and endangered species and designated critical habitat.

b. Historic Properties. Include documentation required in Appendix E supporting your eligibility with regard to the protection of historic properties.

c. Safe Drinking Water Act Underground Injection Control (UIC) Requirements for Certain Subsurface Stormwater Controls. If you are using any of the following stormwater controls at your site, document any contact you have had with the applicable State agency[91] or EPA Regional Office responsible for implementing the requirements for underground injection wells in the Safe Drinking Water Act and EPA's implementing regulations at 40 CFR § 144 -147. Such controls would generally be considered Class V UIC wells:

i. Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);

ii. Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and

iii. Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system).

7.2.10 SWPPP Certification. Your signatory must sign and date your SWPPP in accordance with Appendix G, Part G.11.

7.2.11 Post-Authorization Additions to the SWPPP. Once you are authorized for coverage under this permit, you must include the following documents as part of your SWPPP:

a. A copy of your NOI submitted to EPA along with any correspondence exchanged between you and EPA related to coverage under this permit;

b. A copy of the acknowledgment letter you receive from NeT assigning your NPDES ID (i.e.*, permit tracking number*);

[91] For State UIC program contacts, refer to the following EPA website: https://www.epa.gov/uic.

c. A copy of this permit (an electronic copy easily available to the stormwater team is also acceptable).

7.3 ON-SITE AVAILABILITY OF YOUR SWPPP

You must keep a current copy of your SWPPP at the site or at an easily accessible location so that it can be made available at the time of an on-site inspection or upon request by EPA; a State, Tribal, or local agency approving stormwater management plans; the operator of a storm sewer system receiving discharges from the site; or representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS).[92]

EPA may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) will be withheld from the public, but may not be withheld from EPA, USFWS, or NMFS.[93]

If an on-site location is unavailable to keep the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance of your construction site.

7.4 SWPPP MODIFICATIONS

7.4.1 You must modify your SWPPP, including the site map(s), within seven (7) days of any of the following conditions:

a. Whenever new operators become active in construction activities on your site, or you make changes to your construction plans, stormwater controls, or other activities at your site that are no longer accurately reflected in your SWPPP. This includes changes made in response to corrective actions triggered under Part 5. You do not need to modify your SWPPP if the estimated dates in Part 7.2.3f change during the course of construction;

b. To reflect areas on your site map where operational control has been transferred (and the date of transfer) since initiating permit coverage;

c. If inspections or investigations by EPA or its authorized representatives determine that SWPPP modifications are necessary for compliance with this permit;

d. Where EPA determines it is necessary to install and/or implement additional controls at your site in order to meet the requirements of this permit, the following must be included in your SWPPP:

i. A copy of any correspondence describing such measures and requirements; and

[92] The SWPPP may be prepared, signed, and kept electronically, rather than in paper form, if the records are: (a) in a format that can be read in a similar manner as a paper record; (b) legally dependable with no less evidentiary value than their paper equivalent; and (c) immediately accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form. For additional guidance on the proper practices to follow for the electronic retention of the SWPPP, refer to the Fact Sheet discussion related to Part 4.7.3.

[93] Information covered by a claim of confidentiality will be disclosed by EPA only to the extent of, and by means of, the procedures set forth in 40 CFR part 2, Subpart B. In general, submitted information protected by a business confidentiality claim may be disclosed to other employees, officers, or authorized representatives of the United States concerned with implementing the CWA. The authorized representatives, including employees of other executive branch agencies, may review CBI during the course of reviewing draft regulations.

ii. A description of the controls that will be used to meet such requirements.

e. To reflect any revisions to applicable Federal, State, Tribal, or local requirements that affect the stormwater controls implemented at the site; and

f. If applicable, if a change in chemical treatment systems or chemically enhanced stormwater control is made, including use of a different treatment chemical, different dosage rate, or different area of application.

7.4.2 You must maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change (see Part 7.2.9 above) and a brief summary of all changes.

7.4.3 All modifications made to the SWPPP consistent with Part 7.4 must be authorized by a person identified in Appendix G, Part G.11.b.

7.4.4 Upon determining that a modification to your SWPPP is required, if there are multiple operators covered under this permit, you must immediately notify any operators who may be impacted by the change to the SWPPP.

8 HOW TO TERMINATE COVERAGE

Until you terminate coverage under this permit, you must comply with all conditions and effluent limitations in the permit. To terminate permit coverage, you must submit to EPA a complete and accurate Notice of Termination (NOT), which certifies that you have met the requirements for terminating in Part 8.

8.1 MINIMUM INFORMATION REQUIRED IN NOT

8.1.1 NPDES ID (i.e*., permit tracking number)* provided by EPA when you received coverage under this permit;

8.1.2 Basis for submission of the NOT (see Part 8.2);

8.1.3 Operator contact information;

8.1.4 Name of site and address (or a description of location if no street address is available); and

8.1.5 NOT certification.

8.2 CONDITIONS FOR TERMINATING CGP COVERAGE

You may terminate CGP coverage only if one or more of the conditions in Parts 8.2.1, 8.2.2, or 8.2.3 has occurred. Until your termination is effective consistent with Part 8.5, you must continue to comply with the conditions of this permit.

8.2.1 You have completed all construction activities at your site and, if applicable, construction support activities covered by this permit (see Part 1.2.1c), and you have met all of the following requirements:

a. For any areas that (1) were disturbed during construction, (2) are not covered by permanent structures, and (3) over which you had control during the construction activities, you have met the requirements for final vegetative or non-vegetative stabilization in Part 2.2.14c.

To document that you have met these stabilization requirements, you must take either ground or aerial photographs that show your site's compliance with the Part 2.2.14 stabilization requirements and submit them with your NOT. If any portion of your

site is covered by one of the exceptions in Part 2.2.14c.iii, indicate which exception applies and include a supplementary explanation with your photographs that provides the necessary context for why this portion of the site is in compliance with the final stabilization criteria even though it appears to be unstabilized. You are not required to take photographs of every distinct part of your site that is being stabilized, however, the conditions of the site portrayed in any photographs that are submitted must be substantially similar[94] to those of the areas that are not photographed. You must also comply with the following related to these photographs:

i. Take photographs both before and after the site has met the final stabilization criteria in Part 2.2.14c;

ii. All photographs must be clear and in focus, and in the original format and resolution; and

iii. Include the date each photograph was taken, and a brief description of the area of the site captured by the photograph (e.g., photo shows application of seed and erosion control mats to remaining exposed surfaces on northeast corner of site).

b. You have removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following your termination of permit coverage;

c. You have removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following your termination of permit coverage or those that are biodegradable (as defined in Appendix A); and

d. You have removed all potential pollutants and pollutant-generating activities associated with construction, unless needed for long-term use following your termination of permit coverage; or

8.2.2 You have transferred control of all areas of the site for which you are responsible under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit; or

8.2.3 Coverage under an individual or alternative general NPDES permit has been obtained.

8.3 HOW TO SUBMIT YOUR NOT

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit an NOT for the 2022 CGP.

To access NeT, go to https://cdx.epa.gov/cdx.

Waivers from electronic reporting may be granted as specified in Part 1.4.2. If the EPA Regional Office grants you approval to use a paper NOT, and you elect to use it, you must complete the form in Appendix I.

[94] Stabilization conditions that are substantially similar would include areas that are using the same type of stabilization measures and that have similar slopes, soils, and topography, and have achieved the same level of stabilization.

8.4 DEADLINE FOR SUBMITTING THE NOT

You must submit an NOT within 30 calendar days after any one of the conditions in Part 8.2 occurs.

8.5 EFFECTIVE DATE OF TERMINATION OF COVERAGE

Your authorization to discharge under this permit terminates at midnight of the calendar day that a complete NOT is submitted to EPA.

9 PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY LANDS, OR TERRITORIES

The provisions in this Part provide additions to the applicable conditions of this permit to reflect specific additional conditions required as part of the State or Tribal CWA Section 401 certification process, or the Coastal Zone Management Act (CZMA) certification process, or as otherwise established by the permitting authority. The specific additional revisions and requirements only apply to activities in those specific States, Indian country, and areas in certain States with Federal Facilities or areas subject to construction projects by Federal Operators. States, Indian country, and other areas not included in this Part do not have any additions to the applicable conditions of this permit.

9.1 EPA REGION 1

9.1.1 NHR100000 State of New Hampshire

a. Should the permit coverage for an individual applicant be insufficient to achieve water quality standards, the New Hampshire Department of Environmental Services (NHDES) may prepare additional 401 certification conditions for that applicant. Any additional 401 certification conditions will follow all required NHDES public participation requirements.

b. If you disturb 100,000 square feet or more of contiguous area, you must also comply with RSA 485-A:17 and Env-Wq 1500, and, unless exempt, apply for an Alteration of Terrain (AoT) permit from NHDES. This requirement also applies to a lower disturbance threshold of 50,000 square feet or more when construction occurs within the protected shoreline under the Shoreland Water Quality Protection Act (see RSA 483-B and Env-Wq 1400). A permit application must also be filed if your project disturbs an area of greater than 2,500 square feet, is within 50 feet of any surface water, and has a flow path of 50 feet or longer disturbing a grade of 25 percent or greater. Project sites with disturbances smaller than those discussed above, that have the potential to adversely affect state surface waters, are subject to the conditions of an AoT General Permit by Rule (Env-Wq 1503.03).

c. You must determine that any excavation dewatering discharges are not contaminated before they will be authorized as an allowable non-stormwater discharge under this permit (see Part 1.2.2 of the Construction General Permit or CGP). In the absence of information demonstrating otherwise, the water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the groundwater dewatering location. Information on groundwater contamination can be generated over the Internet via the NHDES web site http:// des.nh.gov/ by using the One Stop Data Mapper. For a toxic substance included in the New Hampshire surface water quality standards, see Env-Wq 1703.21 (see https://www.des.nh.gov/sites/g/fi1es/ehbemt 341/files/documents/2020-01/Env-Wg

1700.pdf). If it is determined that the groundwater to be dewatered is near a remediation or other waste site, you must apply for the Remediation General Permit (see https://www3.epa.gov/region1/npdes/rgp.html)

d. As a minimum, you must treat any uncontaminated excavation "dewatering" discharges and "stormwater" discharges, as those terms are defined in Appendix A of the CGP, as necessary, to remove suspended solids and turbidity so that the surface waters receiving the construction discharges[95] meet New Hampshire surface water quality standards for turbidity (Env-Wq 1703.11 and Env-Wq 1703.03(c)(1)c), benthic deposits (Env-Wq 1703.03(c)(1)a), and Env-Wq 1703.08) and foam, debris, scum or other visible substances (i.e., plumes or visual turbidity)[96] (Env-Wq 1703.03(c)(1)b).

i. For all Construction Activities covered under this CGP, the following shall apply to ensure compliance with the aforementioned regulations for turbidity, benthic deposits and visible substances:

Unless otherwise specified, site inspection requirements shall comply with Part 4 of the CGP. As a minimum site inspection frequency shall be in accordance with Part 4.2.2 of the CGP (and Part 4.3.2 of the CGP for sites discharging dewatering water). Site inspection frequency may be reduced in accordance with Part 4.4 of the CGP (Reductions in Inspection Frequency). Monitoring of the receiving water for visible turbidity and benthic sediment deposits shall be conducted each site inspection and results reported in the Inspection Report required in Part 4.7 of the CGP. Should visible turbidity or benthic sediment deposits attributable or partly attributable to your construction activities be present in the receiving water, the "Corrective Actions" specified in Part 5 shall be immediately implemented to correct the water quality standard violations. In addition, daily monitoring (including photographs) of the receiving water shall be conducted until there is no visible turbidity or benthic deposits. Inspection Reports required in Part 4.7 of the CGP shall include, but not be limited to, the distance downstream and the percent of the river width[97] where visible turbidity was observed, and the period of time that the visible turbidity persisted. A copy of the Inspection Report(s) shall be made available to NHDES within 24 hours of receiving a written request from NHDES.

ii. For Construction Activities, disturbing 5 acres or more of land at any one time (excluding areas that have been completely stabilized in accordance with the final stabilization criteria specified in Part 2.2.14.c of the CGP), the following shall

[95] Construction Discharges include uncontaminated "dewatering" and "stormwater" discharges as those terms are defined in Appendix A of the CGP. Controlled construction discharges are construction discharges where the rate of flow can be regulated such as from a construction settling basin or NHDES approved flocculation system.

[96] For the definition of visual turbidity, see the definition for "Non-Turbid" in Appendix A of the CGP, which states the following:" "Non-Turbid" - a discharge that is free from visual turbidity. For the purposes of this permit, visual turbidity refers to a sediment plume or other cloudiness in the water caused by sediment that can be identified by an observer." *[EPA interprets the text of this footnote as intending to reference the Appendix A definitions of "visual turbidity" and "non-turbid" in the final permit.]*

[97] The distance downstream and the percent of river width where visible turbidity (i.e., plume) is observed is required to determine the extent of the river affected and to determine if there was a "zone of passage" (i.e., a portion of the receiving water where there was no visible turbidity where mobile organisms could pass without being adversely impacted). The percent of river width affected is equal 100 multiplied by the width of the plume (in feet) divided by the width of the receiving water (in feet).

apply to ensure compliance with the aforementioned regulations for turbidity, benthic deposits and visible substances.

Item 9.1.1.d.i) above shall apply to all construction discharges and the minimum site inspection frequency shall comply with Part 4.3.1 of the CGP (and Part 4.3.2 of the CGP for sites discharging dewatering water). Site inspection frequency may be reduced in accordance with Part 4.4 of the CGP (Reductions in Inspection Frequency).

With regards to controlled construction discharges, if there is no visible turbidity (i.e., plumes) or benthic deposits, and, in the absence of information demonstrating otherwise, turbidity measurements of less than or equal to 50 nephelometric turbidity units (NTU) in the controlled construction discharges at the outlet prior to mixing with the receiving surface waters, shall be presumed to meet New Hampshire surface water quality standards for the parameters listed above. As a minimum, the controlled construction discharges must be sampled at each site inspection.

If any controlled construction discharge exceeds 50 NTU, or if visible turbidity or benthic sediment deposits attributable or partly attributable to any construction discharge are observed in the receiving water, then the "Corrective Actions" specified in Part 5 of the CGP shall be immediately implemented.

In addition, should such violation occur, and, in order to determine compliance with surface water quality standards for turbidity (Env-Wq 1703.11 and Env-Wq 1703.03(c)(1)c), benthic deposits (Env-Wq 1703.03(c)(1)a), and Env-Wq 1703.08) and foam, debris, scum or other visible substances (Env-Wq 1703.03(c)(1)b)), turbidity monitoring shall be immediately implemented as specified below:

Turbidity samples of the receiving water shall be immediately taken in the receiving water upstream and beyond the influence of the construction activity, and, unless a mixing zone[98] is approved by NHDES, no more than 75 feet downstream of each controlled construction discharge that exceeded 50 NTU and no more than 75 feet downstream of each construction discharge that caused visible turbidity.

Downstream samples shall be taken at locations in the receiving water that are most likely influenced by the discharge (e.g., if visible turbidity (i.e., a plume) is present, the sample shall be taken in the plume). Samples shall be collected a minimum of 2 times per day during the daylight hours at times when construction activities are most likely to cause turbidity in the receiving water and shall continue until the turbidity water quality standards are met in the receiving water (i.e., the difference between the upstream and downstream turbidity level is no greater than 10 NTU).

[98] Permittees may request a distance greater than 75 feet downstream of a construction discharge for determining compliance with turbidity standards in Class B surface waters, by submitting a mixing zone request to NHDES that complies with Env-Wq 1707.02. If a mixing zone is approved, NHDES is required to include conditions to ensure that the criteria on which the approval is based are met (Env-Wq 1707.03).

If water quality standards are not met during daylight hours on any day, sampling shall resume the next day and continue no fewer than 2 times per day until water quality standards are met. The date, time, location and results of turbidity measurements, as well as a summary identifying the cause of the violations, corrective actions that were implemented, the period of time that the receiving water exceeded turbidity standards and the distance downstream and the percent of the river width where visible turbidity was observed, and the period of time that the visible turbidity persisted, shall be recorded and included in the Inspection Report required in Part 4.7 of the CGP. Turbidity measurements shall be conducted via a field meter in accordance with the requirements for turbidity specified in Table 1B in 40 CFR 136.3 (see 40 CFR §136.3 Identification of test procedures - Code of Federal Regulations ecfr.io). Field meters shall be calibrated every day sampling is conducted and prior to the first sample.

e. Construction site owners and operators are encouraged to consider opportunities for post- construction groundwater recharge using infiltration best management practices (BMPs) during site design and preparation of the SWPPP in order to assure compliance with Env-Wq 1703.03 and Env-Wq 1703.11. If your construction site is in a town that is required to obtain coverage under the NPDES General Permit for discharges from Municipal Separate Storm Sewer Systems (MS4) you may be required to use such practices. The SWPPP must include a description of any on-site infiltration that will be installed as a post-construction stormwater management measure or reasons for not employing such measures such as 1) The facility is located in a wellhead protection area as defined in RSA 485- C:2; or 2) The facility is located in an area where groundwater has been reclassified to GAA, GA1 or GA2 pursuant to RSA 485-C and Env-DW 901; or 3) Any areas that would be exempt from the groundwater recharge requirements contained in Env-Wq 1507.04, including all land uses or activities considered to be a "High-load Area" (see Env-Wq 1502.30). For design considerations for infiltration measures see Env-Wq 1508.06. Note that there may be additional local requirements that fall under the NH MS4 permittee's Authorization to Discharge Permit for those regulated areas.

f. Appendix F of the CGP contains information regarding Tier 2, or high quality waters in the various states. ***[EPA notes that this information has now been moved to https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates]*** Although there is no official list of tier 2 waters for New Hampshire, it can be assumed that all New Hampshire surface waters are tier 2 for turbidity unless 1) the surface water that you are proposing to discharge into is listed as impaired for turbidity in the states listing of impaired waters (see https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/) or 2) sampling upstream of the proposed discharge location shows turbidity values greater than 10 NTU (Env-Wq 1703.11). A single grab sample collected during dry weather (no precipitation within 48 hours) is acceptable.

g. To ensure compliance with RSA 485-C, RSA 485-A, RSA 485-A:13, I(a), Env-Wq 1700 and Env-Wq 302, the following information may be requested by NHDES. This information must be kept on site unless you receive a written request from NHDES that it be sent to the address shown below in 9.1.1.h.

i. A list of all non-stormwater discharges that occur at the facility, including their source locations and the control measures being used (see Part 1.2.2 of the CGP).

ii. Records of sampling and analysis required for construction dewatering and stormwater discharges (see 9.1.1.d above).

h. All required or requested documents must be sent to: NH Department of Environmental Services, Watershed Management Bureau, P.O. Box 95 Concord, NH 03302-0095.

9.1.2 MAR100000 Commonwealth of Massachusetts (except Indian country)

a. All discharges covered by the Construction General Permit shall comply with the provisions pursuant to 314 CMR 3.00, 314 CMR 4.00, 314 CMR 9.00, including applicable construction stormwater standards and 310 CMR 10.00.

b. Pursuant to 314 CMR 3.11 (2)(a)6., and in accordance with MassDEP's obligation under 314 CMR 4.05(5)(e) to maintain surface waters free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife, permittees are prohibited from discharging dewatering water under the CGP from sites that are designated as Superfund/CERCLA or RCRA, and must make accommodations to dispose of the dewatering discharges appropriately, such as coverage under the Remediation General Permit (RGP).

c. Pursuant to 314 CMR 3.11 (2)(a), and in accordance with MassDEP's obligation to protect Outstanding Resource Waters under 314 CMR 4.04(3), applicants seeking coverage under the 2022 CGP that propose to carry out construction activities near Outstanding Resource Waters as identified in 314 CMR 4.06, shall submit to MassDEP for review:

i. a copy of the Stormwater Pollution Prevention Plan (SWPPP),

ii. a copy of the EPA NOI, and

iii. MassDEP's Stormwater BMP Checklist.

For purposes of this review, the permittee shall submit these documents to MassDEP at the same time they are submitted to EPA. Instructions on how to submit these documents to MassDEP and where to find the MassDEP Stormwater BMP Checklist and obtain authorization to discharge can be found here: https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of- intent.

d. Pursuant to 314 CMR 3.11 (2)(a)6., and in accordance with MassDEP's obligation under 314 CMR 4.05(5)(e) to maintain surface waters free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife, applicants that propose to dewater under the 2022 CGP and plan to discharge to certain waters as described below, shall determine that any dewatering discharges are not contaminated by testing the proposed discharge as described below as part of the application for WM15 authorization. Unless otherwise specified, testing described in this section should be conducted using the methods in 40 CFR 136.

i. Applicants for sites that plan to discharge to Outstanding Resource Waters as identified in 314 CMR 4.06 shall test one sample of the proposed dewatering discharge water for pH, E. Coli (for discharges to freshwater), fecal coliform (for

discharges to salt water), Enterococci (for discharges to salt water), total suspended solids, oil and grease, total nitrogen, total phosphorus, and all parameters with numeric criteria listed in the Massachusetts Surface Water Quality Standards at 314 CMR 4.05(e). Results shall be reported to MassDEP as part of the WM15 application. To determine if the dewatering discharge could be covered under the 2022 CGP, the effluent at zero dilution must meet numeric water quality criteria. If the effluent does not meet numeric water quality criteria, the applicant shall contact EPA Region 1 to discuss coverage under the Remediation General Permit.

ii. Applicants for sites that propose to discharge to Public Water Supplies (314 CMR 4.06(1)(d)1) shall also test one sample of the proposed dewatering discharge water for per- and polyfluoroalkyl substances (PFAS), as outlined in the table below. Results shall be reported to MassDEP as part of the WM15 application. If any PFAS compounds are detected, the applicant shall apply for coverage under the NPDES Remediation General Permit for Massachusetts if required.

PFAS Testing Parameters for Discharges to Public Drinking Water Supplies[99]	
Perfluorohexanesulfonic acid (PFHxS), grab	Report ng/L
Perfluoroheptanoic acid (PFHpA), grab	Report ng/L
Perfluorononanoic acid (PFNA), grab	Report ng/L
Perfluorooctanesulfonic acid (PFOS), grab	Report ng/L
Perfluorooctanoic acid (PFOA), grab	Report ng/L
Perfluorodecanoic acid (PFDA), grab	Report ng/L

iii. Applicants for sites that propose to discharge to an impaired water as identified in the most recent final Massachusetts Integrated List of Waters,shall test one sample of the proposed dewatering discharge water for the parameter(s) for which the waterbody is impaired. To determine if the dewatering discharge could be covered under the 2022 CGP, the effluent at zero dilution must meet numeric water quality criteria. If the effluent does not meet numeric water quality criteria, the applicant shall contact EPA Region 1 to discuss coverage under the Remediation GeneralPermit and shall apply for RGP coverage if required.

iv. For dewatering discharges to all other waters, if any pollutants are knownor believed present in the proposed dewatering discharge water, the applicant shall apply for coverage under the NPDES Remediation General Permit for Massachusetts if required. For the purposes of this condition, a pollutant is "known present" if measured above the analytical detection limit using a sufficiently sensitive test method in an environmental sample, and "believed present" if a pollutant has not been measured in an environmental sample but will be added or generated prior to discharge, such as through a treatment process. Consequently, a pollutant is "known absent" if measured as non-detect relative to the analytical detection limit using a sufficiently sensitive test method in an environmental sample, and "believed absent" if a pollutant has not been measured in an environmentalsample but will not be added or generated prior to discharge and is not a parameter that applies to the applicable activity category for a site. If any pollutants are known or believed present in the

[99] PFAS testing shall follow established EPA methods 537 or 537.1 for drinking water until EPA Method 3512 for non-potable water becomes available.

proposed dewatering discharge water, the applicant shall test one sample of the proposed dewatering discharge water for the pollutants known or believed to be present. To determine if the dewatering discharge could be covered under the 2022 CGP, the effluent at zero dilution must meet numeric water quality criteria. If the effluent does not meet numeric water quality criteria, the applicant shall contact EPA Region 1 to discuss coverage under the Remediation General Permit.

e. Pursuant to 314 CMR 3.11 (2)(a), and in accordance with MassDEP's obligation to protect Outstanding Resource Waters under 314 CMR 4.04(3), applicants that propose to dewater under the 2022 CGP and discharge to Outstanding Resource Waters as identified in 314 CMR 4.06, shall submit the SWPPP and associated documents to MassDEP to review. MassDEP shall complete review within 30 daysof receipt.

f. Pursuant to 314 CMR 3.11 (2)(a)6., and in accordance with MassDEP's obligation under 314 CMR 4.05 to maintain surface waters free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to the waterbody, permittees that have been authorized to dewater under the 2022 CGP and that discharge to Outstanding Resource Waters as identified in 314 CMR 4.06 shall carry out daily benchmark monitoring for turbidity[100] for the duration of dewatering. Permittees shall compare the weekly average of the turbidity monitoring results with the established benchmark turbidity value of 25 Nephelometric Turbidity Units (NTU). If a permittee's weekly average turbidity results exceed the benchmark, the operator shall conduct follow-up corrective action to determine the source of the problem and to make any necessary repairs or upgrades to the dewatering controls to lower the turbidity levels. The permittee shall document any corrective action taken in its corrective action log. Furthermore, permittees at these sites shall carry out inspections at higher frequency, specifically, daily inspections of the dewatering discharge treatment for the duration of the discharge. The permittee shall inspect the site for sediment plume or whether a hydrocarbon sheen is visible at the point of discharge, estimate the flow rate at the point of discharge, and inspect the site downstream to assess whether sedimentation is attributable to the dewatering discharges.

g. Pursuant to 314 CMR 3.11 (2)(a)6., and in accordance with MassDEP's obligation under 314 CMR 4.05 to maintain surface waters free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to the waterbody, permittees shall store materials outside the Base Flood Elevation[101] when feasible to prevent displacing runoff and erosion.

h. Pursuant to 314 CMR 3.11 (2)(a), and in accordance with MassDEP's obligation to maintain surface waters free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses under 314 CMR 4.05(5)(c), all applicants who apply for coverage under the 2022 CGP shall follow guidelines on fertilizer application, including use of fertilizer containing no phosphorus, in accordance with 330 CMR 31.00 Plant Nutrient Application Requirements for

[100] Applicants shall follow EPA Method 180.1 to monitor for turbidity

[101] Base Flood Elevation (BFE) is the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year. The BFE is shown on the Flood Insurance Rate Map (FIRM) for zones AE, AH, A1–A30, AR, AR/A, AR/AE, AR/A1– A30, AR/AH, AR/AO, V1–V30 and VE. (Source: https://www.fema.gov/node/404233).

Agricultural Land and Non-Agricultural Turf and Lawns. Further, fertilizer shall never be applied to a site when a rain event greater than 0.5 inches is forecast in the next 48 hours.

i. Pursuant to 314 CMR 3.11 (2)(a), all applicants who apply for coverage under the 2022 CGP and elect to carry out site inspections every 14 days shall also inspect sites within 24 hours of 0.25 inches of precipitation events or greater over 24 hours,or within 24 hours of a discharge that occurred due to snowmelt from 3.25 inches or greater of snow accumulation.[102] During the high flow periods in spring (i.e., months of April to June), inspection frequency shall be increased to once per week for all sites.

  i. To determine whether 3.25 inches or greater of snow accumulation has occurred at a site, snowfall measurements can be taken at the site,[103] or theoperator can rely on similar information from a local weather forecast.

j. Implementing structural improvements, enhanced/resilient pollution prevention measures, and other mitigation measures can help to minimize impacts from stormwater discharges from major storm events such as hurricanes, storm surge, extreme/heavy precipitation,[104] and flood events. Pursuant to 314 CMR 3.11 (2)(a), if such stormwater control measures are already in place due to existing requirements mandated by other state, local or federal agencies, the SWPPP shall include a brief description of the controls and a reference to the existing requirement(s). If the site may be exposed to or has previously experienced suchmajor storm events[105], additional stormwater control measures that may be considered, and implemented as necessary, include, but are not limited to:

  i. Reinforce materials storage structures to withstand flooding and additional exertion of force;

  ii. Prevent floating of semi-stationary structures by elevating to the Base Flood Elevation (BFE) level or securing with non-corrosive device;

  iii. When a delivery of exposed materials is expected, and a storm is anticipated within 48 hours, delay delivery until after the storm or storematerials as appropriate (refer to emergency procedures);

[102] This is the amount of snow that is equivalent to 0.25 inches of rain, based on information from the National Oceanic and Atmospheric Administration (NOAA) indicating that 13 inches of snow is, on average, equivalent to 1 inch of rain. See https://www.nssl.noaa.gov/education/svrwx101/winter/faq/.

[103] NOAA's National Weather Service has guidelines on snowfall measurements at https://www.weather.gov/jkl/snow_measurement. These guidelines recommend use of a "snowboard" (a piece of wood about 16 inches by 16 inches) that is placed in an unobstructed part of the site on a hard surface.

[104] Heavy precipitation refers to instances during which the amount of rain or snow experienced in a location substantially exceeds what is normal. What constitutes a period of heavy precipitation varies according to location and season. Heavy precipitation does not necessarily mean the total amount of precipitation at a location has increased— just that precipitation is occurring in more intense or more frequent events.

[105] To determine if your facility is susceptible to an increased frequency of major storm events that could impact the discharge of pollutants in stormwater, you may reference FEMA, NOAA, or USGS flood map products at https://www.usgs.gov/faqs/where-can-i-find-flood-maps?qt-news_science_products=0#qtnews_science_products.

iv. Temporarily store materials and waste above the Base Flood Elevation ***[EPA notes that it has deleted a footnote reference to the term "Base Flood Elevation" since the same footnote is already included in Part 9.1.2.g, above.]*** level;

v. Temporarily reduce or eliminate outdoor storage;

vi. Temporarily relocate any mobile vehicles and equipment to higher ground;

vii. Develop scenario-based emergency procedures for major storms that are complementary to regular stormwater pollution prevention planning andidentify emergency contacts for staff and contractors; and

viii. Conduct staff training for implementing your emergency procedures atregular intervals.

k. Pursuant to 314 CMR 3.11 (2)(a)6., and in accordance with MassDEP's obligation under 314 CMR 4.05(5)(e) to maintain surface waters free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife, permittees who seek coverage under the 2022 CGP and anticipate to carry out dust control shall limit their dust control methodology to using water only and specifically avoid using other techniques, such as solutions containing calcium chloride.

l. If MassDEP requests a copy of the Stormwater Pollution Prevention Plan (SWPPP) for any construction site at any time, the permittee shall submit the SWPPP to MassDEP within 14 days of such a request. MassDEP may conduct an inspection of any site covered by this permit to ensure compliance with state lawrequirements, including state water quality standards.

9.1.3 MTR10F000 Areas in the State of Vermont located at a federal facility

a. Earth disturbance at any one time is limited to five acres.

b. All areas of earth disturbance must have temporary or final stabilization within 14 days of the initial disturbance. After this time, disturbed areas must be temporarily or permanently stabilized in advance of any runoff producing event. A runoff producing event is an event that produces runoff from the construction site. Temporary stabilization is not required if precipitation is not forecast and work is to continue in the next 24-hours or if the work is occurring in a self-contained excavation (i.e. no outlet) with a depth of two feet or greater (e.g. house foundation excavation, utility trenches). Areas of a construction site that drain to sediment basins are not considered eligible for this exemption, and the exemption applies only to the excavated area itself.

c. Site inspections on active construction sites shall be conducted daily during the period from October 15 through April 15.

d. The use of chemical treatments (e.g. polymers, flocculants, and coagulants) for the settling and/or removal of sediment from stormwater runoff associated with construction and construction-related activities requires prior written approval and an approved site and project-specific plan, from the Vermont Agency of Natural Resources. In addition, the use of cationic polymers is prohibited unless approved by the Vermont Agency of Natural Resources under a site and project-specific plan.

e. Any applicant under EPA's CGP shall allow authorized Vermont Agency of Natural Resources representatives, at reasonable times and upon presentation of credentials, to enter upon the project site for purposes of inspecting the project and determining

compliance with this Certification.

f. The Vermont Agency of Natural Resources may reopen and alter or amend the conditions of this Certification over the life of the EPA 2022 Construction General Permit when such action is necessary to assure compliance with the VWQS.

9.2 EPA REGION 2

9.2.1 NYR10I000 Indian country within the State of New York

a. Saint Regis Mohawk Tribe

i. Any Responsible-Person/Decision-Maker required under the CGP to submit a Notice of Intent (NOI) to EPA for coverage under the CGP, must concurrently submit an electronic copy of the NOI to the SRMT Environmental Division, Water Resource Program Manager. Additionally, an electronic copy of the Notice of Termination (NOT) must be provided within three business days after electronic confirmation is received from EPA that the NOT has been accepted. The NOI and NOT must be electronically provided to the following addresses:

Mr. Tieman W. Smith
Water Resources Program Manager Saint Regis Mohawk Tribe
449 Frogtown Road
Akwesasne, NY 13655 Tiernan.Smith@srmt-nsn.gov 518.358.2272 ext. 5073

ii. Any Responsible-Person/Decision-Maker that is required as part of the CGP to prepare a Discharge Management Plan (OMP) or Storm Water Management Plan (SWMP) and/or Storm Water Pollution Prevention Plan (SWPPP) must submit an electronic copy of the DMP, SWMP and/or SWPPP to the SRMT Environment Division, Water Resources Program Manager IO business days prior to the start of construction of any work to be conducted under the CGP. The applicable documents must be provided to the electronic address listed above.

iii. Any Responsible-Person/Decision-Maker that is required under the CGP to submit an annual report to EPA must submit an electronic copy of the annual report concurrently to the SRMT Water Resource Program. Additionally, any correspondences between the applicant and EPA related to analytical data, written reports, corrective action, enforcement, monitoring, or an adverse incident must likewise be routed to the SRMT Water Resources Program at the above electronic address.

iv. An "Authorization to Proceed Letter" with site-specific mitigation requirements may be sent out to the permittee when a review of the NOI and OMP, SWMP and /or SWPPP on a case-by-case basis, is completed by the SRMT Environment Division, Water Resource Program. This approval will allow the application to proceed if all mitigation requirements are met.

b. Seneca Nation

i. Under Part 1.1.5 of the CGP, the Seneca Nation requests that an applicant must demonstrate that they meet the eligibility criteria listed in Appendix D (certify in your Notice of Intent (NOI) that you meet one of the eligibility criteria [Criterion A-F]) as well as species and critical habitats that are listed under the Seneca Nation's "Fishing and Conservation Laws" and the "Seneca Nation of Indians Comprehensive Conservation Law".

ii. The Tribal Historic Preservation Office (THPO) was established in 2000 after the Seneca Nation received a recognition letter from the National Park Service (NPS); therefore under Part 1.1.6 of the CGP (Appendix E) and prior to submitting a Notice of Intent (NOI) operators must complete the Nation's TPHO, Project Review Form (https://sni.org/media/246603/sni-thpo-project-review-form.pdf) and submit the completed form with associated information to the Tribal Historic Preservation Officer at 90 Ohi:yo' Way, Salamanca, NY 14779. Federal agencies engaging in construction activities must provide for construction review by a certified construction reviewer in accordance with 7 Del. C. §§4010 & 4013 and 7 DE Admin. Code 5101, subsection 6.1.6.

iii. Under Part 1.2 of the CGP, discharges must also follow the Section 13 of the Guide for Construction (Seneca Nation of Indians Source Water Code) and respectively, Council Resolution, dated April 13, 2013 (CN: R-04-13-13-11) to ensure that the health, safety and welfare of the citizens of the Seneca Nation, and all other within the Lands and Territories of the Seneca Nation of Indians, and to facilitate the adequate provisions of water through the elimination or prevention of ground water contamination in the vicinity of wells that supply drinking water for the Nation. The area is known as the Source Water Protection Area (SWPA) and specified activities are regulated within this SWPA, as cited in Section 13 of the Guide for Construction and Section VI, of CN: R-04-13-13-11.

iv. Under Part 1.4, any operator who seeks coverage of the CGP, and is required to submit a notice of intent NOI and Notice of Termination (NOT) (as necessary) to the EPA for coverage, under Part 1.4.2 must also submit a copy of the NOI to the Seneca Nation's Environmental Protection Department (EPD) within three business days of submittal to the EPA, (address shown below). Respectively, a copy of the NOT (as described under Part 8.3 of the CGP), which certifies that you have met the requirements of Part 8, must be provided within three business days after electronic confirmation is received from the EPA that the NOT has been accepted. In addition to a NOI and NOT, the Seneca Nation (Environmental Protection Department [EPD]) would require an Environmental Impact Assessment (EA) (Long Form), as shown in Section 2 of the Seneca Nation of Indians Laws, Ordinances & Policies (Guide for Construction), to be completed and submitted to the EPD prior to any project to determine whether the impacts from a project would create significant and detrimental effects to the Nation's lands, water (violate WQS), and environment. The NOI, NOT, and EA must be submitted electronically to epd@sni.org and provided to the following address:

Seneca Nation
Environmental Protection Department (EPD) Attn: Director of EPD
12837 Route 438
Irving, NY 14081

v. Under Part 3.0 of the CGP, discharges must be controlled as necessary to meet applicable WQS. The Seneca Nation is working actively towards finalizing and implementing the; therefore, the EPD would require an applicant to submit or grant access to the permit to obtain information on the impact of effluents on receiving waters, including the capability of receiving waters to support future designated uses and achieve the WQS of the Nation; and to advise prospective dischargers of discharge requirements, and coordinate with the appropriate

permitting agencies. As stated in the Decision Document, under Section 303(c) of the CWA, 33 U.S.C. § 1313(c), states develop, review, and revise (as appropriate) water quality standards for surface waters of the United States. At a minimum, such standards are to include designated water uses, water quality criteria to protect such uses, and an antidegradation policy. 40 C.F.R. § 131.6. In addition, under Section 401 of the CWA states may grant, condition, or deny "certification" for federally permitted or licensed activities that may result in a discharge to the waters of the United States 33 U.S.C. § 1341.

vi. Under Part 7.2.8(a)(b)(c) and for Part 9 of the CGP, the following Sections of the Seneca Nation's Guide for Construction shall be considered, in conjunction with the CGP:

(a) Section 1. Executive Order - To Establish a Policy for Governing Access to Nation Territories and Facilities by Officials of Foreign Government, dated March 31, 2011

(b) Section 3. Natural Resources Committee, Sand and Gravel Law (CN: R-06-24-05-08)

(c) Section 4. Fishing and Conservation Laws - Part 1.1.5 of the CGP

(d) Section 5. Seneca Nation of Indians Comprehensive Conservation Law, adopted January 14, 2012

(e) Section 9. Food is Our Medicine (FIOM) Program/Native Planting Policy (CN: R-03- 08-14-14)

(f) Section 10. Forestry Management Plan (CN: R-08-14-10-23)

(g) Section 11. Timber Ordinance #411-092, dated May 8, 1982

(h) Section 14. Flood Damage Prevention Local Law, dated September 27, 1988

(i) Section 16. Utilities Ordinance No. 87-100

(j) Authorizing Emergency Action and Contingency Plan to Restrain Pollution of Nations Waters, (Council Resolution: R-03-01-18-10), dated March 10, 2018 Seneca Nation of Indians Permit Application for Construction within Waterways Permit, Form NR98-01.00

9.3 EPA REGION 3

9.3.1 DCR100000 District of Columbia

a. Discharges authorized by this permit shall comply with the District of Columbia Water Pollution Control Act of 1984, as amended (DC Official Code § 8-103.01 and § 8-103.06, et seq.) to ensure that District of Columbia waters, waters in adjacent and downstream states, and the beneficial uses of these waters will not be harmed or degraded by the discharges.

b. Discharges authorized by this permit must comply with §§ 1104.1 and 1104.8 of Chapter 11 and the provisions of Chapter 19 of Title 21of District of Columbia Municipal Regulations in order to attain and maintain designated uses of the District of Columbia waters.

c. The permittee shall comply with the District of Columbia Stormwater Management and Soil Erosion and Sediment Control regulations in Chapter 5 of Title 21 of the District of Columbia Municipal Regulations.

d. The permittee shall comply with the District of Columbia Flood Management Control regulations in Chapter 31 of Title 20 of the District of Columbia Municipal Regulations.

e. The permittee shall submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Regulatory Review Division, Department of Energy & Environment, Government of the District of Columbia, 1200 First Street, NE, 5th Floor, Washington, DC 20002, during the review and approval of the permittee's DOEE Erosion and Sediment Control Plan in accordance with the provisions of Chapter 542 of Title 21 of the District of Columbia Municipal Regulations.

f. Upon request, the permittee shall submit all inspection and monitoring reports as required by this permit and 40 CFR § 122.41 to the Associate Director, Inspection and Enforcement Division, Department of Energy & Environment, Government of the District of Columbia, 1200 First Street, NE, 5th Floor, Washington, DC 20002; telephone (202) 535-2226, or by email at Joshua.Rodriguez@dc.gov.

g. In the event the permittee intends to discharge dewatering water, groundwater, or groundwater comingled with stormwater from a known contaminated site, the permittee shall contact the Regulatory Review Division, Department of Energy & Environment, Government of the District of Columbia, 1200 First Street, NE, 5th Floor, Washington, DC 20002; telephone (202) 535-2600, or by email at MS4DischargeAuthorization@dc.gov to request authorization to discharge dewatering water, groundwater, or groundwater comingled with stormwater to the District's Municipal Separate Storm Sewer System (MS4) or to a surface water body pursuant to §§ 8-103.02, 8-103.06, and 8-103.07 of the District of Columbia Water Pollution Control Act of 1984, as amended.

9.3.2 DER10F000 Areas in the State of Delaware located at a federal facility (as defined in Appendix A)

a. Federal agencies must submit a sediment and stormwater management plan (SSMP) and receive Department approval prior to undertaking any land clearing, soil movement or construction activity unless conducting an exempt activity.

b. Federal construction activities are required to have a third-party Certified Construction Reviewer (CCR) perform weekly reviews to ensure the adequacy of construction activities pursuant to the approved SSMP and regulations.

Implementation of approved SSMPs requires the daily oversight of construction activity by certified responsible personnel.

c. Implementation of approved SSMPs requires the daily oversight of construction activity by certified responsible personnel.

d. A current copy of the SSMP must be maintained at the construction site.

e. Unless authorized by the Department, not more than 20 acres may be disturbed at any one time.

9.4 EPA REGION 4

No additional conditions

9.5 EPA REGION 5

9.5.1 MIR10I000 Indian country within the State of Minnesota

a. Fond du Lac Reservation

i. New dischargers wishing to discharge to an Outstanding Reservation Resource Water (ORRW)[106] must obtain an individual permit from EPA for storm water discharges from large and small construction activities.

ii. A copy of the Storm Water Pollution Prevention Plan (SWPPP) must be submitted to the Office of Water Protection at least fifteen (15) days in advance of sending the Notice of Intent to EPA. The SWPPP can be submitted electronically to richardgitar@FDLREZ.com or by hardcopy sent to:

Fond du Lac Reservation
Office of Water Protection
1720 Big Lake Road
Cloquet, MN 55720

iii. Copies of the Notice of Intent (NOI) and the Notice of Termination (NOT) must be sent to the Fond du Lac Office of Water Protection at the same time they are submitted to EPA. [The condition helps the Office of Water Protection keep track of when a project is about to start and when it has ended. FDL Water Quality Certification Ordinance, Section 204 (a) (2)).

iv. If the project will entail a discharge to any watercourse or open water body, the turbidity limit shall NOT exceed 10% of natural background within the receiving water(s) as determined by Office of Water Protection staff. For such discharges, turbidity sampling must take place within 24 hours of a ½-inch or greater rainfall event. The results of the sampling must be reported to the Office of Water Protection within 7 days of the sample collection. All sample reporting must include the date and time, location (GPS: UTM/Zone 15), and NTU. CGP applicants are encouraged to work with the Office of Water Protection in determining the most appropriate location(s) for sampling. [This condition helps both the Office of Water Protection and the project proponent in knowing whether or not their erosion control efforts are effective. FDL Water Quality Certification, Section 204 (b) (1)).

v. Receiving waters with open water must be sampled for turbidity prior to any authorized discharge as determined by Office of Water Protection staff. This requirement only applies to receiving waters which no ambient turbidity data exists. [This condition allows the Office of Water Protection to obtain a baseline turbidity sample in which to compare to other samples. FDL Water Quality Certification Ordinance, Section 204 (b) (2)].

vi. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Fond du Lac Reservation, Ordinance #12/98, as amended. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Fond du Lac

[106] Although additional waters may be designated in the future, currently Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake, and Jaskari Lake are designated as ORRWs.

Reservation for any of the uses designated in the Water Quality Standards of the Fond du Lac Reservation. These uses include wildlife, aquatic life, warm water fisheries, cold water fisheries, subsistence fishing (netting), primary contact recreation, secondary contact recreation, cultural, wild rice areas, aesthetic waters, agriculture, navigation, commercial and wetlands. It also includes the designated uses of wetlands including, but not limited to, baseflow discharge, cultural opportunities, flood flow attenuation, groundwater recharge, indigenous floral and fauna) diversity and abundance, nutrient cycling, organic carbon export/cycling, protection of downstream water quality, recreation, resilience against climactic effects, sediment/shoreline stabilization, surface water storage, wild rice, and water dependent wildlife. [In addition to listing the designated uses of waters of the Fond du Lac Reservation, this condition also limits the project proponent to discharges that will not violate our Water Quality Standards. FDL Water Quality Certification Ordinance, Section 204 (a) (7)).

vii. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Fond du Lac Reservation. All spills must be reported to the appropriate emergency management Agency (National Response Center AND the State Duty Officer), and measures shall be taken immediately to prevent the pollution of waters of the Fond du Lac Reservation, including groundwater. The Fond du Lac Office of Water Protection must also be notified immediately of any spill regardless of size. [This condition helps protect water quality and also reminds project proponents of their responsibility in reporting spill events. FDL Water Quality Certification Ordinance, Section 204 (b) (3)).

viii. All seed mixes, whether used for temporary stabilization or permanent seeding, shall NOT contain any annual ryegrass (Lolium species). Wild rye (Elymus species) or Oats (Avena species) may be used as a replacement in seed mixes. [This condition prevents the use of annual ryegrass on the Reservation. Annual ryegrass is allelopathic, which means it produces biochemical in its roots that inhibit the growth of native plants. If used in seed mixes, annual ryegrass could contribute to erosion, especially on slopes. However, the condition also specifies substitute grasses that germinate almost as fast as annual ryegrass for use as a cover crop to help prevent erosion. FDL Water Quality Certification Ordinance, Section 204 (t) (1)).

ix. To prevent the introduction of invasive species, ALL contractors and subcontractors MUST disclose information stating prior equipment location(s) and ALL known invasive species potentially being transported from said location(s). All equipment MUST undergo a high pressure wash (including any equipment mats) BEFORE ENTERING the Fond du Lac Reservation. Personal equipment such as work boots, gloves, vest, etc. MUST be clean of debris, dirt and plant and animal material BEFORE ENTERING the Fond du Lac Reservation. Equipment being transported from known infested areas MUST undergo a high pressure wash as soon as possible after leaving the infested site and again BEFORE ENTERING the Fond du Lac Reservation, to avoid transport of invasive species into areas surrounding the Reservation. Written certification of equipment cleaning MUST be provided to the Fond du Lac Office of Water Protection. Upon arrival, ALL contractor and subcontractor equipment will be inspected by appointed Fond du Lac staff. If equipment is deemed unsatisfactory, the equipment MUST

undergo a high pressure washing until the equipment is cleared by the inspector, until such time, minimal travel will be allowed through the Reservation. The contractor shall be held responsible for the control of any invasive species introduced as a result of their project. [This condition requires the project proponent to prevent the inadvertent introduction of invasive species by taking an active role in cleaning all vehicles, equipment, and equipment mats before entering the Reservation. This condition has been placed in certifications since 2012, due to the introduction of Wild Parsnip in 2011 from a pipeline contractor. It is much easier to prevent the introduction of an invasive species than it is to eradicate it once it has been introduced. Many invasive plant species form monocultures, preventing native plants from growing. This situation often leads to cases of erosion, which in turn effects water quality. FOL Water Quality Certification Ordinance, Section 204 (g) (1)].

x. A copy of this certification MUST be kept by the contractor on-site at all times and be available for viewing by all personnel, including inspectors. [This condition ensures that the information contained in the certification, especially the conditions, is readily available onsite for reference. FOL Water Quality Certification Ordinance, Section 204 (a) (9)].

b. The Grand Portage Band of Lake Superior Chippewa

i. The CGP authorization is for construction activities that may occur within the exterior boundaries of the Grand Portage Reservation in accordance to the Grand Portage Land Use Ordinance. The CGP regulates stormwater discharges associated with construction sites of one acre or more in size. Only those activities specifically authorized by the CGP are authorized by this certification (the "Certification").

ii. All construction stormwater discharges authorized by the CGP must comply with the Water Quality Standards and Water Resources Ordinance, as well as Applicable Federal Standards (as defined in the Water Resources Ordinance).

iii. All appropriate steps must be taken to ensure that petroleum products or other chemical pollutants are prevented from entering the Waters of the Reservation. All spills must be reported to the appropriate emergency-management agency, and measures must be taken to prevent the pollution of the Waters of the Reservation, including groundwater.

iv. The 2022 CGP requires inspections and monitoring reports of the construction site stormwater discharges by a qualified person. Monitoring and inspection reports must comply with the minimum requirements contained in the 2022 CGP. The monitoring plan must be prepared and incorporated into the Storm Water Pollution Prevention Plan (the "SWPP"). A copy of the SWPP must be submitted to the Board at least 30 days in advance of sending the requisite Notice of Intent to EPA. The SWPP should be sent to:

Grand Portage Environmental Resources Board

P.O. Box 428

Grand Portage, MN 55605

Copies of the Notice of Intent and Notice of Termination required under the General Permit must be submitted to the Board at the address above at the same time they are submitted to the EPA.

v. If requested by the Grand Portage Environmental Department, the permittee must provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Water Quality Standards and any Applicable Federal Standards. The burden is on the applicant to demonstrate compliance with the Water Quality Standards, the Water Resources Ordinance, and Applicable Federal Standards whether or not the application is ultimately eligible for the CGP.

vi. CGP discharges must not cause nuisance conditions as defined in Grand Portage Water Quality Standards.

vii. The Board retains full authority to ensure compliance with and to enforce the provisions of the Water Resource Ordinance and Water Quality Standards, Applicable Federal Standards, and these Certification conditions. Nothing herein affects the scope or applicability of other controlling tribal or federal requirements, including but not limited to impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for listing on the National Register of Historic Places under the National Historic Preservation Act, 54 U.S.C. §§ 300101 et seq.

viii. Appeals related to Board actions taken in accordance with any of the preceding conditions may be heard by the Grand Portage Tribal Court.

c. Leech Lake Band of Ojibwe

i. The water quality standards that apply to the construction site are the standards at the time the operator submits its Notice of Intent (NOI) to EPA and the LLBO WRP (see conditions # 2 and # 3).

ii. A copy of the Stormwater Pollution Prevention Plan (SWPPP) must be submitted to the LLBO WRP at least 30 days in advance of sending the NOI for the project to EPA. See attached LLBO 401 Water Quality Certification Ordinance. Section 304(a)(1). The SWPPP should be submitted electronically to Jeff.Harper@llojibwe.net and by hardcopy sent to:

Leech Lake Band of Ojibwe
ATTN: Water Resources Program - 401 Cert
Division of Resource Management
190 Sailstar Drive NW
Cass Lake, Minnesota 56633

iii. Copies of the NOI and the Notice of Termination (NOT) must be submitted to the LLBO WRP at the same time they are submitted to EPA. See attached LLBO 401 Water Quality Certification Ordinance, Section 304(a)(2). The NOI and NOT should be submitted electronically to Jeff.Harper@llojibwe.net and sent by hardcopy to the address cited in condition # 2.

iv. Any and all other conditions listed in Section 304 of the attached LLBO 401 Water Quality Certification Ordinance shall be observed unless the LLBO WRP deems that certain conditions therein are not applicable to the project in need of a permit under this certification.

v. A copy of this certification MUST be kept by the contractor on-site at all times and be available for viewing by all personnel, including inspectors.

vi. Upon consideration of the NOI, if the LLBO WRP finds that the discharge will not be controlled as necessary to meet applicable water quality standards, the LLBO WRP may insist, consistent with Part 3.1 of the CGP, that additional controls are installed to meet applicable water quality standards, or recommend to EPA that the operator obtain coverage under an individual permit.

9.5.2 WIR10I000 Indian country within the State of Wisconsin

a. Bad River Band of Lake Superior Tribe of Chippewa Indians

i. Only those activities specifically authorized by the CGP are authorized by this Certification. This Certification does not authorize impacts to cultural properties, orhistorical sites, or properties that may be eligible for listing as such.

ii. All projects which are eligible for coverage under the CGP and are located within the exterior boundaries of the Bad River Reservation shall be implemented in such a manner that is consistent with the Tribe's Water Quality Standards (WQS). The Tribe's WQS can be viewed at: http://www.badriver-nsn.gov/wp-content/uploads/2020/01/NRD_WaterQualityStandards_2011.pdf

iii. Operators are not eligible to obtain authorization under the CGP for all new discharges to an Outstanding Tribal Resource Water (OTRW or Tier 3 water). OTRWs, or Tier 3 waters, include the following: Kakagon Slough and the lower wetland reaches of its tributaries that support wild rice, Kakagon River, Bad River Slough, Honest John Lake, Bog Lake, a portion of Bad River, from where it enters the Reservation through the confluence with the White River, and Potato River. OTRWs can be viewed at: https://www.arcgis.com/apps/View/index.html?appid=6f44c371217e4ee8b5f1c2c705c 7c7c5

iv. An operator proposing to discharge to an Outstanding Resource Water (ORW or Tier 2.5 water) under the CGP must comply with the antidegradation provisions of the Tribe's WQS. ORWs, or Tier 2.5 waters, include the following: a portion of Bad River, from downstream the confluence with the White River to Lake Superior, White River, Marengo River, Graveyard Creek, Bear Trap Creek, Wood Creek, Brunsweiler River, Tyler Forks, Bell Creek, and Vaughn Creek. ORWs can be viewed at: https://www.arcgis.com/apps/View/index.html?appid=6f44c371217e4ee8b5f1c2c705c 7c7c5. The antidegradation demonstration materials described in provision E.4.iii., and included on the antidegradation demonstration template found at: https://www.badriver-nsn.gov/natural-resources/projectreviews/, must be submitted to the following address:

Bad River Tribe's Natural Resources Department

Attn: Water Regulatory Specialist

P.O. Box 39 Odanah, WI 54861

WaterReg@badriver-nsn.gov

v. An operator proposing to discharge to an Exceptional Resource Water (ERW or Tier 2 water) under the CGP must comply with the antidegradation provisions of the Tribe's WQS. ERWs, or Tier 2 waters, include the following: any surface water within the exterior boundaries of the Reservation that is not specifically classified as an Outstanding Resource Water (Tier 2.5 water) or an Outstanding Tribal Resource Water (Tier 3 water). ERWs can be viewed at:

https://www.arcgis.com/apps/View/index.html?appid=6f44c371217e4ee8b5f1c2c705c 7c7c5. The antidegradation demonstration materials described in provision E.4.ii., and included on the antidegradation demonstration template found at: https://www.badriver-nsn.gov/natural-resources/projectreviews/, must be submitted to the following address:

Bad River Tribe's Natural Resources Department
Attn: Water Regulatory Specialist
P.O. Box 39 Odanah, WI 54861
WaterReg@badriver-nsn.gov

vi. Projects utilizing cationic treatment chemicals within the Bad River Reservation boundaries are not eligible for coverage under the CGP.

vii. A discharge to a surface water within the Bad River Reservation boundaries shall not cause or contribute to an exceedance of the turbidity criterion included in the Tribe's WQS, which states: Turbidity shall not exceed 5 NTU over natural background turbidity when the background turbidity is 50 NTU or less, or turbidity shall not increase more than 10% when the background turbidity is more than 50 NTU.

viii. All projects which are eligible for coverage under the CGP within the exterior boundaries of the Bad River Reservation must comply with the Bad River Reservation Wetland and Watercourse Protection Ordinance, or Chapter 323 of the Bad River Tribal Ordinances, including the erosion and sedimentation control, natural buffer, and stabilization requirements. Questions regarding Chapter 323 and requests for permit applications can be directed to the Wetlands Specialist in the Tribe's Natural Resources Department at (715) 682-7123 or wetlands@badriver-nsn.gov.

ix. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must notify the Tribe prior to the commencing earth-disturbing activities. The operator must submit a copy of the Notice of Intent (NOI) to the following addresses at the same time it is submitted to the U.S. EPA:

Bad River Tribe's Natural Resources Department
Attn: Water Regulatory Specialist
P.O. Box 39 Odanah, WI 54861
WaterReg@badriver-nsn.gov

Bad River Tribe's Natural Resources Department
Attn: Tribal Historic Preservation Officer (THPO)
P.O. Box 39 Odanah, WI 54861
THPO@badriver-nsn.gov

The operator must also submit a copy of the Notice of Termination (NOT) to the above addresses at the same time it is submitted to the U.S. EPA. Photographs showing the current site conditions must be included as part of the NOT to document the stabilization requirements have been met.

x. The THPO must be provided 30 days to comment on the project.

xi. The operator must obtain THPO concurrence in writing. This written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties. For more information regarding the specifics of the cultural resources process, see 36 CFR Part 800. A best practice for an operator is to consult with the THPO during the planning stages of an undertaking.

xii. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the following address at the same time as submitting the NOI:

Bad River Tribe's Natural Resources Department
Attn: Water Regulatory Specialist
P.O. Box 39 Odanah, WI 54861
WaterReg@badriver-nsn.gov

xiii. Any corrective action reports that are required under the CGP must be submitted to the following address within one (1) working day of the report completion:

Bad River Tribe's Natural Resources Department
P.O. Box 39 Odanah, WI 54861
WaterReg@badriver-nsn.gov

xiv. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must submit a copies of the inspection reports (including photographs) to the following address within 24 hours of completing any site inspection required:

Bad River Tribe's Natural Resources Department Attn: Water Regulatory Specialist
P.O. Box 39 Odanah, WI 54861
WaterReg@badriver-nsn.gov

xv. An operator shall be responsible for meeting any additional permit requirements imposed by the U.S. EPA necessary to comply with the Tribe's antidegradation policies if the discharge point is located upstream of waters designated by the Tribe.

9.6 EPA REGION 6

9.6.1 NMR100000 State of New Mexico, except Indian country

a. In Outstanding National Resource Waters (ONRWs) in New Mexico, no degradation is permitted except in limited, specifically defined instances. Therefore, Operators are not eligible to obtain authorization under this general permit for stormwater discharges to waters classified as ONRWs listed in Paragraph D of 20.6.4.9 New Mexico Administrative Code (NMAC), also referred to as "Tier 3 waters" as defined in Appendix A of this permit. Exception: When construction activities are in response to a public emergency (e.g., wildfire, extreme flooding, etc.) and the related work requires immediate authorization to avoid a threat to public health or safety.

i. Operators who conduct construction activities in response to a public emergency to mitigate an immediate threat to public health or safety shall

adhere to the requirements in 20.6.4.8(A)(3)(c) NMAC, including notifying the New Mexico Environment Department (NMED) within seven days of initiation of the emergency action and providing NMED with a summary of the action taken within 30 days of initiation of the emergency action.

ii. For all other scenarios, Operators with proposed discharges to ONRWs in New Mexico shall obtain coverage from EPA under an NPDES Individual Permit and will comply with the additional standards and regulations related to discharges to ONRWs in 20.6.4.8(A) NMAC. Additional information is available from:

New Mexico Environment Department Surface Water Quality Bureau
P.O. Box 5469
Santa Fe, NM 87502-5469 Telephone: 505-827-0187
https://www.env.nm.gov/surface-water-quality/wqs/
https://gis.web.env.nm.gov/oem/?map=swqb

b. If construction dewatering activities are anticipated at a construction site and non-stormwater discharges of groundwater, subsurface water, spring water, and/or other dewatering water are anticipated, the Operators/Permittees must complete the following steps:

1. Review the state's Ground Water Quality Bureau Mapper (https://gis.web.env.nm.gov/GWQB/) and Petroleum Storage Tank Bureau Mapper (https://gis.web.env.nm.gov/GWQB/).

   Check if the following sources are located within the noted distance from the anticipated construction dewatering activity. At a minimum, a list of the following potential sources of contaminants and pollutants at the noted distance is to be kept in the SWPPP.

Source of Potential Contamination or Pollutants*	Constituents likely to be required for testing*
Within 0.5 mile of an open Leaking Underground Storage Tank (LUST) site	BTEX (Benzene, Toluene, Ethylbenzene, and Xylene) plus additional parameters depending on site conditions**
Within 0.5 mile of an open Voluntary Remediation site	All applicable parameters or pollutants listed in 20.6.4.13, 20.6.4.52, 20.6.4.54, 20.6.4.97 thru 20.6.4.99, 20.6.4.101 through 20.6.4.899, and 20.6.4.900 NMAC (or an alternate list approved by the NMED-SWQB)*
Within 0.5 mile of an open RCRA Corrective Action Site	
Within 0.5 mile of an open Abatement Site	
Within 0.5 mile of an open Brownfield Site	
Within 1.0 mile or more of a Superfund site or National Priorities List (NPL) site with associated groundwater contamination.	
Construction activity contaminants and/or natural water pollutants	Additional parameters depending on site activities and conditions (Contact NMED- SWQB for an alternate list)*

*For further assistance determining whether dewatering may encounter contaminated sources, please contact the NMED Ground Water Quality Bureau at 505-827-2965 or NMED Surface Water Quality Bureau (SWQB) at 505-827-0187.

** EPA approved sufficiently sensitive methods must be used. For known PCB sources and analysis, EPA Method 1668C must be used (see https://www.epa.gov/cwa-methods).

2. If dewatering activities are anticipated, information on the flow rate and potential to encounter contaminated groundwater, subsurface water, spring water, or dewatering water must be provideddirectly to NMED at the following address:

   NMED Surface Water Quality Bureau

   Program Manager, Point Source Regulation
   SectionPO Box 5469, Santa Fe, NM 87502

   Please call the SWQB to obtain the appropriate email address (505-827-0187).

3. In addition, the Operator/Permittee must characterize the quality of the groundwater and subsurface water, spring water, or dewatering water being considered for discharge according to the table above and including dissolved hardness and pH. Considering the contaminant sources listed in the table above, water quality data may already be available. For further assistance, contactthe

NMED Surface Water Quality Bureau (505-827-0187), Ground Water Quality Bureau (505-827- 2965), Petroleum Storage Tank Bureau (505-476-4397), or Hazardous Waste Bureau (505-476- 6000).

i. The Operator/Permittee must submit recent analytical test results (i.e., within the past 5 years) according to the table above, and including dissolved hardness and pH, to the EPA Region 6 Stormwater Permit Contact and the NMED Surface Water Quality Bureau (see contact information in #2 above). If the test data exceed applicable water quality standards, then the groundwater, subsurface water, spring water, or dewatering water cannot be discharged into surface waters under this general permit. Operators/Permittees may submit an NPDES Individual Permit application to treat and discharge to waters of the U.S. or find alternative disposal measures. No discharges to surface waters are allowed until authorized.

ii. If the discharge has the potential to affect groundwater (e.g., land application), the Operator/Permittee must submit an NOI to the NMED Ground Water Quality Bureau (see 20.6.2.1201 NMAC – Notice of Intent to Discharge).

4. The Operator/Permittee must document any findings and all correspondence with NMED and EPA in the SWPPP.

c. Operators who intend to obtain authorization under this permit for new and existing storm water dischargesfrom construction sites must satisfy the following condition:

i. The SWPPP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion and sediment control best management practices (BMPs) and/or other controls that are designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure thatapplicable standards in 20.6.4 NMAC, including the antidegradation policy, and TMDL waste load allocations (WLAs) are met. This requirement applies to discharges both during construction and after construction operations have been completed. The SWPPP must identify and document the rationale for selecting these BMPs and/or other controls. The SWPPP must also describe design specifications, construction specifications, maintenance schedules (including a long-term maintenance plan), criteria for inspections, and expected performance and longevity of these BMPs.For sites greater than 5 acres in size, BMP selection must be made based on the use of appropriatesoil loss prediction models (i.e. SEDCAD, RUSLE, SEDIMOT, MULTISED, etc.) OR equivalent generallyaccepted (by professional erosion control specialists) soil loss prediction tools.

ii. For all sites, the Operator(s) must demonstrate, and include documentation in the SWPPP, that implementation of the site-specific practices will ensure that the applicable standards and TMDL WLAs are met, and will result in sediment yields and flow velocities that, to the maximum extent practicable, will not be greater than the sediment yield levels and flow velocities from preconstruction, pre-development conditions.

iii. All SWPPPs must be prepared in accordance with good engineering practices by qualified (e.g., CPESC certified, engineers with appropriate training) erosion control specialists familiar with the use of soil loss prediction models and design of erosion and sediment control systems based on these models (or equivalent soil

loss prediction tools). Qualifications of the preparer (e.g., professional certifications, description of appropriate training) must be documented in the SWPPP.The Operator(s) must design, implement, and maintain BMPs in the manner specified in the SWPPP.

NMED supports the use of EPA's small residential lot template if a site qualifies to use it as explained inthe permit, as long as it is consistent with the above requirements. NMED's requirement does not preclude small residential sites from using the template, but it may require an additional short paragraphto justify the selection of specific BMPs for the site.

d. Operators must notify NMED when discharges of toxic or hazardous substances or oil from a spill or other release occurs - see Emergency Spill Notification Requirements, Part 2.3.6 of the permit. For emergencies, Operators can call 505-827-9329 at any time. For non-emergencies, Operators can call 866-428-6535 (voice mail 24-hours per day) or 505-476-6000 during business hours from 8am-5pm, Monday through Friday. Operators can also call the NMED Surface Water Quality Bureau directly at 505-827-0187.

e. Operators of small construction activities (i.e., 1-5 acres) are not eligible to qualify for a waiver in lieu of needing to obtain coverage under this general permit based on Item C.3 of Appendix C (Equivalent Analysis Waiver) in the State of New Mexico.

9.6.2 NMR10I000 Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I.

a. Nambe Pueblo

i. The operator must provide a copy of the Notice of Intent (NOI) and Notice of Termination (NOT) to the Nambe Pueblo Governor's Office at the same time it is provided to the US Environmental Protection Agency. The NOI and NOT should be provided to the following address:

Office of the Governor Nambe Pueblo

!SA NPI02 WEST

Nambe Pueblo, New Mexico 87506

ii. The operator must provide a copy of the Storm Water Pollution Prevention Plan (SWPPP) to Nambe Pueblo at the same time it is submitted to the EPA, either by email to governor@nambepueblo.org or mailed to the above address.

iii. The operator must provide copies of inspection reports, a copy of the corrective action log, and modifications made to the SWPPP as a result of inspection findings, upon request by the Nambe Pueblo Department of Environmental and Natural Resources or Nam be Governor.

b. Ohkay Owingeh Tribe

i. All operators obtaining permit coverage under the EPA CGP, must submit a copy of the certified (signed) Notice of Intent (NOI) to the Ohkay Owingeh Office of Environmental Affairs, a copy of NOI modifications and the Notice of Termination (NOT), must be provided within three business days after EPA provides electronic confirmation that the submission has been received. The NOI and NOT must be provided to the following address:

Naomi L. Archuleta - Environmental Programs Manager Ohkay Owingeh Office of Environmental Affairs
P.O. Box 717
Ohkay Owingeh, NM 87566
naomi.archuleta@ohkay.org

Noah Kaniatobe - Environmental Specialist Ohkay Owingeh, Office of Environmental Affairs
P.O. Box 717
Ohkay Owingeh, NM 87566
noah.kaniatohe@ohkay.org

ii. All operators obtaining permit coverage under the EPA CGP, must submit an electronic copy of the Storm Water Pollution Prevention Plan (SWPPP) to Ohkay Owingeh Office of Environmental Affairsat the same time that the NOI is submitted to the tribe (see contact information listed above).

iii. Following each incident where the operator takes a corrective action the operator must provide thecorrective action log to the Ohkay Owingeh Office of Environmental Affairs.

iv. The operator must notify Ohkay Owingeh Office of Environmental Affairs within 24 hours, in the event of an emergency spill in addition to the notification requirements at Part 2.3.6 of the CGP. Please contact: Ohkay Owingeh Tribal Police Department at 505.852.2757.

Please contact:
Ohkay Owingeh
Tribal Police Department
505.852.2757

c. Pueblo of Isleta

i. All operators obtaining permit coverage under the EPA CGP must submit a copy of the certified Notice ofIntent (NOI) to the Pueblo of Isleta at the same time it is submitted to EPA for projects occurring within the exterior boundaries of the Pueblo of Isleta. Additionally, a copy of NOI modifications and the Notice of Termination (NOT), must be provided within three business days after EPA provides electronic confirmation that the submission has been received. The Notices must be provided to the following address:

Water Quality Control OfficerPueblo of Isleta
Environment DepartmentPO Box 1270
Isleta NM 87022
505-869-7565
WQCO@isletapueblo.com

ii. The operator must notify the Pueblo of Isleta's Dispatch at 505-869-3030 as soon as possible and thePueblo of Isleta Water Quality Control Officer within 10 hours, in the event of a spill of hazardous ortoxic substances or if health or the

environment become endangered in addition to the notification requirements at Part 2.3.6 and at I.12.6.1 of the CGP.

iii. All operators obtaining permit coverage under the EPA CGP must submit an electronic copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Pueblo of Isleta Water Quality Control Officer atthe above address, 30 days prior to submitting the certified NOI to EPA. If the electronic file is too largeto send through e-mail, a zip file or flash drive may be submitted.

iv. All operators obtaining permit coverage under the EPA CGP must give 2 days advance notice to the Pueblo of Isleta Water Quality Control Officer of any planned changes in the permitted activity whichmay result in noncompliance with permit requirements.

v. All operators obtaining permit coverage under the EPA CGP must post a sign or other notice of permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice mustbe located so that it is visible from the public road or tribal road that is nearest to the active part of the construction site. The sign must be maintained on-site from the time construction activities begin until final stabilization is met.

vi. Erosion and sediment controls shall be designed to retain sediment on-site and project-generatedwaste materials that have the potential to discharge pollutants shall not be placed on open soil oron a surface that is not stabilized. Volumes of sediment over five (5) cubic yards must be removed from the active construction site; additionally, if sediment is placed for disposal withinthe exterior boundaries of the Pueblo of Isleta, disposal must be within a tribally approved sediment disposal site.

d. Pueblo of Laguna

i. All operators obtaining permit coverage under the EPA CGP must submit an electronic copy of the certified (signed) Notice of Intent (NOI) to the Pueblo of Laguna's Environmental & Natural Resources Department (ENRD) within three business days of submittal to the EPA. Additionally, a copy of NOI modifications and the Notice of Termination (NOT), must be provided within three business days after the EPA provides electronic confirmation that the submission has been received. The NOI and NOT must be electronically submitted to info.environmental@pol-nsn.gov.

ii. All operators obtaining permit coverage under the EPA CGP must submit an electronic copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Pueblo of Laguna's ENRD 14 days prior to the submittal of the NOI (see contact information listed above).

iii. The operator must provide copies of corrective actions logs and modifications made to the SWPPP as a result of inspection findings to the Pueblo of Laguna ENRD (see contact information above).

iv. In addition to the notification requirements of Part 2.3.6 of the CPG ***[EPA interprets this intending to refer to the CGP]***, the operator must notify the Pueblo of Laguna ENRD at 505-552-7512 in the event of an emergency spill as soon as possible.

e. Pueblo of Sandia. The following conditions apply only to discharges on the Pueblo of Sandia Reservation:

i. All operators obtaining permit coverage under the EPA CGP, must submit a copy of the certified (signed) Notice of Intent (NOI) to the Pueblo of Sandia Environment Department concurrently with submittal to the EPA. Additionally, a copy of NOI modifications and the Notice of Termination (NOT), must be provided concurrently with submittal to the EPA. The NOI and NOT must be provided electronically to the following addresses:

Electronic Addresses:

Amy Rosebrough (Water Quality Manager): rosebrough@sanidapueblo.nsn.us
Greg Kaufman (Environment Director):gkaufman@sandiapueblo.nsn.us

ii. All operators obtaining permit coverage under the EPA CGP, must submit an electronic copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Pueblo of Sandia Environment. Department at least 14 days prior to submittal of the NOI to the Pueblo (see contact information listed above).

iii. If requested by the Pueblo of Sandia Environment Department, the permittee must provide additional information necessary on a case-by-case basis to assure compliance with the Pueblo of Sandia Water Quality Standards and/or applicable Federal Standards.

iv. An "Authorization to Proceed Letter" with site specific mitigation requirements may be sent out to the permittee when a review of the NOI and SWPPP, on a case-by-case basis, is completed by the Pueblo of Sandia Environment Department. This approval will allow the application to proceed if all mitigation requirements are met.

v. The Pueblo of Sandia will not allow Small Construction Waivers (Appendix C) to be granted for any small construction activities.

vi. The operator must provide copies of inspection reports, a copy of the corrective action log, and modifications made to the SWPPP as a result of inspection findings to the Pueblo of Sandia Environment Department upon request. An inspection report and corrective action log must be submitted to the Pueblo within 3 days of any inspection that results in corrective action (see contact information listed above).

vii. The operator must notify the Pueblo of Sandia within 24 hours in the event of an emergency spill, in addition to the notification requirements at Part 2.3.6 of the COP (see contact information listed above).

viii. Before submitting a Notice of Termination (NOT) to the EPA, permittees must clearly demonstrate to the Pueblo of Sandia Environment Department through a site visit or documentation that requirements for site stabilization have been met and any temporary erosion control structures have been removed. A short letter stating that the NOT is acceptable and all requirements have been met will be sent to the permittee to add to the permittee's NOT submission to the EPA.

f. Pueblo of Santa Ana. The following conditions apply only to discharges on the Pueblo of Santa Ana Reservation:

i. All operators obtaining permit coverage under the EPA CGP, must submit a copy of the certified (signed) Notice of Intent (NOI) to the Pueblo's Department of Natural Resources within three business days of submittal to EPA. Additionally, a copy of NOI modifications and the Notice of Termination (NOT), must be

provided within three business days after EPA provides electronic confirmation that the submission has been received. The NOI and NOT must be provided to the following address:

Regular U.S. Delivery Mail:
Pueblo of Santa Ana
Department of Natural Resources Water Resources Division
Attn: Andrew Sweetman 02 Dove Rd
Santa Ana Pueblo, NM 87004

Electronically:
Andrew Sweetman
Water Resources Division Manager Andrew.Sweetman@santaana-nsn.gov
Tammy Montoya Hydrologist
Tammy.Montoya@santaana-nsn.gov

ii. All operators obtaining permit coverage under the EPA CGP, must submit an electronic copyof the Stormwater Pollution Prevention Plan (SWPPP) to the to the Pueblo's Department of Natural Resources at the same time that the NOI is submitted to the tribe (see contact information listed above).

iii. The operator must provide copies of inspection reports, a copy of the corrective action log, and modifications made to the SWPPP as a result of inspection findings, upon request by the Pueblo's Department of Natural Resources.

iv. The operator must notify the Pueblo's Department of Natural Resources within 24 hours in the event of an emergency spill, in addition to the notification requirements at Part 2.3.6 of the CGP.

g. Pueblo of Taos

i. All operators obtaining permit coverage under the EPA CGP, must submit a copy of the certified (signed) Notice of Intent (NOi) to the Taos Pueblo Environmental Office and Taos Pueblo Governor's Office within three business days of submittal to EPA. Additionally, a copy of NOi modifications and the Notice of Termination (NOT), must be provided within three business days after EPA provides electronic confirmation that the submission has been received. The NOi and NOTmust be provided to the following addresses:

Honorable Governor of Taos Pueblo PO Box 1846
Taos, New Mexico 87571

Taos Pueblo Environmental Office PO Box 1846
Taos, New Mexico 87571

ii. All operators obtaining permit coverage under the EPA CGP, must submit an electronic copy of theStormwater Pollution Prevention Plan (SWPPP) to the Taos Pueblo Environmental Office when the NOI is submitted to the tribe. Electronic copy of SWPPP downloaded on flash drive may be sent to the above address for the Taos Pueblo Environmental Office.

iii. The operator must provide a copy of the corrective action log following each corrective action undertaken and modifications made to the SWPPP as a result of

a corrective action to the Taos Pueblo Environmental Office at address listed above.

h. Pueblo of Tesuque.

i. All operators obtaining permit coverage under the EPA CGP, must submit a copy of the certified (signed) Notice of Intent (NOI) to the Pueblo of Tesuque Department of Environment and Natural Resources (DENR) and the Pueblo's Governor within three business days of submittal to EPA. Additionally, a copy of any NOi modifications and the Notice of Termination (NOT), must be provided within three business days after EPA provides electronic confirmation that the submission has been received. The NOI and NOT must be provided to the following address:

Governor Mark Mitchell Pueblo of Tesuque
20 TP 828
Santa Fe, NM 87506 governor@puebloftesuque.org

Sage Mountain.flower Pueblo of Tesuque
Department of Environment and Natural Resources Director
20 TP 828

ii. All operators obtaining permit coverage under the EPA CGP, must submit an electronic copyof the Stormwater Pollution Prevention Plan (SWPPP) to Pueblo of Tesuque DENR and the Pueblo's Governor at the same time that the NO! is submitted to the EPA (see contact information listed above).

iii. The operator must provide a copy of the corrective action log, and any modifications made tothe SWPPP as a result of inspection findings, or upon request by the Pueblo of Tesuque DENR.

iv. The operator must notify the Pueblo of Tesuque DENR within 24 hours in the event of an emergency spill, in addition to the notification requirements at Part 2.3.6 of the CGP (seecontact information listed above).

i. Santa Clara Indian Pueblo.

i. All operators obtaining permit coverage under the EPA CGP, must submit a copy of the certified (signed) Notice of Intent (NOI) to the Santa Clara Pueblo Office of Environmental Affairs at the same time the NOI is submitted to the U.S. EPA. Additionally, a copy of the NOI modifications and the Notice of Termination (NOT), must be provided at the same time after electronic confirmation is received from EPA that the NOT has been accepted. The NOI and NOT shall be provided to the following address in electronic format:

Dino Chavarria,
Santa Clara Pueblo
Office of Environmental Affairs
dinoc@santaclarapueblo.org

ii. All operators obtaining permit coverage under the EPA CGP, must submit an electronic copy of the Stormwater Pollution Prevention Plan to the Santa Clara Pueblo Office of Environmental Affairs at the same time the NOI is submitted to the U.S. EPA (see contact information listed above).

iii. The operator must notify the Santa Clara Pueblo Office of Environmental Affairs at the address above within 24 hours, in the event of an emergency spill, in addition to the notification requirements at Part 2.3.6 of the CGP

9.6.3 OKR10I000 Indian country within the State of Oklahoma, except areas of Indian country covered by an extension of state program authority pursuant to Section 10211 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA).

a. Pawnee Nation. The following conditions apply only to discharges within Pawnee Indian country:

i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pawnee Nation at the same time it is submitted to the Environmental Protection Agency to the following address:

Pawnee Nation Department of Environmental Conservation and Safety
P.O. Box 470
Pawnee, OK 74058
Or email to dnrs@pawneenation.org

ii. An electronic copy of the Storm Water Pollution Prevention Plan (SWPPP) must be submitted to the Pawnee Nation Department of Environmental Conservation and Safety at the same time the NOI is submitted.

iii. The operator must provide access to the site for inspections and for copies of inspection reports, copy of the corrective action log and modifications, made to the SWPPP because of inspection findings, upon request by the Pawnee Nation DECS.

iv. The Pawnee Nation Department of Environmental Conservation and Safety must be notified at 918.762.3655 immediately upon discovery of any noncompliance with any provision of the permit conditions.

9.6.4 OKR10F000 Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, or the Oklahoma Department of Agriculture and Forestry including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).

a. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Lee Creek or any water or watershed designated "ORW" in Oklahoma's Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Certification is denied for any on-going activities such as sand and gravel mining or any other mineral mining.

b. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Lee Creek or any water or watershed designated "ORW" in Oklahoma's Water Quality Standards, certification is denied for any discharges originating from support activities, including, but not limited to, concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas.

c. Dewatering discharges into sediment or nutrient-impaired waters, and waters identified as Tier 2, Tier 2.5, or Tier 3 (OAC 785:46-13) shall be controlled to meet water quality standards for turbidity in those waters as follows:

i. Cool Water Aquatic Community/Trout Fisheries: 10 NTUs (OAC 785: 45-5-12(f)(7)(A)(i)

ii. Lakes: 25 NTUs (OAC 785: 45-5-12(f)(7)(A)(ii)

iii. In waters where background turbidity exceeds these values, turbidity from dewatering discharges should be restricted to not exceed ambient levels (OAC 785: 45-5-12(f)(7)(B)

9.7 EPA REGION 7

No additional conditions.

9.8 EPA REGION 8

9.8.1 MTR10I000 Indian country within the State of Montana

a. Blackfeet Nation.

i. The Applicant and applicants for projects authorized under the NWPs should obtain all other permits, licenses, and certifications that may be required by federal, state, or tribal authority. Primary relevant tribal permit will be ALPO (Ordinance 117). Others may apply. It is the applicant's responsibility to know the tribal and local ordinances and complete all necessary permissions before they can commence work.

ii. If a project is unable to meet the enclosed conditions, or if certification is denied for an applicable NWP, the Applicant may request an individual certification from Blackfeet. An individual certification request must follow the requirements outlined in 40 CFR 121.5 of EPA's CWA § 401 Certification Rule, effective September 11, 2020.

iii. Copies of this certification should be kept on the job site and readily available for reference.

iv. If the project is constructed and/or operated in a manner not consistent with the applicable NWP, general conditions, or regional conditions, the permittee may be in violation of this certification.

v. Blackfeet and EPA representatives may inspect the authorized activity and any mitigation areas to determine compliance with the terms and conditions of the NWP.

vi. This NWP Reissuance does not reduce Tribal authority under any other rule.

vii. The project, including any stream relocations and restoration, must be built as shown and as otherwise described in the application, the construction plans, cross sections, mitigation plans and other supporting documents submitted to this office. Impacts to aquatic systems and restoration efforts will be monitored by an appropriate aquatic resource professional to ensure that disturbed areas are restored to at least their original condition.

viii. All existing water uses will be fully maintained during and after the completion of the project. (If applicable)

ix. Where practicable, perform all in-channel and wetland work during periods of low flow or drawn—down or when dry

x. Equipment staging areas must be located out of all delineated wetlands

xi. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during and immediately after construction, and all exposed soil and other fills, as well as any work below the ordinary high-water mark or in a wetland, must be permanently stabilized as soon as possible

xii. Materials such as piling, culverts, sandbags, fabric, mats, timbers used for temporary facilities in wetlands or below the high- water mark of Waters of the US must be free from oil, gas, excess dirt, loose paint and other pollutants.

xiii. Equipment staging areas in wetlands or in stream or river channels must be placed on mats, or other measures must be taken to minimize soil disturbance and compaction.

xiv. Clearing of riparian or wetland vegetation for the sole purpose of constructing work bridges, detours, staging areas or other temporary facilities must be limited to the absolute minimum necessary. When temporary impacts to native riparian or wetland vegetation are unavoidable, it must be mowed or cut above ground with the topsoil and root mass left intact.

xv. Remove all temporary fills and structures in the entirety when they are no longer needed. Restore affected areas to the appropriate original and planned contours where possible. Re-vegetate disturbed areas with appropriate native species when native species are impacted.

xvi. Construction methods and best management practices (BMPs) must minimize aquatic resource impacts to the maximum extent possible. Any BMPs described in the Joint Application must be followed. BMPs should include installation and maintenance of sediment control measures; separation, storage and reuse of any topsoil; and recovery of all disturbed areas where possible. All best management practices must in place prior to the onset of construction or as soon as practicable during the construction process.

xvii. Best available technology and/or best management practices must be utilized to protect existing water uses and maintain turbidity and sedimentation at the lowest practical level.

xviii. Applicant/contractor should manage disturbed streambank topsoil in a manner that optimizes plant establishment for the site.

xix. When operating equipment or otherwise undertaking construction in wetlands and water bodies the following conditions apply:

(a) Work should be done in dry conditions if possible.

(b) All equipment is to be inspected for oil, gas, diesel, anti-freeze, hydraulic fluid or other petroleum leaks. All such leaks will be properly repaired and equipment cleaned prior to being allowed on the project site. Leaks that occur after the equipment is moved to the project site will be fixed the same day or the next day or removed from the project area. The equipment is not allowed to continue operation once a leak is discovered.

(c) All equipment is to be inspected and cleaned before and after use to minimize the spread or introduction of invasive or undesirable species.

(d) Construction equipment shall not operate below the existing water surface except as follows:

- Impacts from construction should be minimized through the use of best management practices submitted in the permit application.
- Essential work below the waterline shall be done in a manner to minimize impacts to aquatic system and water quality.

(e) Containment booms and/or absorbent material must be available onsite. Any spills of petroleum products must be reported to the Army Corps, Blackfeet Nation BEO Office and the US EPA within 24 hours.

xx. Upland, riparian and in-stream vegetation should be protected except where its removal is necessary for completion of work. Revegetation should be completed as soon as possible. Applicant/contractor should revegetate disturbed soil in a manner that optimizes plant establishment for the site. Revegetation must include topsoil replacement, planting, seeding, fertilization, liming and weed-free mulching as necessary. Applicant must use native plant material and soils where appropriate and feasible. This certification does not allow for the introduction of non-native flora and fauna. All disturbed surface areas must be restored to pre-construction contours and elevation.

xxi. Spoils piles should not be placed or stored within the delineated wetlands or streams unless protected by a temporary structure designed to divert and handle high flows that can be anticipated during permit activity. Spoils piles should be placed on landscaping fabric or some other material to separate spoils material and allow retrieval of spoils material with minimal impact.

xxii. Impacts to wetlands shall not exceed 4.92 acres.

xxiii. Any unexpected and additional impacts to waters of the US should be reported to the

xxiv. Army Corps, Blackfeet Environmental Office Water Quality Coordinator and the US EPA.

xxv. All instream and stream channel reconstruction work must be completed before the stream is diverted into the new channel.

xxvi. Any temporary crossings, bridge supports, cofferdams, or other structures that are necessary during permit activity should be designed to handle high flows that can be anticipated during permit activity. All temporary structures should be completely removed from the water body at the conclusion of the permitted activity and the area restored to a natural function and appearance.

xxvii. The certification does not authorize any unconfined discharge of liquid cement into the waters of the United States. Grouting riprap must occur under dry conditions with no exposure of wet concrete to the water body.

xxviii. BMPs shall include application of certified weed-free straw or hay across all disturbed wetland areas that are temporarily impacted; installation and maintenance of sediment control measures during construction and if necessary, after construction is completed; use of heavy mud mats if necessary; separation,

storage and reuse of all streambank topsoil and wetland topsoil, as appropriate; and recovery of all disturbed wetland and streambank areas where possible. All conditions set by the Blackfeet Tribe and US Army Corps must be followed.

xxix. All applicants, including federal agencies, must notify EPA and the Blackfeet Environmental Office of the use of all NWPs for which certification has been granted prior to commencing work on the project. Notifications must include:

(a) project location (lat. Long., exact point on map);

(b) NWP that will be used and the specific activity that will be authorized under the NWP;

(c) amount of permanent and temporary fills;

(d) a short summary of the proposed activity, and all other federal, state, tribal or local permits or licenses required for the project;

(e) complete contact information of both the applicant and contractor (name, name of the company or property if applicable, telephone, mobile, and email); and,

(f) Summary of best management practices that will be used.

(g) A summary of communications with the affected Tribe's water quality staff regarding the project, including any concerns or issues.

(h) Notify Blackfeet and EPA at least 7 days before the completion of construction and operations begin.

xxx. Point source discharges may not occur: (1) in fens, bogs or other peatlands; (2) within 100 feet of the point of discharge of a known natural spring source; or (3) hanging gardens.

xxxi. Except as specified in the application, no debris, silt, sand, cement, concrete, oil or petroleum, organic material, or other construction related materials or wastes shall be allowed to enter into or be stored where it may enter into waters of the U.S.

xxxii. Silt fences, straw wattles, and other techniques shall be employed as appropriate to protect waters of the U.S. from sedimentation and other pollutants.

xxxiii. Water used in dust suppression shall not contain contaminants that could violate water quality standards.

xxxiv. Erosion control matting that is either biodegradable blankets or loose-weave mesh must be used to the maximum extent practicable.

xxxv. All equipment used in waters of the U.S. must be inspected for fluid leaks and invasive species prior to use on a project. All fluid leaks shall be repaired and cleaned prior to use or when discovered, or if the fluid leak can't be repaired, the equipment shall not be used on site. Equipment used in waters with the possibility of aquatic nuisance species infestation must be thoroughly cleaned and effectively decontaminated before they are used on the project.

xxxvi. Vegetation should be protected except where its removal is necessary for completion of the work. Locations disturbed by construction activities should be revegetated with appropriate native vegetation in a manner that optimizes plant establishment for the specific site.

xxxvii. Revegetation may include topsoil replacement, planting, seeding, fertilization, liming, and weed-free mulching, as necessary. Where practical, stockpile weed- seed-free topsoil and replace it on disturbed areas. All revegetation materials, including plants and plant seed shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities.

xxxviii. Activities may not result in any unconfined discharge of liquid cement into waters of the U.S. Grouting riprap must occur under dry conditions with no exposure of wet concrete to the waterbody.

xxxix. Activities that may result in a point source discharge shall occur during seasonal low flow or no flow periods to the extent practicable.

xl. The placement of material (discharge) for the construction of new dams is not certified, except for stream restoration projects.

xli. Any decision-maker that is required under 7.0 of the CGP to prepare a Stormwater Pollution Prevention Plan (SWPPP), must submit an electronic copy of the SWPPP to the Blackfeet Environmental Office at least 30 days before construction starts for review and approval. Any modifications to the SWPPP should be submitted to the Blackfeet Environmental Office.

xlii. Any Decision-maker required under Part 1.4 of the CGP to submit a Notice of Intent (NOI) to EPA for coverage under the CGP, must submit a copy of the NOI to the Blackfeet Environmental Office within three business days of submittal to EPA. Additionally, a copy of the Notice of Termination (NOT) must be provided within three business days after electronic confirmation is received from EPA that the NOT has been accepted. The NOI and NOT must be provided to the following address Gerald Wagner, Blackfeet Environmental Office Director.

62 Hospital Drive, Browning, MT 59417

beo.director@gmail.com

b. Fort Peck Tribes.

i. Any Decision-maker required under Part 1.4 of the CGP to submit a Notice of Intent (NOI) to EPA for coverage under the CGP, must submit a copy of the NOI to the Fort Peck Tribes Office of Environmental Protection within three business days of submittal to EPA. Additionally, a copy of the Notice of Termination (NOT) must be provided within three business days after electronic confirmation is received from EPA that the NOT has been accepted. The NOI and NOT must be provided to the following address:

Martina Wilson, Office of Environmental Protection Director

501 Medicine Bear Rd Poplar, MT 59255

martinawilson@fortpecktribes.net

ii. Any Decision-maker that is required under Part 7.0 of the CGP to prepare a Stormwater Pollution Prevention Plan (SWPPP), must submit an electronic copy of the SWPPP to the Fort Peck Tribes Office of Environmental Protection at least 30 days before construction starts for review and approval. Any modifications to the

SWPPP should be submitted to the Fort Peck Tribes Office of Environmental Protection.

iii. Any Decision-maker that is required under Part 8.0 of the CGP to submit a weekly, bi-weekly, and/or annual report to EPA, must submit an electronic copy of the annual report to the Fort Peck Tribes Office of Environmental Protection within three business days after submittal to EPA.

9.9 EPA REGION 9

9.9.1 CAR10I000 Indian country within the State of California

a. Morongo Band of Mission Indians

i. A copy of the Stormwater Pollution Prevention Plan (SWPPP) must be submitted (either mailed or electronically) to the MEPD no less than thirty (30) days before commencing construction activities:

Morongo Band of Mission Indians
Environmental Protection Department
12700 Pumarra Road
Banning, CA 92220
Email: epd@morongo-nsn.gov

ii. Copies of the Notice of Intent (NOI) and the Notice of Termination (NOT) must be sent to the MEPD at the same time they are submitted to EPA.

iii. Operators of an "emergency-related project" must submit notice to the MEPD within twenty- four (24) hours after commencing construction activities.

iv. Spills, leaks, or unpermitted discharges must be reported to the MEPD within twenty-four (24) hours of the incident, in addition to the reporting requirements of the CGP.

v. Projects utilizing cationic treatment chemicals (as defined in Appendix A of the CGP) within the Morongo Reservation are not eligible for coverage under this certification of the CGP.

vi. Facilities covered under the CGP will be subject to compliance inspections by MEPD staff, including compliance with final site stabilization criteria prior to submitting an NOI ***[EPA assumes this intended to refer to an NOT]***.

9.9.2 GUR100000 Island of Guam

a. For purposes of this Order, the term "Project Proponent" shall mean U.S. Environmental Protection Agency, and its agents, assignees, and contractors.

b. For purposes of this Order, the permit "Operator" shall mean any party associated with a construction project that meets either of the following two criteria:

i. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications (e.g. in most cases this is the owner of the site); or

ii. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the permit; in most cases this is the general contractor of the project).

Subcontractors generally are not considered operators for the purposes of this permit.

c. The Project Proponent shall enforce the proposed 2022 CGP and ensure that the Operator complies with the conditions of the permit at all times.[107] (40 CFR §121.11(c))

d. All submittals required by this Order shall be sent to the Guam Environmental Protection Agency Attn: 401 Federal Permit Manager, Non-Point Source Program, EMAS Division, 3304 Mariner Avenue, Bldg. 17-3304, Barrigada, Guam 96913, AND via email to jesse.cruz@epa.guam.gov. The submittals shall be identified with WQC Order #2021- 04 and include the COP Permit Number, certifying representative's name, title, mailing address and phone number. (§51060)(4) 2017 GWQS)

e. A copy of the Operator's signed Stormwater Pollution Prevention Plan (SWPPP) and signed Notice of Intent (NOI) and Notice of Termination (NOT) submitted to EPA for review and approval, shall concurrently be submitted to Guam EPA, consistent with condition A4. Coordination with Guam EPA is encouraged when the receiving water(s) for the proposed discharge is/are being identified. (§10105.B.5.d.) GSESCR; (§51060)(4) 2017 GWQS)

f. The Operator must comply with the conditions and requirements set forth in 22 GAR 10, Guam Soil Erosion and Sediment Control Regulations (GSESCR).

g. Before submitting the NOT to EPA, Operators shall comply with GSESC regulations at §10105.B10. (Stabilization of Affected Areas) and §10107.B. {Final Inspection and Approval)

h. All operators/owners shall comply with the general design criteria for best management practices (BMPs) acceptable for meeting the Construction and Post-construction stormwater criteria in the 2006 CNMI and Guam Stormwater Management Manual. (E.O. 2012-02)

i. Operating reports and monitoring and analytical data (e.g. Discharge Monitoring Reports (DMRs), follow-up monitoring reports, Exceedance Reports for Numerical Effluent Limits, etc.) submitted to EPA shall be concurrently submitted to Guam EPA, consistent with condition A4. §51060)(4) 2017 GWQS

j. The Operators who install a sediment basin or similar impoundment shall maintain the storage capacity of five thousand cubic feet {5,000 cu. ft.) per acre of project area tributary to the basin. (§10105.B.5.i.) GSESCR

k. (1) This Order does not authorize EPA to qualify Rainfall Erosivity Waivers to stormwater discharges associated with small construction activities (i.e. 1-5 acres). Operators are required to apply for an NOI for those projects eligible for coverage under the proposed 2022 CGP. An Erosion and Sediment Control Plan is required for every site that would be covered by the proposed 2022 CGP. (22 GAR §10104) The average annual rainfall for Guam and the CNMI exceeds I00 inches per year in many locations. These climatic conditions combined with the region's unique limestone, volcanic geologic formations, sensitive water resources and significant land

[107] By incorporating this condition into the permit, EPA acknowledges receipt of Guam's certification conditions.

development forces make stormwater discharges a very significant environmental and economic issue. (2006 CNMJ/Guam Stormwater Management Manual) E.O. 2012-02

(2) This Order does not authorize EPA to approve a Sediment TMDL Waiver for the Ugum River. Operators of construction activities eligible for a TMDL Waiver in lieu of coverage under the proposed 2022 CGP, shall submit a complete and accurate waiver certification as described in C.2., Appendix C - (Small Construction Waivers) to Guam EPA per condition A4., prior to notifying EPA of its intention to obtain a waiver. §51060)(4) 2017 GWQS

l. The Project Proponent shall submit to Guam EPA a signed Statement of Understanding of Water Quality Certification Conditions.[108] (see Attachment A for an example) per condition A4. §51060)(4) 2017 GWQS

m. The Operator shall comply with applicable provisions of the Guam Pesticides Act of2007 (10 GCA Chapter 50) and implementing regulations at Title 22 GAR Chapter 15 for any use and application of pesticides.

n. Point source discharge(s) to waterbodies under the jurisdiction of Guam EPA must be consistent with the antidegradation policy in 22 GAR §510l(b).

o. The operator shall carry out construction activities in such a manner that will not violate Guam Water Quality Standards (GWQS). Proposed 2022 CGP discharges are prohibited as follows:

- **i.** In Marine Waters, Category M-1 Excellent 22 GAR Chapter 5 §5102(b)(I); and
- **ii.** In Surface Waters, Category S-1 High 22 GAR Chapter 5 §5102(c)(I)

p. In addition to complying with construction dewatering requirements in Part 2.4 and site inspection requirements for all areas where construction dewatering is taking place in Part 4 of the proposed 2022 CGP, Operators shall comply with all dewatering conditions and requirements set forth in 22 GAR 7, Water Resources Development and Operating Regulations, to include securing Guam EPA permits prior to any dewatering activities.

q. The Operator shall develop and implement a Spill Prevention and Containment Plan.

r. The Operator shall have adequate and appropriate spill response materials on hand to respond to emergency release of oil, petroleum or any other material into waters of the territory.

s. Any unpermitted discharge into territorial waters or onto land with a potential for entry into territorial waters, is prohibited. If this occurs, the Operator shall immediately take the following actions:

- **i.** Cease operations at the location of the violation or spill.
- **ii.** Assess the cause of the water quality problem and take appropriate measures to correct the problem and/or prevent further environmental damage.
- **iii.** Notify Guam EPA of the failure to comply. All petroleum spills shall be reported immediately to:

[108] By incorporating this condition into the permit, EPA acknowledges receipt of Guam's certification conditions.

(a) Guam's Emergency 911 system

(b) Guam EPA's 24-Hour Spill Response Team at (671) 888-6488 or during working hours (671) 300-4751

(c) US Coast Guard Sector Guam (671) 355-4824

(d) National Response Center 1-800-424-8802

iv. Submit a detailed written report to Guam EPA within five days of noncompliance that describes the nature of the event corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.

t. Compliance with this condition does not relieve the Operator from responsibility to maintain continuous compliance with the terms and conditions of this Order or the resulting liability from failure to comply.

u. Submittal or reporting of any of this information does not provide relief from any subsequent enforcement actions for unpermitted discharges to waters of the United States.

v. This Order is valid for five (5) Years from Date of Certification, unless otherwise approved by the Guam EPA Administrator.

w. The Operator shall be required to adhere to the current Guam Coral Spawning Moratorium dates for both hard and soft corals where in-water activities and/or construction activity in close proximity with marine waters may impair water quality. These dates can be obtained from the Guam Department of Agriculture, Division of Aquatic and Wildlife Resources, or the NOAA NMFS Pacific Islands Regional Office Habitat Conservation Division.

x. The Operator shall provide notice to Guam EPA consistent with Condition A4:

(a) Immediately upon discovery of noncompliance with the provisions of this Order.

y. A Notice of Violation/Work Stop Order will be issued if certification conditions are not adhered to or when significant or sustained water quality degradation occurs. Work or discharge shall be suspended or halted until the Operator addresses environmental problems/concerns to Guam EPA's satisfaction. Guam EPA may also levy penalties and fines (10 GCA §47111). Invalidity or enforceability of one or more provisions of this certification shall not affect any other provision of this certification.

9.10 EPA REGION 10

9.10.1 IDR10I000 Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)

a. Shoshone-Bannock Tribes

i. Copies of the following information must be sent to the SBT-WRD:

(a) Notice of Intents (NOI)

The Notice of Intent shall be forwarded to the SBT-WRD within thirty (30) days of receipt of submitting NOI to the USEPA.

Shoshone-Bannock Tribes Water Resources Department
PO Box 306 Pima Drive
Fort Hall, ID 83203 Phone: (208) 239-4582
Fax: (208) 239-4592
Or Email ctanaka@sbtribes.com

b. If requested by the SBT-WRD, the permittee must submit a copy of the SWPPP to SBT-WRD within fourteen (14) days of the request.

9.10.2 ORR10I000 Indian country within the State of Oregon, except Fort McDermitt Reservation lands (see Region 9)

a. Confederated Tribes of Coos, Lower Umpqua, and Siuslaw

i. No activities allowed under the CGP shall result in the degradation of any Tribal waters or affect resident aquatic communities or resident or migratory wildlife species at any life stage.

ii. The operator shall be responsible for achieving compliance with CTCLUSI Water Quality Standards and all other tribal codes, regulations, and laws as they exist at the time that the permit is submitted.

iii. The operator shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the CTCLUSI Water Quality Program before, or at the same time as, it is submitted to EPA.

iv. The operator shall be responsible for submitting all Stormwater Pollution Prevention Plans (SWPPP) required under this general permit to the CTCLUSI Water Quality Program for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards, prior to the beginning of any discharge activities taking place.

v. The operator shall be responsible for reporting an exceedance to Tribal Water Quality Standards to the CTCLUSI Water Quality Program at the same time it is reported to EPA.

vi. The THPO will be provided 30 days to comment on the APE as defined in the permit application.

vii. If the project is an undertaking, a cultural resource assessment must occur. All fieldwork must be permitted by the THPO (as appropriate), conducted by qualified personnel (as outlined by the Secretary of Interior's Standards and Guidelines; http://www.nps.gov/history/local-law/arch_stnds_O.htm) and documented according to Oregon Reporting Standards (Reporting_Guidelines.pdf) (oregon.gov). The resulting report must be submitted to the THPO and the THPO must concur with the finding of effect and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.

viii. The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate adverse effects to historic properties.

b. Confederated Tribes of the Umatilla Indian Reservation

i. The operator shall be responsible for achieving compliance with the

Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) Water Quality Standards.

ii. The operator shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the CTUIR Water Resources Program at the address below, at the same time it is submitted to EPA.

iii. The operator shall be responsible for submitting all Stormwater Pollution Prevention Plans (SWPPP) required under this general permit to the CTUIR Water Resources Program for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards, prior to the beginning of any discharge activities taking place.

iv. The operator shall be responsible for reporting an exceedance to Tribal Water QualityStandards to the CTUIR Water Resources Program at the same time it is reported to EPA.

Confederated Tribes of the Umatilla Indian Reservation
Water Resources Program
46411 Timíne Way
Pendleton, OR 97801
(541) 429-7200

v. The THPO will be provided 30 days to comment on the APE as defined in the permit application.

vi. If the project is an undertaking, a cultural resource assessment must occur. All fieldwork must be permitted by the Tribal Historic Preservation Office (as appropriate), conducted by qualified personnel (as outlined by the Secretary of Interior's Standards and Guidelines; http://www.nps.gov/history/local-law/arch_stnds_0.htm) and documented according to Oregon Reporting Standards (Reporting_Guidelines.pdf (oregon.gov). The resulting report must be submitted to the THPO and the THPO must concur with the finding of effect and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.

vii. The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate adverse effects to historic properties.

9.10.3 WAR10F000 Areas in the State of Washington, except those located on Indian country, subject to construction activity by a Federal Operator

a. For purposes of this Order, the term "Project Proponent" shall mean those that are seeking coverage under this permit, and its agents, assignees and contractors.

b. The Federal Agency shall mean the US Environmental Protection Agency. The Federal Agency shall enforce the permit and ensure that the Project Proponent complies with the conditions of the permits at all times.

c. Failure of any person or entity to comply with this Certification may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Certification.

d. The Certification conditions within this Order must be incorporated into EPA's final NPDES permit. Per 40 CFR 121.10(a), all certification conditions herein that satisfy the

requirements of 40 CFR 121.7(d) must be incorporated into the permit. Per 40 CFR 121.10(b), the permit must clearly identify all certification conditions.

e. This Certification does not authorize exceedances of water quality standards established in chapter 173-201A WAC.

f. Discharges from construction activity must not cause or contribute to violations of the Water Quality Standards for Surface Water of the State of Washington (chapter 173-201A WAC), Ground Water Quality Standards (chapter 173- 200 WAC), Sediment Management Standards (chapter 173-204 WAC), and standards in the EPA's Revision of certain Federal water quality criteria applicable to Washington (40 CFR 131.45). Discharges that do not comply with these standards are prohibited.

g. Prior to discharge of stormwater and non-stormwater to waters of the State, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate Stormwater Pollution Prevention Plan (SWPPP), with all appropriate Best Management Practices (BMPs) installed and maintained in accordance with the SWPPP and the terms and conditions of the permit.

i. BMPs must be consistent with:

(a) The Stormwater Management Manual for Western Washington (most current approved edition at the time this permit was issued), for sites west of the crest of the Cascade Mountains; or

(b) The Stormwater Management Manual for Eastern Washington (most current approved edition at the time this permit was issued), for sites east of the crest of the Cascade Mountains; or

(c) Revisions to either manual, or other stormwater management guidance documents or manuals which provide equivalent level of pollution prevention, that are approved by Ecology and incorporated into this permit in accordance with the permit modification requirements of WAC 173-226-230. (For purposes of this section, the stormwater manuals listed in Appendix 10 of the Phase I Municipal Stormwater Permit are approved by Ecology); or

(d) Documentation in the SWPPP that the BMPs selected provided an equivalent level of pollution prevention, compared to the applicable stormwater management manuals, including:

- The technical basis for the selection of all stormwater BMPs (scientific, technical studies, and/or modeling) that support the performance claims for the BMPs being selected.
- An assessment of how the selected BMP will satisfy AKART requirements and the applicable federal technology-based treatment requirements under 40 CFR part 125.3.

The Stormwater Management Manuals for Eastern and Western Washington can be found at: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Stormwater-manuals.

ii. An adequate SWPPP must include a narrative and drawings. All BMPs must be clearly referenced in the narrative and marked on the drawings. The SWPPP

narrative must include documentation to explain and justify the pollution prevention decisions made for the project. Documentation must include:

(a) Information about existing site conditions (topography, drainage, soils, vegetation, etc.).

(b) Potential erosion problem areas.

(c) The 13 elements of a SWPPP, including BMPs used to address each element. Unless site conditions render the element unnecessary and the exemption is clearly justified in the SWPPP, the 13 elements are as follows:

- Preserve Vegetation/Mark Clearing Limits
- Establish Construction Access
- Control Flow Rates
- Install Sediment Controls
- Stabilize Soils
- Protect Slopes
- Protect Drain Inlets
- Stabilize Channels and Outlets
- Control Pollutants
- Control Dewatering
- Maintain BMPs
- Manage the Project
- Protect Low Impact Development (LID) BMPs

h. Discharges of stormwater and authorized non-stormwater must be monitored for turbidity (or transparency) and, in the event of significant concrete work or engineered soils, pH must also be monitored. As applicable based on project specifics, monitoring, benchmarks, and reporting requirements contained in Condition S.4. (pp.10-16) of the Washington State Construction Stormwater General Permit, effective January 1, 2021, shall apply.

i. Discharges to segments of waterbodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, phosphorus, or pH must comply with the following numeric effluent limits:

Parameter identified in 303(d) listing	Parameter Sampled	Unit	Analytical Method	Numeric Effluent Limit
• Turbidity • Fine Sediment • Phosphorus	Turbidity	NTU	SM2130	25 NTUs at the point where the stormwater is discharged from the site.
High pH	pH	su	pH meter	In the range of 6.5 – 8.5

All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current EPA-approved listing of impaired waters that exists on the

effective date of the permit, or the date when the operator's complete permit application is received by EPA, whichever is later.

The EPA approved WQ Assessment can be found at: https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d

j. Discharges to a waterbody that is subject to a Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus must be consistent with the TMDL.

- **i.** Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges shall be consistent with any specific waste load allocations or requirements established by the applicable TMDL.
- **ii.** Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but no specific requirements have been identified, compliance with this permit will be assumed to be consistent with the approved TMDL.
- **iii.** Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with this permit will be assumed to be consistent with the approved TMDL.
- **iv.** Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.

Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus which has been completed and approved by EPA as of the effective date of the permit, or prior to the date of the operator's complete application for permit coverage is received by EPA, whichever is later.

k. Discharges to waters of the state from the following activities are prohibited:

- **i.** Concrete wastewater.
- **ii.** Wastewater from washout and clean-up of stucco, paint, form release oils, curing compounds and other construction materials.
- **iii.** Process wastewater as defined by 40 Code of Federal Regulations (CFR) 122.2.
- **iv.** Slurry materials and waste from shaft drilling, including process wastewater from shaft drilling for construction of building, road, and bridge foundations unless managed to prevent discharge to surface water.
- **v.** Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
- **vi.** Soaps or solvents used in vehicle and equipment washing.
- **vii.** Wheel wash wastewater, unless managed to prevent discharge to surface water.
- **viii.** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed according to appropriate controls described within the permit.

l. This Certification is valid until the expiration date including any administrative extension or termination date of the NPDES 2022 Construction General Permit. (40 CFR § 122.46)

m. The Federal Agency shall enforce and the Project Proponent must comply with all the reporting and notification conditions of the NPDES 2022 Construction General Permit in order to comply with this Order and the certification conditions herein (40 CFR § 121.11).

n. You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 **Pollution Control Hearings Board** 1111 Israel RD SW STE 301 Tumwater, WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 **Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

CONTACT INFORMATION

Please direct all questions about this Order to:

Noel Tamboer
Department of Ecology
P.O. Box 47600
Olympia, WA 98503-7600

(360) 701-6171
noel.tamboer@ecy.wa.gov

9.10.4 WAR10I000 Indian country within the State of Washington

a. Lummi Nation

i. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Lummi tribal agencies. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must also obtaina land use permit from the Lummi Planning Department as provided in Title 15 of theLummi Code of Laws and regulations adopted thereunder.

ii. Pursuant to LCL 17.05.020(a), each operator shall develop and submit a Storm WaterPollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.

iii. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi

iv. Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210 together with supplements and amendments thereto).

v. Each operator shall submit a signed copy of the Notice of Intent (NOI) to the Lummi Water Resources Division at the same time it is submitted electronically to the Environmental Protection Agency (EPA) and shall provide the Lummi Water Resources Division the acknowledgement of receipt of the NOI from the EPA and the associated NPDES tracking number provided by the EPA within 7 calendar days of receipt from the EPA.

vi. Each operator shall submit a signed copy of the Notice of Termination (NOT) to the Lummi Water Resources Division at the same time it is submitted electronically to the EPA and shall provide the Lummi Water Resources Division the EPA acknowledgement of receipt of the NOT.

vii. Storm Water Pollution Prevention Plans, Notice of Intent, Notice of Termination and associated correspondence with the EPA shall be submitted to:

Lummi Natural Resources Department
ATTN: Water Resources Manager 2665 Kwina Road
Bellingham, WA 98226-9298

b. Port Gamble S'Klallam Tribe

i. No discharge from the project site shall cause exceedances of Port Gamble S'KlallamSurface Water Quality Standards narrative or numeric criteria in Tribal waters. This includes activities outside of Tribal lands that occur upstream of Tribal waters.

(a) If any exceedance of these water quality standards occurred, the Natural Resources Department shall be notified immediately.

- The Department shall additionally be provided a complete draft of the proposed corrective action within a reasonable timeframe and its approval will be required before any corrective action may be taken.

ii. Operators performing activities under the CGP that may affect Tribal waters will requirea permit and shall submit their plans to the Port Gamble S'Klallam Natural Resources Department for review.

- The Department has the right to require conditions outside of this Water QualityCertification prior to permit approval.

iii. No activities allowed under the CGP shall result in the degradation of any Tribal watersor change in designated uses.

iv. No activities allowed under the CGP shall affect resident aquatic communities or resident/migratory wildlife species at any life stage.

- Biological assessment methods used to determine the effect of an activity allowedunder the CGP shall be approved by the PGST Natural Resources Department.

v. No activities allowed under the CGP shall be conducted within wetland and stream bufferzones, nor shall said activities affect in any way wetland or stream buffers, as defined by *PGST Law and Order Code 24.08.01(c)*.

vi. Concentrations for substances listed within the table in *Water Quality Standards for Surface Waters* sec. 7(7) shall not be exceeded by activities allowed under the CGP.

c. Spokane Tribe of Indians

i. Pursuant to Tribal Law and Order Code (TLOC) Chapter 30 each operator shall be responsible for achieving compliance with the Surface Water Quality Standards of the Spokane Tribe. The operator shall notify the Spokane Tribe, Water Control Board (WCB) of any spills of hazardous material and;

ii. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the WCB at the same time it is submitted to EPA.

iii. The permittee shall allow the Tribal Water Control Board or its designee to inspect and sample at the construction site as needed.

iv. Each operator shall submit a signed copy of the Notice of Termination (NOT) to the WCB at the same time it is submitted to EPA

The correspondence address for the Spokane Tribe Water Control Board is:

Water Control Board c/o Brian Crossley PO Box480
Wellpinit WA 99040
(509)626-4409
crossley@spokanetribe.com

d. Swinomish Tribe

i. Owners and operators seeking coverage under this permit must submit a copy of the Notice of Intent (NOI) to the DEP at the same time the NOI is submitted to EPA.

ii. Owners and operators must also submit to the DEP changes in NOI and/or Notices of Termination at the same time they are submitted to EPA.

iii. Owners and operators seeking coverage under this permit must also submit a Stormwater Pollution Prevention Plan to the DEP for review and approval by DEP prior to beginning any discharge activities.

e. Tulalip Tribes

i. Submission of NOI: Copies of the Notice of Intent (NOI),) Certification shall be submitted to the Tribe's Natural Resources Department to notify the Tribes of the

pending project and in order for the Tribes to review the projects potential impacts to endangered or threatened species.

ii. Submission of SWPPP: A copy of the Stormwater Pollution Plans (SWPPPs) shall be submitted to the Tribe's Natural Resources Department along with the NOI during the 30 day waiting period.

iii. Submission of Monitoring Data and Reports: The results of any monitoring required by this permit and reports must be sent to the Tribe's Natural Resources Depa1tment,

iv. The Tulalip Tribes are federally recognized successors in the interest to the Snohomish, Snoqualmie, Skykomish, and other allied tribes and bands signatory to the Treaty of Point Elliott.

v. including a description of the corrective actions required and undertaken to meet effluent limits or benchmarks (as applicable).

vi. Authorization to Inspect: The Tribe's Natural Resources Department may conduct an inspection of any facility covered by this permit to ensure compliance with tribal water quality standards. The Department may enforce its certification conditions.

vii. Submission of Inspection Reports: Inspection reports must be sent to the Tribe's Natural Resources Department, including a description of the corrective actions required and undertaken to meet effluent limits or benchmarks (as applicable).

viii. Permits on-site: A copy of the pe1mit shall be kept on the job site and readily available for reference by the construction supervisor, construction managers and foreman, and Tribal inspectors.

ix. Project Management: The applicant shall ensure that project managers, construction managers and foreman, and other responsible parties have read and understand conditions of the permit, this certification, and other relevant documents, to avoid violations or noncompliance with this certification.

x. Emergency Spill Notification Requirements: In the event of a spill or the contractor shall immediately take action to stop the violation and correct the problem, and immediately repo1t spill to the Tulalip Tribes Police Department (425) 508-1565. Compliance with this condition does not relieve the applicant from responsibility to maintain continuous compliance with the tem1S and conditions of this certification or the resulting liability from failure to comply.

xi. Discharges to CERCLA Sites: This permit does not autho1ize direct stormwater discharges to certain sites undergoing remedial cleanup actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) unless first approved by the appropriate EPA Regional office. In the case of the Tulalip Landfill site (WAD980639256), the Tulalip Tribes also requests notification by the facility and consultation with EPA prior to discharge. Contaminants at this site may include but are not limited to: dioxins, furans, arsenic, copper, lead, zinc, 4- methyl-phenol, Hex-CB, HPAHs, PCBs, PCE, cadmium, mercury, and LPAHs.

xii. Discharge-related Activities that have Potential to Cause an Adverse Effect on Historic Properties: Installation of stormwater controls that involve subsurface disturbances may potentially have an adverse impact on historic properties.

xiii. Procedures detailed in the permit shall be completed. Richard Young, of the Tulalip Tribe's Cultural Resources Department shall be contacted prior to initiating discharge- related activities that may have an impact on historic properties. His contact information is (360) 716-2652, ryoung@tulaliptribes-nsn.gov.

xiv. Invalidation: This certification will cease to be valid if the project is constructed and/or operated in a manner not consistent with the project description contained in

xv. the permit. This certification will also cease to be valid and the applicant must reapply with an updated application if info1mation contained in the permit is voided by subsequent submittals.

xvi. Modification: Nothing in this certification waives the Tulalip Tribes of Washington's authority to issue modifications to this ce1iification if additional impacts due to operational changes are identified, or if additional conditions are necessary to protect water quality or further protect the Tribal Communities interest.

xvii. incorporation by reference: TI1is certification does not exempt the applicant from compliance with other statues and codes administered by the Tribes, county, state and federal agencies.

xviii. Compliance with Tribe's I996 Water Quality Standards: Each permittee shall be responsible for controlling discharges and achieving compliance with the T1ibe's Water Quality Standards.

xix. Compliant with Tulalip Tribes Tidelands Management Policy: Permittee shall be responsible for achieving compliance with applicable sections of the Tulalip Tribe's Tidelands Management Policy. (Tulalip Tribal Code Title 8 Chapter 8.30).

xx. Compliant with Tulalip Tribes Environmental Infractions: Permittee shall be responsible for achieving compliance with applicable sections of the Tulalip Tribe's Environmental Infractions. (Tulalip Tribal Code Title 8 Chapter 8.20).

xxi. Where to Submit information and for further Coordination: All requested documents should be sent to the: Tulalip Tribes Natural Resources Environmental Department c/o Kurt Nelson and Valerie Streeter, 6704 Marine Drive, Tulalip, Washington 98271. For further 40 I Certification coordination with the Tulalip Tribes Natural Resources Department, please contact Mr. Kurt Nelson (360) 716-4617 knelson@tu1aliptribes- nsn.gov. 6406 Marine Dr., Tulalip WA 98271.

f. Makah Tribe

i. The permittee shall be responsible for meeting any additional permit requirements imposed by EPA necessary to comply with the Makah Tribe's Water Quality Standards if the discharge point is located within the Makah's U&A treaty reserved areas.

ii. Each permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to Makah Fisheries Management, Water Quality Department at the address listed below at the same time it is submitted to the EPA.

Makah Water Quality
Makah Fisheries Management (MFM)
ray.colby@makah.com

PO Box 115
Neah bay, WA 98357

iii. All supporting documentation and certifications in the NOI related to coverage under the general permit for Endangered Species Act purposes shall be submitted to the Tribe's Habitat programs for their review.

iv. If EPA requires coverage under an individual or alternative permit, the permittee shall submit a copy of the permit to Assistant Fisheries Director, ray.colby@makah.com.

v. The permittee shall submit all Stormwater Pollution Prevention plan (SWPP) to MFM for review and approval prior to beginning any activities resulting in a discharge to Makah tribal waters.

vi. The permittee shall notify Ray Colby, ray.colby@makah.com (360) 645-3150 prior to conducting inspections at construction sites generating stormwater discharges to tribal waters.

vii. The operator shall treat dewatering discharges with controls necessary to minimize discharges of pollutants to surface waters, or ground waters, and from stormwater runoff onsite from excavations, trenches, foundations, or storage areas. To the extent feasible, at all points where dewatering is discharged, comply with the velocity dissipation using check dams, sediment traps, and grouted outlets.

g. Puyallup Tribe of Indians

i. The permittee shall be responsible for meeting any additional permit requirements imposed by EPA necessary to comply with the Puyallup Tribe's antidegradation procedures.

ii. Each permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to Char Naylor, Tribal Water Quality Manager at the following e-mail address: (char.naylor@puyalluptribe-nsn.gov) at the same time it is submitted to EPA.

iii. All supporting documentation and certifications in the NOI related to coverage under the general permit for Endangered Species Act purposes shall be submitted to Char Naylor, Tribal Water Quality Manager/Assistant Fisheries Director (char.naylor@puyalluptribe-nsn.gov) for review.

iv. If EPA requires coverage under an individual or alternative permit, the permittee shall submit a copy of the permit to Char Naylor at the email address listed above.

v. The permittee shall submit all stormwater pollution prevention plans to Char Naylor for review and approval prior to beginning any activities resulting in a discharge to Puyallup tribal waters.

vi. The permittee shall contact Brandon Reynon (Brandon.reynon@puyalluptribe-nsn-gov), Tribe's Historic Preservation Officer or Jennifer Keating (Jennifer.keating@puyalluptribe-nsn.gov), Tribe's Assistant Historic Preservation Officer regarding historic properties and cultural resources.

vii. To minimize the discharge of pollutants to groundwater or surface waters from stormwater that is removed from excavations, trenches, foundations, vaults, or

other storage areas, treat dewatering discharges with controls necessary to minimize discharges of pollutants. Examples of appropriate controls include sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, and filtration systems (e.g., bag or sand filters) that are designed to remove sediment.

To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. At all points where dewatering water is discharged, utilize velocity dissipation controls. Examples of velocity dissipation devices include check dams, sediment traps, riprap, and grouted riprap at outlets.

viii. The permittee shall provide and maintain natural buffers to the maximum extent possible (and/or equivalent erosion and sediment controls) when tribal waters are located within 100 feet of the boundaries. If infeasible to provide and maintain an undisturbed 100 foot natural buffer, erosion and sediment controls to achieve the sediment load reduction equivalent to a 100-foot undisturbed natural buffer shall be required.

Appendix A - Definitions and Acronyms

1. Definitions

"Action Area" – all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. See 50 CFR 402. For the purposes of this permit and for application of the threatened and endangered species protection eligibility requirements, the following areas are included in the definition of action area:

- The areas on the construction site where stormwater discharges originate and flow toward the point of discharge into the receiving waters. This includes:
    - areas on the construction site where excavation, site development, or other ground disturbance activities occur, and
    - areas where stormwater controls will be constructed and operated, including any areas where stormwater flows to and from the stormwater controls.
- The areas in the vicinity of the construction site where stormwater discharges flow from the construction site to one or more points of discharge into receiving waters. (Example: Where stormwater flows into an off-site ditch, swale, or gully that leads to receiving waters.
- The extent of the receiving water potentially affected by stormwater discharges from your construction site through alteration of water chemistry, turbidity, temperature, or bank structure (i.e., erosive flow), regardless of whether the construction site is adjacent to the receiving water.

"Agricultural Land" - cropland, grassland, rangeland, pasture, and other agricultural land, on which agricultural and forest-related products or livestock are produced and resource concerns may be addressed. Agricultural lands include cropped woodland, marshes, incidental areas included in the agricultural operation, and other types of agricultural land used for the production of livestock.

"Antidegradation Policy" or "Antidegradation Requirements" - the water quality standards regulation that requires States and Tribes to establish a three-tiered antidegradation program:

1. Tier 1 maintains and protects existing uses and water quality conditions necessary to support such uses. An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur. Where an existing use is established, it must be protected even if it is not listed in the water quality standards as a designated use. Tier 1 requirements are applicable to all surface waters.
2. Tier 2 maintains and protects "high quality" waters -- waterbodies where existing conditions are better than necessary to support CWA § 101(a)(2) "fishable/swimmable" uses. Water quality can be lowered in such waters. However, State and Tribal Tier 2 programs identify procedures that must be followed and questions that must be answered before a reduction in water quality can be allowed. In no case may water quality be lowered to a level which would interfere with existing or designated uses.
3. Tier 3 maintains and protects water quality in outstanding national resource waters (ONRWs). Except for certain temporary changes, water quality cannot be lowered in such waters. ONRWs generally include the highest quality waters of the United States. However, the ONRW classification also offers special protection for waters of exceptional ecological significance, i.e., those which are important, unique, or sensitive ecologically.

Decisions regarding which water bodies qualify to be ONRWs are made by States and authorized Indian Tribes.

"Arid Areas" – areas with an average annual rainfall of 0 to 10 inches. For assistance in determining average annual rainfall in specific locations, refer to the NOAA National Mapping webpage (https://www.ncdc.noaa.gov/cag/national/mapping), the PRISM Climate Group's Time Series Values for individual locations (https://prism.oregonstate.edu/explorer/), or EPA's US EPA EnviroAtlas (https://www.epa.gov/enviroatlas).

"Bank" (e.g., stream bank or river bank) – the rising ground bordering the channel of a water of the U.S.

"Biodegradable" – capable of decomposing under ambient soil conditions into naturally occurring materials over a period of time (e.g., one year).

"Bluff" – a steep headland, promontory, riverbank, or cliff.

"Borrow Areas" – the areas where materials are dug for use as fill, either onsite or off-site.

"Business day" – for the purposes of this permit, a business day is a calendar day on which construction activities will take place.

"Bypass" – the intentional diversion of waste streams from any portion of a treatment facility. See 40 CFR 122.41(m)(1)(i).

"Cationic Treatment Chemical" – polymers, flocculants, or other chemicals that contain an overall positive charge. Among other things, they are used to reduce turbidity in stormwater discharges by chemically bonding to the overall negative charge of suspended silts and other soil materials and causing them to bind together and settle out. Common examples of cationic treatment chemicals are chitosan and cationic PAM.

"Commencement of Construction Activities" – the initial disturbance of soils (or 'breaking ground') associated with clearing, grading, or excavating activities or other construction-related activities (e.g., grubbing; stockpiling of fill material; placement of raw materials at the site).

"Common Plan of Development or Sale" – A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one common plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot.

"Construction Activities" – earth-disturbing activities, such as the clearing, grading, and excavation of land, and other construction-related activities (e.g., grubbing; stockpiling of fill material; placement of raw materials at the site) that could lead to the generation of pollutants. Some of the types of pollutants that are typically found at construction sites are:

- sediment;
- nutrients;
- heavy metals;
- pesticides and herbicides;
- oil and grease;
- bacteria and viruses;
- trash, debris, and solids;

- treatment polymers; and
- any other toxic chemicals.

"Construction and Development Effluent Limitations and New Source Performance Standards" (C&D Rule) – as published in 40 CFR § 450, the regulation requiring effluent limitations guidelines (ELGs) and new source performance standards (NSPS) for controlling the discharge of pollutants from construction sites.

"Construction Site" or "Site" – the land or water area where construction activities will occur and where stormwater controls will be installed and maintained. The construction site includes construction support activities, which may be located at a different part of the property from where the primary construction activity will take place, or on a different piece of property altogether.

"Construction Support Activity" – a construction-related activity that specifically supports the construction activity and involves earth disturbance or pollutant-generating activities of its own, and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.

"Construction Waste" – discarded material (such as packaging materials; scrap construction materials; masonry products; timber, steel, pipe, and electrical cuttings; plastics; and styrofoam).

"Conveyance Channel" – a temporary or permanent waterway designed and installed to safely convey stormwater flow within and out of a construction site.

"Critical Habitat" – as defined in the Endangered Species Act at 16 U.S.C. 1531 for a threatened or endangered species, (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

"CWA" – the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. section 1251 et seq.

"Dewatering" – the act of draining accumulated stormwater and/or ground water from building foundations, vaults, and trenches, or other similar points of accumulation. Examples can include, but are not limited to:

- Surface area dewatering: water pumped from disturbed surface areas (e.g., trenches, sumps, excavation pits, or other excavations associated with construction where sediment-laden ground water or surface water/storm inflow must be removed) or from sediment basins or similar impoundments for maintenance or decommissioning purposes.
- Ground water dewatering: water discharged from well development, well pump tests, or pumping of ground water from a construction area. Common methods of ground water dewatering from a construction area include sumps and wells, generally described as follows:
  - Sumps: lowers ground water levels near the construction area. Dewatering using sumps consists of pumping ground water out of a lower collection point(s) typically gravity-fed by local ground water.
  - Wells: drilled wells, including bored/augured, driven, or jetted, which use vacuum or pumping to lower the ground water at greater depths than sumps. The two most common types of wells used for dewatering ground water are:

- Wellpoints: small-diameter shallow wells which are connected via a header pipe. A pump creates a vacuum in the header pipe.
- Deep Wells: larger-diameter holes, drilled relatively deep (typically greater than 10 feet), pumped by submersible electric pumps.

"Dewatering Water" – as used in this permit, water discharged from dewatering operations.

"Discharge" – when used without qualification, means the "discharge of a pollutant."

"Discharge of a Pollutant" – any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. See 40 CFR 122.2.

"Discharge Point" – for the purposes of this permit, the location where collected and concentrated stormwater flows or dewatering water are discharged from the construction site.

"Discharge-Related Activity" – activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged.

"Discharge to an Impaired Water" – for the purposes of this permit, a discharge to an impaired water occurs if the first water of the U.S. to which you discharge is identified by a State, Tribe, or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting an applicable water quality standard and (1) requires development of a total maximum daily load (TMDL) (pursuant to section 303(d) of the CWA; or (2) is addressed by an EPA-approved or established TMDL; or (3) is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1). For discharges that enter a storm sewer system prior to discharge, the water of the U.S. to which you discharge is the first water of the U.S. that receives the stormwater discharge from the storm sewer system.

"Domestic Waste" – for the purposes of this permit, typical household trash, garbage or rubbish items generated by construction activities.

"Drainageway" – an open linear depression, whether constructed or natural, that functions for the collection and drainage of surface water.

"Drought-Stricken Area" – for the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration's U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are likely: (1) "Drought to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php.

"Earth-Disturbing Activity"– actions taken to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, site preparation (e.g., excavating, grubbing, cutting, and filling), soil compaction, and movement and stockpiling of top soils.

"Earth-Disturbing Activities Conducted Prior to Active Mining Activities" – Consists of two classes of earth-disturbing (i.e., clearing, grading and excavation) activities:

a. activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a mine site for vehicles and equipment (except when related to access road construction); other earth disturbances associated with site preparation activities on any areas where active mining

activities have not yet commenced (e.g., for heap leach pads, waste rock facilities, tailings impoundments, wastewater treatment plants); and

b. construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads.

Note: only earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining (see (b) above) are considered to be "construction" and therefore stormwater discharges from these activities are eligible for coverage under this permit. See Part 1.2.1.b. The activities described in (a) above are not considered to be "construction" and therefore stormwater discharges associated with this activity are not eligible for coverage under this permit.

"Effective Operating Condition" – for the purposes of this permit, a stormwater control is kept in effective operating condition if it has been implemented and maintained in such a manner that it is working as designed to minimize pollutant discharges.

"Effluent Limitations" – for the purposes of this permit, any of the Part 2 or Part 3 requirements.

"Effluent Limitations Guideline" (ELG) – defined in 40 CFR § 122.2 as a regulation published by the Administrator under section 304(b) of the CWA to adopt or revise effluent limitations.

"Eligible" – for the purposes of this permit, refers to stormwater and allowable non-stormwater discharges that are authorized for coverage under this general permit.

"Emergency-Related Project" – a project initiated in response to a public emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services.

"Endangered Species" – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

"Excursion" – a measured value that exceeds a specified limit.

"Existing Site" – a site where construction activities commenced prior to February 16, 2017.

"Exit Points" – any points of egress from the construction site to be used by vehicles and equipment during construction activities.

"Exposed Soils" – for the purposes of this permit, soils that as a result of earth-disturbing activities are left open to the elements.

"Federal Facility" – any buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property, owned by, or constructed or manufactured for the purpose of leasing to, the Federal government.

"Federal Operator" – an entity that meets the definition of "Operator" in this permit and is either any department, agency or instrumentality of the executive, legislative, and judicial branches of the Federal government of the United States, or another entity, such as a private contractor, performing construction activity for any such department, agency, or instrumentality.

"Final Stabilization" – on areas not covered by permanent structures, either (1) uniform, perennial vegetation *(e.g., evenly distributed, without large bare areas)* has been established, or for arid or semi-arid areas, will be established that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas, and/or (2) permanent non-

vegetative stabilization measures (e.g., riprap, gravel, gabions, and geotextiles) have been implemented to provide effective cover for exposed portions of the site

"General Contractor" – for the purposes of this permit, the primary individual or company solely accountable to perform a contract. The general contractor typically supervises activities, coordinates the use of subcontractors, and is authorized to direct workers at a site to carry out activities required by the permit.

"Hazardous Substances" or "Hazardous or Toxic Waste" – for the purposes of this permit, any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.2.

"Historic Property" – as defined in the National Historic Preservation Act regulations, means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian Tribe or Native Hawaiian organization and that meet the National Register criteria.

"Impaired Water"– a water identified by the State, Tribe, or EPA as not meeting an applicable water quality standard and (1) requires development of a TMDL (pursuant to section 303(d) of the CWA; or (2) is addressed by an EPA-approved or established TMDL; or (3) is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1).

"Impervious Surface" – for the purpose of this permit, any land surface with a low or no capacity for soil infiltration including, but not limited to, pavement, sidewalks, parking areas and driveways, packed gravel or soil, or rooftops.

"Indian Country" or "Indian Country Lands" – defined at 40 CFR §122.2 as:

1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;
2. All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a State; and
3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-ways running through the same.

"Infeasible" – for the purpose of this permit, infeasible means not technologically possible or not economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with State water rights law.

"Install" or "Installation" – when used in connection with stormwater controls, to connect or set in position stormwater controls to make them operational.

"Jar test" – a test designed to simulate full-scale coagulation/flocculation/sedimentation water treatment processes by taking into account the possible conditions.

"Landward" – positioned or located away from a waterbody, and towards the land.

"Large Construction Activity" – defined at 40 CFR § 122.26(b)(14)(x) and incorporated here by reference. Large construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres. Large construction activity does

not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

"Linear Construction Site" – includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

"Minimize" – to reduce and/or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable in light of best industry practices.

"Mining Activity" – for the purposes of this permit, includes mining-related construction activities defined at 40 CFR 122.26(b)(14)(x) and 122.26(b)(15)(i), and active mining activities defined at 40 CFR 122.26(b)(14)(iii). Both of these sub categories of activities include earth-disturbing activities, with the latter also including such activities as: extraction, removal or recovery, and beneficiation of mined material from the earth; removal of overburden and waste rock to expose mineable material; and site reclamation and closure activities.

"Mining Operations" – for the purposes of this permit, mining operations are grouped into two distinct categories, with distinct effluent limits and requirements applicable to each: 1) earth-disturbing activities conducted prior to active mining activities; and 2) active mining activities, which includes reclamation.

"Municipal Separate Storm Sewer System" or "MS4" – defined at 40 CFR §122.26(b)(8) as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned and operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian Tribe or an authorized Indian Tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

"National Pollutant Discharge Elimination System" (NPDES) – defined at 40 CFR §122.2 as the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an 'approved program.'

"Native Topsoil" – the uppermost layer of naturally occurring soil for a particular area, and is often rich in organic matter, biological activity, and nutrients.

"Natural Buffer" – for the purposes of this permit, an area of undisturbed natural cover surrounding waters of the United States within which construction activities are restricted. Natural cover includes the vegetation, exposed rock, or barren ground that exists prior to commencement of earth-disturbing activities.

"Natural Vegetation" – vegetation that occurs spontaneously without regular management, maintenance, or species introductions or removals, and that generally has a strong component of native species..

"New Operator of a Permitted Site" – an operator that through transfer of ownership and/or operation replaces the operator of an already permitted construction site that is either a "new site" or an "existing site".

"New Site" – a site where construction activities commenced on or after February 16, 2017.

"New Source" – for the purposes of this permit, a construction project that commenced construction activities after February 1, 2010.

"New Source Performance Standards (NSPS)" – for the purposes of this permit, NSPS are technology-based standards that apply to construction sites that are new sources under 40 CFR 450.24.

"Non-Stormwater Discharges" – discharges that do not originate from storm events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

"Non-Turbid" – a discharge that is free from visual turbidity.

"Notice of Intent" (NOI) – the form (electronic or paper) required for authorization of coverage under the Construction General Permit.

"Notice of Termination" (NOT) – the form (electronic or paper) required for terminating coverage under the Construction General Permit.

"NPDES eReporting Tool" (NeT) – EPA's online system for submitting electronic Construction General Permit forms.

"Operational" – for the purposes of this permit, stormwater controls are made "operational" when they have been installed and implemented, are functioning as designed, and are properly maintained.

"Operator" – for the purposes of this permit and in the context of stormwater discharges associated with construction activity, any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications *(*e.g. *in most cases this is the owner of the site)*; or
2. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (e.g.*, they are authorized to direct workers at a site to carry out activities required by the permit; in most cases this is the general contractor of the project)*.

This definition is provided to inform permittees of EPA's interpretation of how the regulatory definitions of "owner or operator" and "facility or activity" are applied to discharges of stormwater associated with construction activity. Subcontractors generally are not considered operators for the purposes of this permit.

"Ordinary High Water Mark" – the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris.

"Permitting Authority" – for the purposes of this permit, EPA, a Regional Administrator of EPA, or an authorized representative.

"Point(s) of Discharge" – see "Discharge Point."

"Point Source" – any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

"Pollutant" – defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

"Pollution Prevention Controls" – stormwater controls designed to reduce or eliminate the addition of pollutants to construction site discharges through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

"Polymers" – for the purposes of this permit, coagulants and flocculants used to control erosion on soil or to enhance the sediment removal capabilities of sediment traps or basins. Common construction site polymers include polyacrylamide (PAM), chitosan, alum, polyaluminum chloride, and gypsum.

"Prohibited Discharges" – discharges that are not allowed under this permit, including:

1. Wastewater from washout of concrete;
2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. Soaps or solvents used in vehicle and equipment washing;
5. Toxic or hazardous substances from a spill or other release; and
6. Waste, garbage, floatable debris, construction debris, and sanitary waste.

"Provisionally Covered Under this Permit" – for the purposes of this permit, EPA provides temporary coverage under this permit for emergency-related projects prior to receipt of a complete and accurate NOI. Discharges from earth-disturbing activities associated with the emergency-related projects are subject to the terms and conditions of the permit during the period of temporary coverage.

"Qualified Person" – a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

"Receiving Water" – a "Water of the United States" as defined in 40 CFR §122.2 into which the regulated stormwater discharges.

"Run-On" – sources of stormwater that drain from land located upslope or upstream from the regulated site in question.

"Seasonally Dry Period" – a month in which the long-term average total precipitation is less than or equal to 0.5 inches. Refer to EPA's Seasonally Dry Period Locator and supporting maps for assistance in determining whether a site is operating during a seasonally dry period for the area, located at https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates.

"Sediment-Related parameter" – for the purposes of this permit, a pollutant parameter that is closely related to sediment such as turbidity, total suspended solids (TSS), total suspended sediment, transparency, sedimentation, and siltation.

"Semi-Arid Areas" – areas with an average annual rainfall of 10 to 20 inches. For assistance in determining average annual rainfall in specific locations, refer to the NOAA National Mapping webpage (https://www.ncdc.noaa.gov/cag/national/mapping), the PRISM Climate Group's Time Series Values for individual locations (https://prism.oregonstate.edu/explorer/), or EPA's US EPA EnviroAtlas (https://www.epa.gov/enviroatlas).

"Shared Control" - for the purposes of this permit, a stormwater control, such as a sediment basin or pond, used by two or more operators that is installed and maintained for the purpose of minimizing and controlling pollutant discharges from a construction site with multiple operators associated with a common plan of development or sale. Any operators that are contributing stormwater from their construction activities to a shared control are considered to rely upon a shared control.

"Small Construction Activity" – defined at 40 CFR §122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

"Small Residential Lot" – for the purpose of this permit, a lot being developed for residential purposes that will disturb less than 1 acre of land, but is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre.

"Snowmelt" – the conversion of snow into overland stormwater and ground water flow as a result of warmer temperatures.

"Spill" – for the purpose of this permit, the release of a hazardous or toxic substance from its container or containment.

"Stabilization" – the use of vegetative and/or non-vegetative cover to prevent erosion and sediment loss in areas exposed through the construction process.

"Steep Slopes" – where a State, Tribe, local government, or industry technical manual (e.g., stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

"Storm Sewer System" – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) designed or used for collecting or conveying stormwater.

"Stormwater" – stormwater runoff, snowmelt runoff, and surface runoff and drainage.

"Stormwater Control" - refers to any best management practice or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

"Stormwater Discharge Associated with Construction Activity" – as used in this permit, a discharge of pollutants in stormwater to waters of the United States from areas where earth-disturbing activities (e.g., clearing, grubbing, grading, or excavation) occur, or where construction materials or equipment storage or maintenance (e.g., fill piles, borrow area,

concrete truck chute washdown, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants), are located.

"Stormwater Inlet" – a structure placed below grade to conduct water used to collect stormwater runoff for conveyance purposes.

"Stormwater Team" – the group of individuals responsible for oversight of the development and modifications of the SWPPP, and oversight of compliance with the permit requirements. The individuals on the "Stormwater Team" must be identified in the SWPPP.

"Storm Event" – a precipitation event that results in a measurable amount of precipitation.

"Storm Sewer" – a system of pipes (separate from sanitary sewers) that carries stormwater runoff from buildings and land surfaces.

"Subcontractor" – for the purposes of this permit, an individual or company that takes a portion of a contract from the general contractor or from another subcontractor.

"SWPPP" (Stormwater Pollution Prevention Plan) – a site-specific, written document that, among other things: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater controls to reduce or eliminate pollutants in stormwater discharges from the construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.

"Temporary Stabilization" – a condition where exposed soils or disturbed areas are provided temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb this area.

"Thawing Conditions" – for the purposes of this permit, thawing conditions are expected based on the historical likelihood of two or more days with daytime temperatures greater than 32˚F. This date can be determined by looking at historical weather data. Note: the estimation of thawing conditions is for planning purposes only. During construction the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

"Threatened Species" – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

"Tier 2 Waters" – for antidegradation purposes, pursuant to 40 CFR 131.12(a)(2), those waters that are characterized as having water quality that exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

"Tier 2.5 Waters" – for antidegradation purposes, those waters designated by States or Tribes as requiring a level of protection equal to and above that given to Tier 2 waters, but less than that given Tier 3 waters. Some States have special requirements for these waters.

"Tier 3 Waters" – for antidegradation purposes, pursuant to 40 CFR 131.12(a)(3), Tier 3 waters are identified by States as having high quality waters constituting an Outstanding National Resource Water (ONRW), such as waters of National Parks and State Parks, wildlife refuges, and waters of exceptional recreational or ecological significance.

"Total Maximum Daily Load" or "TMDL" – the sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources,

tributaries, or adjacent segments. TMDLs can be expressed in terms of mass per time, toxicity, or other appropriate measure.

"Toxic Waste" – see "Hazardous Substances."

"Treatment Chemicals" – polymers, flocculants, or other chemicals used to reduce turbidity in stormwater.

"Turbidity" – a condition of water quality characterized by the presence of suspended solids and/or organic material.

"Uncontaminated Discharge" – in the context of authorized non-stormwater discharges, a discharge that meets applicable water quality standards.

"Upland" – the dry land area above and 'landward' of the ordinary high water mark.

"Upset" – Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).

"Visual Turbidity" – for the purposes of this permit, visual turbidity is present when there is a sediment plume in the discharge or the discharge appears cloudy, opaque, or has a visible contrast that can be visually identified by an observer.

"Water-Dependent Structures" – structures or facilities that are required to be located directly adjacent to a waterbody or wetland, such as a marina, pier, boat ramp, etc.

"Water Quality Standards" – defined in 40 CFR § 131.3, and are provisions of State (including Tribal) or Federal law which consist of a designated use or uses for the waters of the United States, water quality criteria for such waters based upon such uses, and an antidegradation policy to protect high-quality waters. Water quality standards protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

"Waters of the United States" – see definition at 40 CFR 122.2.

"Wetland" – those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. On-site evaluations are typically required to confirm the presence and boundaries of wetlands.

2. Acronyms

ACHP – Advisory Council on Historic Preservation

BMP – Best Management Practice

CBI – Confidential Business Information

CGP – Construction General Permit

CFR – Code of Federal Regulations

CWA – Clean Water Act

CZMA – Coastal Zone Management Act

ECHO – EPA Enforcement and Compliance History Online

ELG – Effluent Limitations Guideline

EPA – United States Environmental Protection Agency
ESA – Endangered Species Act
FR – Federal Register
MS4 – Municipal Separate Storm Sewer System
MSGP – Multi-Sector General Permit
NEPA – National Environmental Policy Act
NeT – NPDES eReporting Tool
NTU - Nephelometric turbidity units
NHPA – National Historic Preservation Act
NMFS – United States National Marine Fisheries Service
NPDES – National Pollutant Discharge Elimination System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NRC – National Response Center
NRCS – National Resources Conservation Service
NSPS – New Source Performance Standards
ONRW – Outstanding National Resource Water
PAM – Polyacrylamide
POTW – Publicly Owned Treatment Works
RUSLE – Revised Universal Soil Loss Equation
SDS – Safety Data Sheet
SHPO – State Historic Preservation Office
SPCC – Spill Prevention Control and Countermeasure
SWPPP – Stormwater Pollution Prevention Plan
THPO – Tribal Historic Preservation Office
TMDL – Total Maximum Daily Load
TSS – Total Suspended Solids
UIC – Underground Injection Control
USDA – United States Department of Agriculture
USFWS – United States Fish and Wildlife Service
USGS – United States Geological Survey
WQS – Water Quality Standard

Appendix B - Permit Areas Eligible for Coverage and EPA Regional Addresses

Permit coverage for stormwater discharges from construction activity occurring within the following areas is provided by legally separate and distinctly numbered permits. For assistance in determining whether your construction activities are located within Indian country, refer to the Bureau of Indian Affairs' digital map of the land areas of Federally-recognized Tribes at https://biamaps.doi.gov/indianlands/#.

B.1 EPA Region 1

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 1:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
CTR10I000	Indian country within the State of Connecticut
MAR100000	Commonwealth of Massachusetts (except Indian country)
MAR10I000	Indian country within the State of Massachusetts
NHR100000	State of New Hampshire
RIR10I000	Indian country within the State of Rhode Island
VTR10F000	Areas in the State of Vermont located at a Federal Facility (as defined in Appendix A)
1R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

For stormwater discharges in EPA Region 1 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 1 Address:
U.S. EPA Region 1
Office of Ecosystem Protection
Stormwater and Construction Permits Section
5 Post Office Square, Suite 100
(OEP 06-1)
Boston, MA 02109-3912

B.2 EPA Region 2

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 2:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
NYR10I000	Indian country within the State of New York
PRR100000	Commonwealth of Puerto Rico
02R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

For stormwater discharges in EPA Region 2 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 2 Address:
For Puerto Rico:
U.S. EPA Region 2
Caribbean Environmental Protection Division
NPDES Stormwater Program
City View Plaza II – Suite 7000
48 Rd. 165 Km 1.2
Guaynabo, PR 00968-8069

For New York:
U.S. EPA Region 2
NPDES Stormwater Program
290 Broadway, 24th Floor
New York, NY 10007-1866

B.3 EPA Region 3

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 3:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
DCR100000	District of Columbia
DER10F000	Areas in the State of Delaware located at a Federal Facility (as defined in Appendix A)
VAR10I000	Indian country within the State of Virginia
03R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

For stormwater discharges in EPA Region 3 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 3 Address:
U.S. EPA Region 3
Office of NPDES Permits and Enforcement
NPDES Permits Branch, Mailcode 3WP41
1650 Arch Street
Philadelphia, PA 19103

B.4 EPA Region 4

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 4:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
ALR10I000	Indian country within the State of Alabama
FLR10I00E	Indian country within the State of Florida
MSR10I000	Indian country within the State of Mississippi
NCR10I000	Indian country within the State of North Carolina
04R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country (except Catawba lands in South Carolina)

For stormwater discharges in EPA Region 4 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 4 Address:
U.S. EPA Region 4
Water Protection Division
NPDES Stormwater Program
Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303-3104

B.5 EPA Region 5

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 5:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
MIR10I000	Indian country within the State of Michigan, except the L'Anse Reservation of the Keweenaw Bay Indian Community
MNR10I000	Indian country within the State of Minnesota, except sites located in the Fond du Lac Reservation discharging to Outstanding Reservation Resources Waters (ORRWs)[1]
WIR10I000	Indian country within the State of Wisconsin, except sites located in the Bad River Band of Lake Superior Tribe of Chippewa Indians discharging to Outstanding Tribal Resource Waters (OTRWs) or Tier 3 waters[2]
05R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

[1] The Tribe has identified Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake, and Jaskari Lake as ORRWs.
[2] The Tribe has identified the following as OTRWs or Tier 3 waters: Kakagon Slough and the lower wetland reaches of its tributaries that support wild rice, Kakagon River, Bad River Slough, Honest John Lake, Bog Lake, a portion of Bad River, from where it enters the Reservation through the confluence with the White River, and Potato River.

For stormwater discharges in EPA Region 5 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 5 Address:
U.S. EPA Region 5
NPDES Program Branch
77 W. Jackson Blvd.
Mail Code WN16J
Chicago, IL 60604-3507

B.6 EPA Region 6

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 6:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
LAR10I000	Indian country within the State of Louisiana
NMR100000	State of New Mexico, except Indian country
NMR10I000	Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I.
OKR10I000	Indian country within the State of Oklahoma, except areas of Indian country covered by an extension of state program authority pursuant to Section 10211 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA).
OKR10F000	Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, or the Oklahoma Department of Agriculture and Forestry including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).
TXR10I000	Indian country within the State of Texas
06R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

For stormwater discharges in EPA Region 6 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 6 Address:
U.S. EPA Region 6
NPDES Stormwater Program (WQ-PP)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

B.7 EPA Region 7

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 7:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
IAR10I000	Indian country within the State of Iowa
KSR10I000	Indian country within the State of Kansas
NER10I000	Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)
07R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

For stormwater discharges in EPA Region 7 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 7 Address:
U.S. EPA Region 7
NPDES Stormwater Program
11201 Renner Blvd
Lenexa, KS 66219

B.8 EPA Region 8

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 8:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
COR10F000	Areas in the State of Colorado located at a Federal Facility (as defined in Appendix A), except those located on Indian country
COR10I000	Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico
MTR10I000	Indian country within the State of Montana
NDR10I000	Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the portion of the lands within the former boundaries of the Lake Traverse Reservation which is covered under South Dakota permit SDR10000I listed below)
SDR10I000	Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake Traverse Reservation located in North Dakota (except for the Standing Rock Reservation which is covered under North Dakota permit NDR10000I listed above)
UTR10I000	Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)
WYR10I000	Indian country within the State of Wyoming
08R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

For stormwater discharges in EPA Region 8 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 8 Address:
EPA Region 8 Storm Water Program
Mailcode: 8P-W-WW
1595 Wynkoop Street
Denver, CO 80202-1129

B.9 EPA Region 9

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 9:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
ASR100000	Island of American Samoa
AZR10I000	Indian country within the State of Arizona, as well as Navajo Reservation lands in New Mexico and Utah
CAR10I000	Indian country within the State of California
GUR100000	Island of Guam
JAR100000	Johnston Atoll
MPR100000	Commonwealth of the Northern Mariana Islands
MWR100000	Midway Island and Wake Island
NVR10000I	Indian country within the State of Nevada, as well as the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Goshute Reservation in Utah
09R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

For stormwater discharges in EPA Region 9 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 9 Address:
U.S. EPA Region 9
Water Division
NPDES Stormwater Program (WTR-2-3)
75 Hawthorne Street
San Francisco, CA 94105-3901

B.10 EPA Region 10

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 10:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
AKR10I000	Indian country lands as defined in 18 U.S.C. 1151 within the State of Alaska
AKR10F000	Denali National Park and Preserve
IDR10I000	Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)
ORR10I000	Indian country within the State of Oregon, except Fort McDermitt Reservation lands (see Region 9)
WAR10F000	Areas in the State of Washington, except those located on Indian country, subject to construction activity by a Federal Operator
WAR10I000	Indian country within the State of Washington
010R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program with authorization to issue permits in Indian country

For stormwater discharges in EPA Region 10 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

EPA Region 10 Address:
U.S. EPA Region 10
NPDES Stormwater Program
1200 6th Avenue (OWW-191)
Seattle, WA 98101-3140

Appendix C - Small Construction Waivers and Instructions

These waivers are only available to stormwater discharges associated with small construction activities (i.e., 1-5 acres). As the operator of a small construction activity, you may be able to qualify for a waiver in lieu of needing to obtain coverage under this general permit based on: (A) a low rainfall erosivity factor, (B) a TMDL analysis, or (C) an equivalent analysis that determines allocations for small construction sites are not needed. Each operator, otherwise needing permit coverage, must notify EPA of its intention for a waiver. It is the responsibility of those individuals wishing to obtain a waiver from coverage under this general permit to submit a complete and accurate waiver certification as described below. Where the operator changes or another is added during the construction project, the new operator must also submit a waiver certification to be waived.

C.1 Rainfall Erosivity Waiver

Under this scenario the small construction project's rainfall erosivity factor calculation ("R" in the Revised Universal Soil Loss Equation) is less than five during the period of construction activity. The operator must certify to EPA that construction activity will occur only when the rainfall erosivity factor is less than five. The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a stabilization practice that will provide interim non-vegetative stabilization can be used for the end of the construction period, provided the operator commits (as a condition of waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the CGP have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with its certification statement constitutes acceptance of and commitment to complete the final stabilization process. The operator must submit a waiver certification to EPA prior to commencing construction activities.

> *Note: The rainfall erosivity factor "R" is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21–64, dated January 1997; United States Department of Agriculture (USDA), Agricultural Research Service.*

EPA has developed an online rainfall erosivity calculator to help small construction sites determine potential eligibility for the rainfall erosivity waiver. You can access the calculator from EPA's website at: https://www.epa.gov/npdes/rainfall-erosivity-factor-calculator-small-construction-sites. The R factor can easily be calculated by using the construction site latitude/longitude or address and estimated start and end dates of construction. This calculator may also be useful in determining the time periods during which construction activity could be waived from permit coverage. You may find that moving your construction activity by a few weeks or expediting site stabilization will allow you to qualify for the waiver. Use this online calculator or the Construction Rainfall Erosivity Waiver Fact Sheet (https://www.epa.gov/sites/production/files/2015-10/documents/fact3-1.pdf) to assist in determining the R Factor for your small construction site.

If you are the operator of the construction activity and eligible for a waiver based on low erosivity potential, you can submit a rainfall erosivity waiver electronically via EPA's NPDES eReporting Tool (NeT) (https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting), unless you received a waiver from your EPA Regional Office (see Part 1.4.1 of the CGP for information about receiving a waiver from electronic reporting).

Note: If the R factor is five or greater, you do not qualify for the rainfall erosivity waiver, and must obtain coverage under an NPDES permit (e.g., the CGP), unless you qualify for the Water Quality Waiver as described in section B below.

If your small construction project continues beyond the projected completion date given on the waiver certification, you must recalculate the rainfall erosivity factor for the new project duration. If the R factor is below five, you must update all applicable information on the waiver certification and retain a copy of the revised waiver as part of your records. The new waiver certification must be submitted prior to the projected completion date listed on the original waiver form to assure your exemption from permitting requirements is uninterrupted. If the new R factor is five or above, you must obtain NPDES permit coverage.

C.2 TMDL Waiver

This waiver is available if EPA has established or approved a TMDL that addresses the pollutant(s) of concern for the impaired water and has determined that controls on stormwater discharges from small construction activity are not needed to protect water quality. The pollutant(s) of concern include sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any waterbody that will receive a discharge from the construction activity. Information on TMDLs that have been established or approved by EPA is available from EPA online at https://www.epa.gov/tmdl and from State and Tribal water quality agencies.

If you are the operator of the construction activity and eligible for a waiver based on compliance with an EPA-established or approved TMDL, you must provide the following information in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the waterbody(s) that would be receiving stormwater discharges from your construction project;
5. The name and approval date of the TMDL;
6. A statement, signed and dated by an authorized representative as provided in Appendix G, Subsection G.11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the TMDL.

C.3 Equivalent Analysis Waiver

This waiver is available for discharges to non-impaired waters only. The operator can develop an equivalent analysis that determines allocations for his/her small construction site for the pollutant(s) of concern or determines that such allocations are not needed to protect water quality. This waiver requires a small construction operator to develop an equivalent analysis based on existing in-stream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety.

If you are a construction operator who wants to use this waiver, you must develop your equivalent analysis and provide the following information to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);

2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the waterbody(s) that would be receiving stormwater discharges from your construction project;
5. Your equivalent analysis;
6. A statement, signed and dated by an authorized representative as provided in Appendix G, Subsection G.11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the equivalent analysis.

C.4 Waiver Deadlines and Submissions

1. Waiver certifications must be submitted prior to commencement of construction activities.
2. If you submit a TMDL or equivalent analysis waiver request, you are not waived until EPA approves your request. As such, you may not commence construction activities until receipt of approval from EPA.
3. Late Notifications: Operators are not prohibited from submitting waiver certifications after initiating clearing, grading, excavation activities, or other construction activities. The Agency reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and waiver authorization is granted.

Submittal of a waiver certification is an optional alternative to obtaining permit coverage for discharges of stormwater associated with small construction activity, provided you qualify for the waiver. Any discharge of stormwater associated with small construction activity not covered by either a permit or a waiver may be considered an unpermitted discharge under the Clean Water Act. As mentioned above, EPA reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and either discharge authorization is granted or a complete and accurate waiver certification is submitted. EPA may notify any operator covered by a waiver that they must obtain NPDES permit coverage. EPA may notify any operator who has been in non-compliance with a waiver that they may no longer use the waiver for future projects. Any member of the public may petition EPA to take action under this provision by submitting written notice along with supporting justification.

Complete and accurate TMDL or equivalent analysis waiver requests must be sent to the applicable EPA Regional Office address specified in Appendix B.

Appendix D - Eligibility Worksheet Relating to Threatened and Endangered Species Protection

D.1 Introduction

This appendix provides a printable worksheet that can be helpful in selecting and documenting your eligibility criteria with respect to the protection of Federally listed threatened or endangered species and Federally designated "critical habitat" under the Endangered Species Act (ESA) [hereinafter "ESA-listed species and designated critical habitat(s)"] from discharges and discharge-related activities authorized under this permit. This is important because Section 9 of the ESA prohibits all persons and agencies from "taking" threatened and endangered species (16 U.S.C. § 1532(19)).

While coordination between you and the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) (together, referred to as the "Services") may not be required in all cases, EPA encourages you to coordinate with the Services, to document that coordination, and to do so early in the planning process prior to submitting your NOI.

D.2 Certifying ESA Eligibility Criterion for the CGP

To be eligible for coverage under the CGP, you must certify that you meet one of the criteria listed in this worksheet (Section D.5), which is then submitted with your NOI for coverage under this permit. If you do not meet one of the ESA eligibility criteria outlined in the worksheet below, you are not eligible for coverage under this permit. These criteria ensure that coverage is available only for discharges and discharge-related activities that (1) avoid or eliminate any short- or long-term adverse effects to ESA-listed species and designated critical habitat(s), or (2) may result in any short- or long-term adverse effects that result in incidental take addressed under the incidental take statement of a biological opinion or permit for take issued under Section 10 of the ESA.

As part of your determination of eligibility, EPA has developed a worksheet that assists operators in arriving at the correct criterion. The following requirements apply to the completion of the worksheet depending on how you are submitting your NOI for permit coverage:

1. If the EPA Regional Office grants you a waiver from electronic reporting, in accordance with Part 1.1.5 of the CGP, you must complete the worksheet in section D.4 of this appendix to provide all information as required on your NOI that supports the eligibility criterion you qualify under per Part 1.1.5 of the permit. **You must submit the worksheet with your NOI. If you do not submit the worksheet with your NOI, your NOI will be considered incomplete.**
2. If you do not have a waiver from electronic reporting, you must **complete your eligibility criteria selection outlined in the Endangered Species Protection section of the NOI in the NPDES eReporting Tool (NeT-CGP)** and provide all information as required on your NOI that supports the eligibility criterion you qualify under per Part 1.1.5 of the permit. The printable worksheet in this appendix may be helpful to you in preparing to submit your NOI, but you do not have to use it.

D.3 What to Expect Once you Submit your NOI

After you submit your NOI and before your NOI is authorized, EPA may notify you if any additional controls are necessary to ensure your discharges are not likely to result in any short- or long-term adverse effects on ESA-listed species and critical habitat.

The Services have the opportunity, within 14 days of submission of the NOI, to advise EPA whether either agency believes the planned discharges meet the selected eligibility criterion; whether the eligibility criterion could be met with additional conditions; or whether the eligibility criterion is not met. With respect to ESA issues, EPA recognizes the Services' expertise and will carefully consider their conclusion(s) in identifying eligibility for authorization, either with or without additional conditions. In the event EPA has placed a hold on your NOI based on NMFS or USFWS' recommendation, EPA will notify you as to whether your discharges are authorized or whether an individual permit will be required. If you do not hear from EPA within 14 days, you may assume that your discharge is authorized without further conditions.

D.4 Worksheet Instructions

Follow the instructions within the worksheet below to determine which criterion you are eligible for coverage under this permit. Check only 1 criterion, answer the required questions, and include the required information.

Please keep the following in mind as you complete the worksheet:

- The worksheet requires that you answer questions in a sequential order so that you can select the correct eligibility criterion. The worksheet does not go through each criterion alphabetically, but rather is organized in a way that allows you to eliminate those criteria that do not apply to your site. For instance, Step 1 of the worksheet requires you to determine whether criterion B, E, or F applies first, in that order, before proceeding to determining whether criterion A applies in Step 2.
- You must consider ESA-listed species and/or designated critical habitat(s) under the jurisdiction of both the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) and select the criterion that best applies to your site. You must comply with any applicable terms, conditions, or other requirements developed in theprocess of meeting one of the eligibility criteria in this section to remain eligible for coverage under this permit.
- When evaluating the potential effects of your activities, you must consider effects to listed species or critical habitats within the "action area" of your construction activity, as identified by the USFWS IPaC and/or the NOAA website resources on page D-10 through D-11 of this appendix. Please Note: *NMFS' jurisdiction includes ESA-listed marine and estuarine species that spawn in inland rivers.* The definition of "action area," which is contained in Appendix A, is repeated below forconvenience.

"Action Area" – all areas to be affected directly or indirectly by the federal action and not merely theimmediate area involved in the action. See 50 CFR part 402. For the purposes of this permit and for application of the Endangered Species Act requirements, the following areas are included in the definition of action area:

- The **areas on the construction site** where stormwater discharges originate and flow toward the point of discharge into the receiving waters. This includes:
  - areas on the construction site where excavation, site development, or other ground disturbance activities occur, and
  - areas where stormwater controls will be constructed and operated, including any areas where stormwater flows to and from the stormwater controls.
- The areas **in the vicinity of the construction site** where stormwater discharges flow from the construction site to one or more points of discharge into receiving waters. (Example: Where stormwater flows into an off-site ditch, swale, or gully that leads to receiving waters.)
- **The extent of the receiving water** potentially affected by stormwater discharges from your construction site through alteration of water chemistry, turbidity, temperature, or bank structure (i.e., erosive flow), regardless of whether the construction site is adjacent to the receiving water.

D.5 Worksheet

Step 1 – Determine if You Meet the Eligibility Requirements of Criterion B, E, or F

Instructions

- First determine whether you are eligible under Criterion B by reviewing the eligibility requirements below.
- If you determine that your facility does not meet Criterion B (e.g., due to difference in action area described, lack of analysis of appropriate effects, new listings or designation of critical habitat), proceed to check if you meet the requirements for Criterion E or F.

Criterion B Eligibility Requirements

If your discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility under the current 2022 CGP that included your action area (e.g., a general contractor or developer may have completed and filed an NOI for the entire action area with the necessary ESA certifications (Criterion A, C, D, E, or F)), you may be eligible under Criterion B. In order to be eligible for coverage, you must confirm that **all** three of the following are true (**check all that apply**):

☐ I have confirmed that the other operator's certification of eligibility accounted for my action area and that the eligibility certification was valid.

☐ There has been no lapse of NPDES permit coverage in the other operator's certification.

☐ I will comply with all measures that formed the basis of the other operator's valid certification of eligibility.

Instructions

- **If all three of the above are true, you may check Criterion B below and answer questions B1-B5, and if applicable, B6-B7.**
- **If any of the above are not true** (for example, if there are any listed species in your action area that were not addressed in the other operator's certification, you are not eligible under Criterion B), **you may not select Criterion B and must proceed to check if you meet the requirements for Criterion E or F.**

B Eligibility requirements met by another operator under the 2022 CGP. The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your "action area" under eligibility Criterion A, C, D, E, or F of the 2022 CGP and you have confirmed that no additional ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS not considered in the

that certification may be present or located in the "action area." To certify your eligibility under this criterion, there must be no lapse of NPDES permit coverage in the other CGP operator's certification. By certifying eligibility under this criterion, you agree to comply with any conditions upon which the other CGP operator's certification was based. You must include below the NPDES ID from the other 2022 CGP operator's notification of authorization under this permit and list any measures that you must comply with). If your certification is based on another 2022 CGP operator's certification under Criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in Criterion C.

B1. Provide the NPDES ID from the other CGP operator's NOI authorized under this permit:

_ _ _ _ _ _ _ _ _ _

B2. Identify the eligibility criterion of the other CGP operator's NOI? (check only one)

☐ A ☐ C ☐ D ☐ E ☐ F

B3. Provide the authorization date of the other CGP operator's NOI (MM/DD/YYYY):

_ _ / _ _ / _ _ _ _

By certifying eligibility under Criterion B, you must comply with any terms and conditions imposed under the eligibility requirements of the criterion for which the other operator has established eligibility (either Criterion A, C, D, E, or F) to ensure that your discharges and discharge-related activities are protective of listed species and/or critical habitat. *Note: If you are unable to meet these eligibility requirements, then you may either establish eligibility under one of the other criteria, or you may consider applying to EPA for an individual permit.*

B4. List any measures that formed the basis of the other operator's valid certification of eligibility that you will comply with (or enter "N/A" if none exist):

B5. Check to confirm you have provided documentation in your SWPPP supporting your eligibility under Criterion B, including any of the terms and conditions, as well as the other operator's basis for establishing eligibility. Yes ☐

If your certification is based on another operator's certification under Criterion C, you must provide the following:

B6. What Federally listed species and/or designated habitat are located in your "action area"? (attached separate sheet if necessary)

B7. What is the distance between your site and the listed species or designated critical habitat (in miles)? _____

Instructions

- **If you selected Criterion B above and answered questions B1-B5, and if applicable, B6-B7, you are done with this worksheet. If you are *not* filing electronically, you must submit this worksheet with your NOI.**
- If you are not eligible under Criterion B, proceed to check if you meet the requirements for Criterion E or F.

Criterion E Eligibility Requirements

If consultation under ESA section 7 has concluded, you may be eligible for coverage under Criterion E. In order to be eligible for coverage under Criterion E, **you must confirm that both of the following are true (check all that apply)**:

☐ A consultation between a Federal agency and USFWS and/or the NMFS under section 7 of the ESA has concluded**.** Consultations can be either formal or informal, and would have occurred only as a result of a separate Federal action (e.g., during application for an individual wastewater discharge permit or the issuance of a wetlands dredge and fill permit), and the consultation must have addressed the effects of your construction activity's discharges and discharge-related activities on all ESA-listed threatened or endangered species and all designated critical habitat under the jurisdiction of each Service, as appropriate, in your action area. The result of this consultation must be either:

i. A biological opinion currently in effect that determined that the action in question (taking into account the effects of your facility's discharges and discharge-related activities) is likely to adversely affect, but is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The biological opinion must have included the effects of your facility's discharges[1] and discharge-related activities on all the listed species and designated

[1] Effects of discharge include, but are not limited to, the analysis of the hydrological, chemical, and biological effects of the discharge on listed species, their prey, and their habitat, as well as critical habitat, where designated. For example, the

critical habitat in your action area under the jurisdiction of each Service, as appropriate. To be eligible under (i), any reasonable and prudent measures specified in the incidental take statement must be implemented;

ii. Written concurrence (e.g., letter of concurrence) from the applicable Service(s) with a determination that your facility's discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat. The concurrence letter must have included the effects of your facility's discharges and discharge-related activities on all the ESA-listed species and/or designated critical habitat on your species list(s) acquired from USFWS and/or NMFS as part of this worksheet.

☐ The consultation does not warrant reinitiation under 50 CFR §402.16; or, if reinitiation of consultation is required (e.g., due to a new species listing, critical habitat designation, or new information), the Federal action agency has reinitiated the consultation and the result of the consultation is consistent with the statements above. Include any reinitiation documentation from the Services or consulting Federal agency with your NOI.

Instructions

- **If both of the above are true, you may check Criterion E below and answer questions E1-E6.**
  - For more information on section 7 consultation, see 50 CFR part 402. If you receive a "jeopardy opinion," you may continue to work with USFWS and/or NMFS and your permitting authority to modify your project so that it will not jeopardize listed species or designated critical habitat.
  - Note that most consultations are accomplished through informal consultation. When conducting informal ESA section 7 consultation as a non-Federal representative, you must follow the procedures found in 50 CFR Part 402 of the ESA regulations. You must notify the Services of your intention and agreement to conduct consultation as a non-Federal representative.
  - Consultation may also occur in the context of another Federal action at the construction site (e.g., where ESA section 7 consultation was performed for issuance of a wetlands dredge and fill permit for the project or where a NEPA review is performed for the project that incorporates a section 7 consultation).
  - Any terms and conditions developed through consultations to protect listed species and critical habitat must be incorporated into the SWPPP. As noted above, a Federal operator may, if they wish, initiate consultation with the Services at Step Four. Non-Federal operators may seek technical assistance from the Services at Step 5.
  - Whether ESA section 7 consultation must be performed with either USFWS, NMFS, or both Services depends on the listed species that may be affected by the operator's stormwater discharges. In general, NMFS has jurisdiction over marine, estuarine, and anadromous species. Operators should also be aware that while formal section 7 consultation provides protection from incidental takings liability, informal consultation does not.

- **If not, proceed to check if you meet the requirements for Criterion F.**

effects analysis would have evaluated whether the various pollutants in the discharge (e.g., TSS, metals) would adversely affect listed species through exposure to the pollutants, or to their prey or habitat. Effects that look only at short-term effects unrelated to the stormwater discharge effects to listed species are not sufficient for these purposes.

☐ **E** **ESA Section 7 consultation has successfully concluded.** Consultation between a Federal Agency and the USFWS and/or NMFS under section 7 of the ESA has concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS. To certify eligibility under this criterion, **Indicate the result of the consultation**:

☐ Biological opinion and/or conference opinion and incidental take statement currently in effect currently in effect from USFWS and/or NMFS that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of ESA-listed species, nor the destruction or adverse modification of critical habitat;

Or

☐ Written concurrence from USFWS and/or NMFS with a finding that the site's discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat.

E1. Identify the federal action agency or agencies involved:

E2. Identify the Service(s) field or regional offices providing the consultation:

E3. Identify any tracking numbers associated with the consultation (e.g., IPaC number, ECO number):

E4. What is the date the consultation was completed? (MM/DD/YYYY) __ __ / __ __ / __ __ __ __

E5. Check to confirm that correspondence with USFWS and/or NMFS documenting the Biological Opinion, conference opinion (IPaC or ECO tracking number) or concurrence is attached. Yes ☐

E6. Check to confirm you have provided documentation in your SWPPP supporting your eligibility under Criterion E, including copies of the correspondence between yourself and the Services. Yes ☐

Instructions

- **If you selected Criterion E above and answered questions E1-E6, you are done with this worksheet. If you are not filing electronically, you must submit this worksheet with your NOI.**
- If you are not eligible under Criterion E, proceed to check if you meet the requirements for Criterion F.

Criterion F Eligibility Requirements

If your construction activities are the subject of a permit under ESA section 10, and this authorization addresses the effects of your site's discharges and discharge-related activities on ESA-listed species and designated critical habitat in your action area, you may be eligible for coverage under Criterion F. In order to be eligible or coverage under Criterion F, **you must confirm that the following is true:**

☐ A permit or permits issued under section 10 of the ESA specifically address the effects of your facility's discharges and discharge-related activities (if applicable) on all federally-listed species and designated critical habitat in your action area.

Note: You must follow USFWS and/or NMFS procedures when applying for an ESA section 10 permit (see 50 CFR §17.22(b)(1) for USFWS and §222.22 for NMFS). Application instructions for section 10 permits can be obtained from http://www.fws.gov and http://www.nmfs.noaa.gov or by contacting the appropriate Service office.

Instructions

- **If the above is true, you may check Criterion F below and answer questions F1-F6.**
- If you are not eligible under criterion F, proceed to Step 2.

☐ **F** **Issuance of section 10 permit**. Potential take is authorized through the issuance of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of the site's discharges and discharge-related activities on ESA-listed species and designated critical habitat. You must include copies of the correspondence between yourself and the participating agencies in your SWPPP and your NOI.

F1. Which Service provided the section 10 permit? (check all that apply)

USFWS ☐ NMFS ☐

F2. Identify the field or regional offices providing the permit(s):

F3. Identify any tracking numbers associated with the consultation (e.g., IPaC number, ECO number):

F4. What is the date the permit(s) was granted? (MM/DD/YYY) __ __ / __ __ / __ __ __ __
(2nd permit date, if applicable: __ __ / __ __ / __ __ __ __)

F5. Check to confirm that correspondence with USFWS and/or NMFS and a copy of the section 10 permit or relevant tracking number(s) (IPaC and/or ECO number) is attached. Yes ☐

F6. Check to confirm you have provided documentation in your SWPPP supporting your eligibility under Criterion F, including a copy of the section 10 permit and copies of the correspondence between yourself and the Services. Yes ☐

Instructions

- **If you selected Criterion F above and answered questions F1-F6, you are done with this worksheet. If you are not filing electronically, you must submit this worksheet with your NOI.**
- If you are not eligible under Criterion F, proceed to Step 2.

Step 2 – Determine if Listed Threatened or Endangered Species or their Designated Critical Habitat(s) are Likely to Occur in your Site's Action Area

Instructions

- **First, determine the extent of your action area.** You must determine whether species listed as either threatened or endangered, or their critical habitat(s) are located in your site's action area (i.e., all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action, including areas beyond the footprint of the site that are likely to be affected by stormwater discharges, discharge-related activities, and authorized non-stormwater discharges).

You must consider the following in determining the action area for your site, and **confirm that all the following are true**:

☐ In determining my "action area", I have considered that discharges of pollutants from the project site can expand the action area well beyond the footprint of my site and the discharge point(s). I have taken into account the controls I will be implementing to minimize pollutants and the receiving waterbody characteristics (e.g., perennial, intermittent, ephemeral) in determining the extent of physical, chemical, and/or biotic effects of the

discharges. I confirm that all receiving waterbodies that could receive pollutants from my site are included in my action area.

☐ In determining my "action area", I have considered that discharge-related activities must also be accounted for in determining my action area. I understand that discharge-related activities are any activities that cause, contribute to, or result in stormwater and authorized non-stormwater point source discharges, and measures such as the siting, construction, timing,[2] and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged. I understand that any new or modified stormwater controls that will have noise or other similar effects, and any disturbances associated with construction of controls, are part of my action area.

If you have any questions about determining the extent of your action area, you may contact EPA or the Services for assistance. https://www.epa.gov/npdes/contact-us-stormwater#regional

Instructions

- **Next, you must identify, to the best of your ability, any species listed as either threatened or endangered, or their critical habitat(s), that are located in your site's action area (see definitions of these terms in Appendix A).** You must follow the instructions on the https://www.epa.gov/npdes/construction-general-permit-threatened-and-endangered-species to obtain lists of any ESA-protected species and/or critical habitat that are expected to exist in your county, township, or the receiving water for your discharge.
- If ESA-protected resources occur within your action area, keep a copy of the species and critical habitat list(s) from the Service(s) with your SWPPP and use the list(s) to complete your NOI. For USFWS species, attach to this worksheet the full printout from your IPaC query/Official Species List. You can include the map from your IPaC query. For NMFS species, attach to this worksheet the full printout of the report from your query of the mapping resource you used (either the National or Greater Atlantic Region Mapper). The printed report from NMFS mappers will include a map of your query.

[2] Timing considerations could be related to, for example, a time of the year where a migratory bird species is present in the action area and the operator might want to consider that in terms of their construction sequencing; there are other times of the year where this consideration might not be relevant.

Instructions

- **After completing Step 2 above, if there are <u>no</u> listed species and <u>no</u> critical habitat areas in your action area,** you may be eligible for criterion A.

Criterion A Eligibility Requirements

In order to be eligible for coverage under criterion A, you must confirm that all the following are true (**check all that apply**):

☐ I confirm that I have used the species location resources of **BOTH** NMFS and USFWS to identify any ESA-listed species within my action area.

☐ I have confirmed there to be no ESA-listed species and no critical habitat in my action area.

Instructions

- **If all of the above are true, you may check criterion A below and answer questions A1-A5.**
- **If any of the above is not true, you may not select criterion A and must proceed to Step 3** to determine if you can become eligible under criterion C.

Note: For existing dischargers that have previously obtained coverage under criterion A, you must verify whether ESA-protected species and/or critical habitat are expected to exist in your action area, as described above. Please note that if you now find that your action area overlaps with ESA-protected species or critical habitat, you must proceed to Step 3.

☐ **A <u>No ESA-listed species and/or designated critical habitat present in action area</u>**. You certify that ESA-listed species and designated critical habitat(s) under the jurisdiction of the USFWS or NMFS are not likely to occur in your site's "action area" as defined in Appendix A of this permit.. *Please Note: NMFS' jurisdiction includes ESA-listed marine and estuarine species that spawn in inland rivers.*

A1. USFWS information sources used (reliance on State resources is not acceptable):

Note: If your Official Species List from USFWS indicated no species or critical habitat were present in your action area, include the full consultation tracking code at the top of your Official Species List in your NOI in the basis statement for Criterion A. If an Official Species List was not available on IPaC, list the contact date and name of the Service staff with whom you corresponded to verify no USFWS species or critical habitat were present in your action area.

A2. NMFS information sources used (reliance on State resources is not acceptable):

A3. I confirm that aerial image(s) of the site is attached. Yes ☐

A4. I confirm that a printout of the species' list(s) showing no ESA-listed species or critical habitat in my action area is attached. Yes ☐

A5. Check to confirm you have provided documentation in your SWPPP supporting your eligibility under Criterion A. For USFWS species, include the full printout from your IPaC query/Official Species List. You can include the map from your IPaC query. For NMFS species, include the full printout from the appropriate NMFS website resources on page X with the correct Region selected. Yes ☐

Instructions

- **If you selected Criterion A above and answered questions A1-A5, you are done with this worksheet. If you are not filing electronically, you must submit this worksheet with your NOI.**

- **If listed species and/or critical habitat may exist in your action area, you must do one or more of the following**:

  - **Conduct visual inspections.** This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal stormwater collection systems.
  - **Conduct a formal biological survey**. In some cases, particularly for larger construction sites with extensive stormwater discharges, biological surveys may be an appropriate way to assess whether species are located in the action area and whether there are likely to be short- or long-term adverse effects to such species. Biological surveys are frequently performed by environmental consulting firms.
  - **If required, conduct an environmental assessment under the National Environmental Policy Act (NEPA).** Some construction activities might require review under NEPA for specific reasons, such as Federal funding or other Federal involvement in the project. Note: Coverage under the CGP does not trigger such a review for individual projects/sites. EPA has complied with NEPA in the issuance of the CGP.

    and
  - **Follow the instructions in Steps 3 – 5 below, as applicable.** Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this CGP may require measures to protect critical habitat that are separate from those to protect listed species.

Step 3 – Assess if the Construction Activity's Discharges or Discharge-Related Activities Are Likely to Result in Short- or Long-Term Adverse Effects to Listed Threatened or Endangered Species or Designated Critical Habitat

Instructions

- If in Step 2 you identified that listed species and/or designated critical habitat could exist in your action area, **you must next assess whether your discharges or discharge-related activities are likely to result in short- or long-term adverse effects to ESA-listed threatened or endangered species or designated critical habitat**.

Potential short- or long-term adverse effects from discharges and discharge-related activities include:

- **Hydrological**. Stormwater discharges may cause siltation, sedimentation, or induce other changes in receiving waters such as temperature, salinity, or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Construction activity itself may also alter drainage patterns on a site where construction occurs that can impact listed species or critical habitat.
- **Habitat**. Excavation, site development, grading, and other surface disturbance activities from construction activities, including the installation or placement of stormwater controls, may result in adverse effects to listed species or their habitat. Stormwater may drain or inundate listed species habitat.
- **Toxicity**. In some cases, pollutants in construction stormwater may have toxic effects on listed species. For example: Stormwater discharges from construction on or adjacent to agricultural property may contain pesticides. Stormwater discharges from projects involving pavement and roofing could include tar and asphalt.

The scope of effects to consider will vary with each site. If you are having difficulty determining whether your project is likely to result in short- or long-term adverse effects to listed species or critical habitat, or one of the Services has already raised concerns to you, you should contact the appropriate Services office for assistance.

Instructions

- **If any short- or long-term adverse effects to listed threatened or endangered species or their critical habitat <u>are not</u> likely, then you may check Criterion C below and answer questions C1-C8.**
- **If any short- or long-term adverse effects to listed threatened or endangered species or their critical habitat <u>are</u> likely, you must follow Step 4 below.** You may still be eligible for Criterion C if you are able to install and implement appropriate measures to avoid the likelihood of adverse effects.

Criterion C Eligibility Requirements

☐ **C** **Discharges not likely to result in any short- or long-term adverse effects to ESA-listed species and/or designated critical habitat.** ESA-listed species and/or designated critical habitat(s) under the jurisdiction of the USFWS and/or NMFS are likely to occur in or near your site's "action area," and you certify to EPA that your site's discharges and discharge-related activities are not likely to result in any short- or long-term adverse effects to ESA-listed threatened or endangered species and/or designated critical habitat. This certification may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to result in any short- or long-term adverse effects to ESA-listed species and/or designated critical habitat. To certify your eligibility under this criterion, you must indicate below1) the ESA-listed species and/or designated habitat located in your "action area" using the process outlined in this Appendix; 2) the distance between the site and the listed species and/or designated critical habitat in the action area (in miles); and 3) a rationale describing specifically how short- or long-term adverse effects to ESA-listed species will be avoided from the discharges and discharge-related activities. You must also include a copy of your site map from your SWPPP showing the upland and in-water extent of your "action area" with your NOI.

C1. I confirm that both ESA-listed species and designated critical habitat under the jurisdiction of the USFWS and/or NMFS were considered in my evaluation. Yes ☐

C2. Provide the USFWS information resources and expertise used to arrive at this criterion selection:

C3. Provide the NMFS information resources and expertise used to arrive at this criterion selection:

C4. What ESA-listed species and/or designated critical habitat are located in your "action area?" (or attach a printout of the species' list(s))

C5. What is the distance between your site and the ESA-listed species and/or designated critical habitat within the action area (in miles, state "on site" if the ESA-listed species and/or designated critical habitat is within the area to be disturbed)? _____

C6. Provide the rationale describing specifically how any short- or long-term adverse effects to ESA-listed species will be avoided from the discharge and discharge-related activities.

C7. I confirm that a site map from my SWPPP showing the upland and in-water extent of my "action area" is attached. Yes ☐

C8. Check to confirm you have provided documentation in your SWPPP supporting your eligibility under Criterion C. Yes ☐

Instructions

- **If you selected Criterion C above and answered questions C1-C8, you are done with this worksheet. If you are not filing electronically, you must submit this worksheet with your NOI.**

- If not, please proceed to step 4.

Step 4 - Determine if Measures Can Be Implemented to Avoid Adverse Effects

Instructions

If you make a preliminary decision in Step 3 that short- or long-term adverse effects from your construction activity's discharges or discharge-related activities are likely to occur, you can still receive coverage under eligibility Criterion C of the CGP if appropriate measures are undertaken to avoid or eliminate the likelihood of short- or long-term adverse effects prior to applying for CGP coverage.

These measures may involve relatively simple changes to construction activities such as re-routing a stormwater discharge to bypass an area where species are located, relocating stormwater controls, or by modifying the "footprint" of the construction activity. If you are unable to ascertain which measures to implement to avoid the likelihood of short- or long-term adverse effects, you must coordinate with USFWS and/or NMFS, in which case you would not be eligible for coverage under eligibility Criterion C, but may instead be eligible for coverage under eligibility criterion D (described in more detail in Step 5).

- **If you are able to install and implement appropriate measures to avoid the likelihood of short- or long-term adverse effects, then <u>you</u> <u>may go back</u> and check eligibility Criterion C above and answer questions C1-C8 above, <u>and</u> C9-C10 below.** The measures you adopt to avoid or eliminate short- or long-term adverse effects must be implemented for the duration of the construction project and your coverage under the CGP.
- **If you cannot ascertain which measures to implement to avoid the likelihood of adverse effects,** you must follow the procedures in Step 5.

C9. I confirm that I have or will install and implement appropriate measures to avoid the likelihood of any short- or long-term adverse effects to ESA-listed threatened or endangered species or their critical habitat. Yes ☐

C10. Provide a description of the measures installed/to be installed and implemented to avoid likelihood of any short- or long-term adverse effects.

Instructions

- **If you selected Criterion C above and answered questions C1-C10, you are done with this worksheet. If you are not filing you NOI electronically, you must submit this worksheet with your NOI.**
- If you are not eligible for Criterion C, please proceed to step 5.

Step 5 - Determine if the Eligibility Requirements of Criterion D Can Be Met

Instructions

- If in Step 4 you cannot ascertain which measures to implement to avoid the likelihood of short- or long-term adverse effects, you must contact USFWS and/or NMFS. You may still be eligible for CGP coverage if likely adverse effects can be addressed through meeting criterion D.
- If you meet the requirements of criterion D, **then you may check criterion D below and answer questions D1-D5.**

Criterion D Eligibility Requirements

D **Coordination with USFWS and/or NMFS has successfully concluded.** Coordination between you and the USFWS and/or NMFS has concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS, and resulted in a written confirmation from USFWS and/or NMFS that the effects of your site's discharges and discharge-related activities are not likely to result in short- or long-term adverse effects for ESA-listed species and/or designated critical habitat in your action area. By certifying eligibility under this criterion, you agree to comply with any conditions you must meet for your site's discharges and discharge-related activities to not likely result in any short- or long-term adverse effects. You must include copies of the correspondence with the participating agencies in your SWPPP and your NOI.

D1. Which Service participated in coordination? (check all that apply) USFWS ☐ NMFS ☐

D2. Identify the field and/or regional office(s) that provided the coordination?

D3. What is the date the coordination concluded? (MM/DD/YYY) __ __ / __ __ / __ __ __ __

D4. Check to confirm that correspondence with USFWS and/or NMFS documenting concurrence is attached. Yes ☐

D5. Check to confirm you have provided documentation in your SWPPP supporting your eligibility under Criterion D, including copies of the correspondence between yourself and the Services. Yes ☐

Instructions

- **If you selected Criterion D above and answered questions D1-D5, you are done with this worksheet. If you are not filing electronically, you must submit this worksheet with your NOI.**

Paperwork Reduction Act Notice

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0305). Responses to this collection of information are mandatory (40 CFR 122.26). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information is estimated to be 3.3 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Appendix E – Historic Property Screening Process

Background

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of Federal "undertakings", such as the issuance of this permit, on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. To address any issues relating to historic properties in connection with the issuance of this permit, EPA developed the screening process in this appendix that enables construction operators to appropriately consider the potential impacts, if any, of their installation of stormwater controls on historic properties and to determine whether actions can be taken, if applicable, to mitigate any such impacts. Although the coverages of individual construction sites under this permit do not constitute separate Federal undertakings, the screening process in this appendix provides an appropriate site-specific means of addressing historic property issues in connection with EPA's issuance of the permit.

Key Terms

Historic property- prehistoric or historic districts, sites, buildings, structures, or objects that are included in or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and remains that are related to and located within such properties

SHPO – The State Historic Preservation Officer for a particular State

THPO or Tribal representative – The Tribal Historic Preservation Officer for a particular Tribe or, if there is no THPO, the representative designated by such Tribe for NHPA purposes

Instructions for All Construction Operators

You are required to follow the screening process in this appendix to determine if your installation of stormwater controls on your site has the potential to cause effects to historic properties, and whether or not you need to contact your SHPO, THPO, or other Tribal representative for further information. **You may not submit your NOI until you have completed this screening process.** The following four steps describe how applicants can meet the historic property requirements under this permit:

Step 1 *Are you installing any stormwater controls that require subsurface earth disturbance?*[1]

The first step of the screening process is to determine if you will install stormwater controls that cause subsurface earth disturbance. The installation of the following types of stormwater controls require subsurface earth disturbance:[2]

- Dikes
- Berms
- Catch Basins
- Ponds
- Ditches
- Trenches
- Culverts
- Channels

[1] You are only required to consider earth-disturbing activities related to the installation of stormwater controls in the NHPA screening process. You are not reqired to consider other earth-disturbing activities at the site. If you are installing one of the above stormwater controls or another type of control that requires subsurface earth disturbance, your stormwater controls have the potential to have an effect on historic properties. If this is the case, then you must proceed to Step 2.

[2] This list is not intended to be exhaustive. Other stormwater controls that are not on this list may involve earth-disturbing activities and must also be examined for the potential to affect historic properties.

- Perimeter Drains
- Swales

If you are not installing one of the above stormwater controls or another type of control that requires subsurface earth disturbance, then you may indicate this on your NOI, and no further screening is necessary. During the 14-day waiting period after submitting your NOI, the SHPO, THPO, or other Tribal representative may request that EPA hold up authorization based on concerns about potential adverse effects to historic properties. EPA will evaluate any such request and notify you if any additional controls to address adverse effects to historic properties are necessary.

Step 2 *Have prior professional cultural resource surveys or other evaluations determined that historic properties do not exist, or have prior disturbances precluded the existence of historic properties?*

If you are installing a stormwater control that requires subsurface earth disturbance, you must next determine if no historic properties exist on your site based on prior professional cultural resource surveys or other evaluations, or if the existence of historic properties has been precluded because of prior earth disturbances.

If prior to your project it has already been determined that no historic properties exist at your site based on available information, including information that may be provided by your applicable SHPO, THPO, or other Tribal representative, then you may indicate this on your NOI, and no further screening steps are necessary. Similarly, if prior earth disturbances have eliminated the possibility that historic properties exist on your site, you may indicate this on your NOI, and no further screening steps are necessary. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other Tribal representative may request that EPA hold up authorization based on concerns about potential adverse effects to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse effects to historic properties are necessary.

If neither of these circumstances exists for your project, you must proceed to Step 3.

Step 3 *If you are installing any stormwater controls that require subsurface earth disturbance, you must determine if these activities will have an effect on historic properties.*

If your answer to the question in Step 2 is "no", then you must assess whether your earth-disturbing activities related to the installation of stormwater controls will have an effect on historic properties. This assessment may be based on historical sources, knowledge of the area, an assessment of the types of earth-disturbing activities you are engaging in, considerations of any controls and/or management practices you will adopt to ensure that your stormwater control-related earth-disturbing activities will not have an effect on historic properties, and any other relevant factors. If you determine based on this assessment that earth disturbances related to the installation of your stormwater controls will have no effect on historic properties, you may indicate this on your NOI, and document the basis for your determination in your SWPPP, and no further screening steps are necessary. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other Tribal representative may request that EPA hold up authorization based on concerns about potential adverse effects to historic properties. EPA will evaluate any such request and notify you if any further processes are necessary including any additional measures to address adverse effects to historic properties are necessary.

If none of the circumstances in Steps 1 - 3 exist for your project, you must proceed to Step 4.

Step 4: *If you are installing any stormwater controls that require subsurface earth disturbance and you have not satisfied the conditions in Steps 1 - 3, you must contact and consult with the appropriate historic preservation authorities.*

Where you are installing stormwater controls that require subsurface earth disturbance, and you cannot determine in Step 3 that these activities will have no effect on historic properties, then you must contact the relevant SHPO, THPO, or other Tribal representative to request their views as to the likelihood that historic properties are potentially present on your site and may be impacted by the installation of these controls.

> *Note: Addresses for SHPOs may be found at https://ncshpo.org/directory/, and addresses for THPOs may be found at https://grantsdev.cr.nps.gov/THPO_Review/index.cfm. If a Tribe does not have a THPO, you should contact the appropriate Tribal government office designated by the Tribe for this purpose.*

You must submit the following minimum information in order to properly initiate your request for information:

1. Project name (*i.e.*, the name or title most commonly associated with your project);
2. A narrative description of the project;
3. Name, address, phone and fax number, and email address (if available) of the operator;
4. Most recent U.S. Geological Survey (USGS) map section (7.5 minute quadrangle) showing actual project location and boundaries clearly indicated; and
5. Sections of the SWPPP site map (see Part 7.2.4) that show locations where stormwater controls that will cause subsurface earth disturbance will be installed (see Step 1).

Without submitting this minimum information, you will not have been considered to have properly initiated your request. You will need to provide the SHPO, THPO, or other Tribal representative **a minimum of 15 calendar days** after they receive these materials to respond to your request for information about your project.

If you do not receive a response within 15 calendar days after receipt by the SHPO, THPO, or other Tribal representative of your request, then you may indicate this on your NOI, and no further screening steps are necessary. Or, if the applicable SHPO, THPO, or other Tribal representative responds to your request with an indication that no historic properties will be affected by the installation of stormwater controls at your site, then you may indicate this on your NOI, and no further screening steps are necessary. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other Tribal representative may request that EPA hold up authorization based on concerns about potential adverse effects to historic properties. EPA will evaluate any such request and notify you if any further processes are necessary including any additional measures to address adverse effects to historic properties are necessary.

If within 15 calendar days of receipt of your request the applicable SHPO, THPO, or other Tribal representative responds with a request for additional information or for further consultation regarding appropriate measures for treatment or mitigation of effects on historic properties caused by the installation of stormwater controls on your site, you must comply with this request and proceed to Step 5.

Step 5: *Consultation with applicable consulting parties.*

If, following your discussions with the appropriate historic preservation authorities in Step 4, the applicable SHPO, THPO, Tribal representative, or any other consulting party requests additional information or further consultation, you must respond with such information or consult to determine impacts to historic properties that may be caused by the installation of stormwater controls on your site and appropriate measures for treatment or mitigation of such impacts. If as a result of your discussions with the applicable SHPO, THPO, Tribal representative, or any other

consulting party, you enter into, and comply with, a written agreement regarding treatment and/or mitigation of impacts on your site, then you may indicate this on your NOI, and no further screening steps are necessary.

If, however, agreement on an appropriate treatment or mitigation plan cannot be reached between you and the SHPO, THPO, Tribal representative, or any other consulting party within 30 days of your response to the SHPO, THPO, Tribal representative, or any other consulting party's request for additional information or further consultation, you may submit your NOI, but you must indicate that you have not negotiated measures to avoid or mitigate such effects. You must also include in your SWPPP the following documentation:

1. Copies of any written correspondence between you and the SHPO, THPO, Tribal representative, or any other consulting party; and
2. A description of any significant remaining disagreements as to mitigation measures between you and the SHPO, THPO, Tribal representative, or any other consulting party.

After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, ACHP, Tribal representative, or any other consulting party may request that EPA place a hold on authorization based upon concerns regarding potential adverse effects to historic properties. EPA, in coordination with the ACHP, will evaluate any such request and notify you if any further processes are necessary including any additional measures to address adverse effects to historic properties are necessary.

Appendix F – Buffer Requirements.

The purpose of this appendix is to assist you in complying with the requirements in Part 2.2.1 of the permit regarding the establishment of natural buffers and/or equivalent sediment controls. This appendix is organized as follows:

F.1 SITES THAT ARE REQUIRED TO PROVIDE AND MAINTAIN NATURAL BUFFERS AND/OR EQUIVALENT EROSION AND SEDIMENT CONTROLS 2
F.2 COMPLIANCE ALTERNATIVES AND EXCEPTIONS 3
F.2.1 Compliance Alternatives 3
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F.3 SMALL RESIDENTIAL LOT COMPLIANCE ALTERNATIVES 12
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F.3.2 Small Residential Lot Compliance Alternatives 12

F.1 SITES THAT ARE REQUIRED TO PROVIDE AND MAINTAIN NATURAL BUFFERS AND/OR EQUIVALENT EROSION AND SEDIMENT CONTROLS

The requirement in Part 2.2.1 to provide and maintain natural buffers and/or equivalent erosion and sediment controls applies for any discharges to waters of the U.S. located within 50 feet of your site's earth disturbances. If the receiving water is not located within 50 feet of earth-disturbing activities, Part 2.2.1 does not apply. See Figure F – 1.

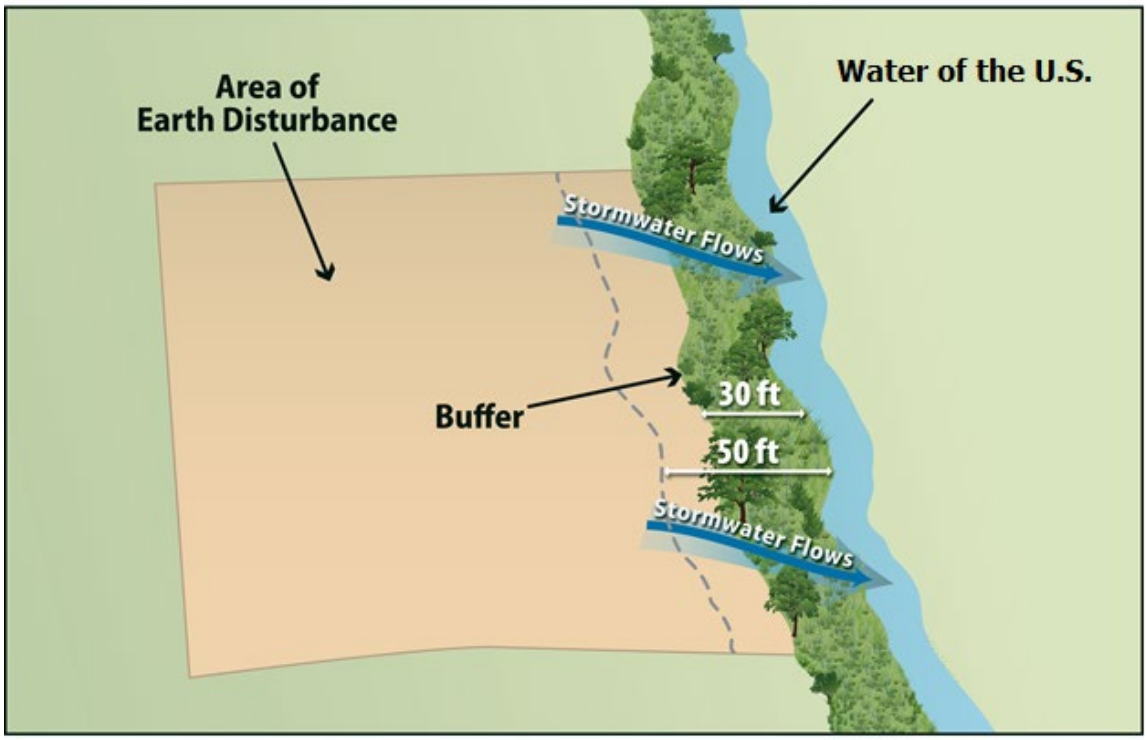

Figure F-1 Example of earth-disturbing activities within 50 feet of a water of the U.S.

F.2 COMPLIANCE ALTERNATIVES AND EXCEPTIONS

F.2.1 Compliance Alternatives

If Part 2.2.1 applies to your site, you have three compliance alternatives from which you can choose, unless you qualify for any of the exceptions (see below and Part 2.2.1.a):

1. Provide and maintain a 50-foot undisturbed natural buffer; or
2. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or
3. If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

The compliance alternative selected must be maintained throughout the duration of permit coverage.

See Part F.2.2 below for exceptions to the compliance alternatives.

See Part F.2.3 for requirements applicable to providing and maintaining natural buffers under compliance alternatives 1 and 2 above.

See Part F.2.4 for requirements applicable to providing erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer under compliance alternatives 2 and 3 above.

F.2.2 Exceptions to the Compliance Alternatives

The following exceptions apply to the requirement to implement one of the Part 2.2.1.a compliance alternatives (see also Part 2.2.1.b):

- The following disturbances are exempt from the requirements Part 2.2.1 and this Appendix[1]:
  - Construction approved under a CWA Section 404 permit; or
  - Construction of a water-dependent structure or water access areas *(e.g., pier, boat ramp, trail)*.
- If there is no discharge of stormwater to waters of the U.S. through the area between the disturbed portions of the site and any waters of the U.S. located within 50 feet of your site, you are not required to comply with the requirements in Part 2.2.1 and this Appendix. This includes situations where you have implemented controls measures, such as a berm or other barrier, that will prevent such discharges.
- Where no natural buffer exists due to preexisting development disturbances *(e.g., structures, impervious surfaces)* that occurred prior to the initiation of planning for the current development of the site, you are not required to comply with the requirements in Part 2.2.1 and this Appendix.
  Where some natural buffer exists but portions of the area within 50 feet of the receiving water are occupied by preexisting development disturbances, you are

[1] This exemption does not apply, however, to disturbances within 50 feet of a receiving water that are adjacent to the disturbances listed here (i.e., construction permitted under CWA Section 404, or construction of a water-dependent structure or water access area) and that are covered by this permit.

required to comply with the requirements in Part 2.2.1 and this Appendix. For the purposes of calculating the sediment load reduction for either compliance alternative 2 or 3, you are not expected to compensate for the reduction in buffer function that would have resulted from the area covered by these preexisting disturbances. Clarity about how to implement the compliance alternatives for these situations is provided in F.2.3 and F.2.4 below.

If during your project, you will disturb any portion of these preexisting disturbances, the area removed will be deducted from the area treated as a "natural buffer."

- For "linear construction sites" (see Appendix A), you are not required to comply with this requirement if site constraints *(e.g., limited right-of-way)* make it infeasible to implement one of the Part 2.2.1.a compliance alternatives, provided that, to the extent feasible, you limit disturbances within 50 feet of any waters of the U.S. and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from earth disturbances within 50 feet of the receiving water You must also document in your SWPPP your rationale for why it is infeasible for you to implement one of the Part 2.2.1.a compliance alternatives, and describe any buffer width retained and supplemental erosion and sediment controls installed.
- For "small residential lot" construction *(i.e., a lot being developed for residential purposes that will disturb less than 1 acre of land, but is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre),* you have the option of complying with one of the "small residential lot" compliance alternatives in Part F.3 of this appendix.

Note that you must document in your SWPPP if any disturbances related to any of the above exceptions occurs within the buffer area on your site.

F.2.3 Requirements for Providing and Maintaining Natural Buffers

This part of the appendix applies to you if you choose compliance alternative 1 (50-foot buffer), compliance alternative 2 (a buffer of < 50 feet supplemented by additional erosion and sediment controls that achieve the equivalent sediment load reduction as the 50-foot buffer), or if you are providing a buffer in compliance with one of the "small residential lot" compliance alternatives in Part F.3.

Buffer Width Measurement

Where you are retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water:

1. The ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or
2. The edge of the stream or river bank, bluff, or cliff, whichever is applicable.

Refer to Figures F – 2 and F - 3. You may find that specifically measuring these points is challenging if the flow path of the receiving water changes frequently, thereby causing the measurement line for the buffer to fluctuate continuously along the path of the waterbody. Where this is the case, EPA suggests that rather than measuring each change or deviation along the water's edge, it may be easier to select regular intervals

from which to conduct your measurement. For instance, you may elect to conduct your buffer measurement every 5 to 10 feet along the length of the water.

Additionally, note that if earth-disturbing activities will take place on both sides of a receiving water that flows through your site, to the extent that you are establishing a buffer around this water, it must be established on both sides. For example, if you choose compliance alternative 1, and your project calls for disturbances on both sides of a small stream, you would need to retain the full 50 feet of buffer on both sides of the water. However, if your construction activities will only occur on one side of the stream, you would only need to retain the 50-foot buffer on the side of the stream where the earth-disturbance will occur.

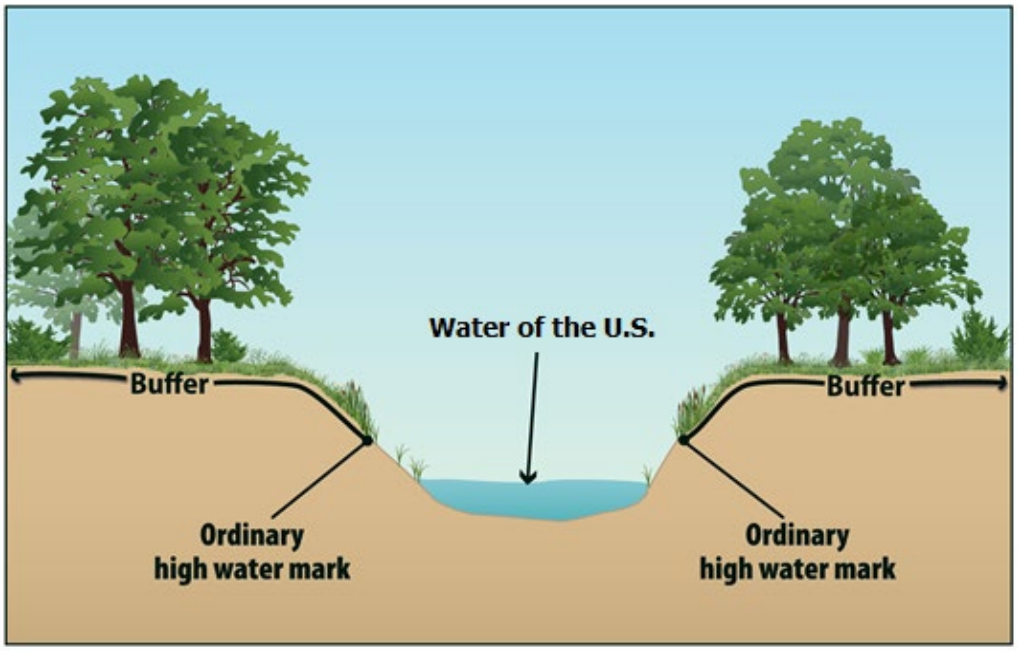

Figure F-2 Buffer measurement from the ordinary high water mark of the water body, as indicated by a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, and/or the presence of litter/debris.

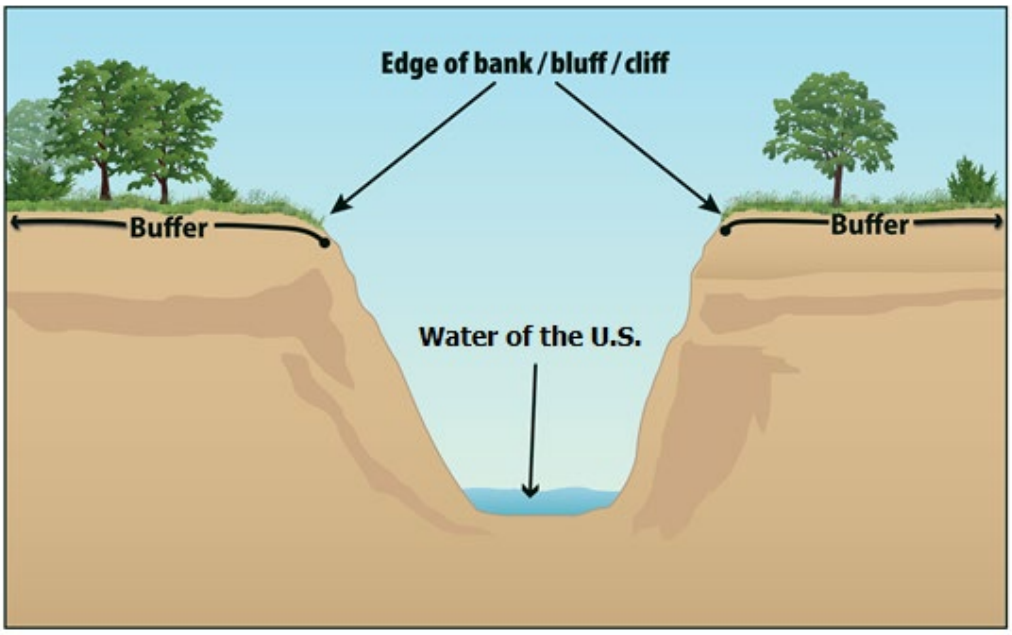

Figure F-3 Buffer measurement from the edge of the bank, bluff, or cliff, whichever is applicable.

Limits to Disturbance Within the Buffer

You are considered to be in compliance with the requirement to provide and maintain a natural buffer if you retain and protect from construction activities the natural buffer that existed prior to the commencement of construction. If the buffer area contains no vegetation prior to the commencement of construction (e.g., sand or rocky surface), you are not required to plant vegetation. As noted above, any preexisting structures or impervious surfaces may occur in the natural buffer provided you retain and protect from disturbance the buffer areas outside of the preexisting disturbance.

To ensure that the water quality protection benefits of the buffer are retained during construction, you are prohibited from conducting any earth-disturbing activities within the buffer during permit coverage. In furtherance of this requirement, **prior to commencing earth-disturbing activities on your site, you must delineate, and clearly mark off, with flags, tape, or a similar marking device, the buffer area on your site.** The purpose of this requirement is to make the buffer area clearly visible to the people working on your site so that unintended disturbances are avoided.

While you are not required to enhance the quality of the vegetation that already exists within the buffer, you are encouraged to do so where such improvements will enhance the water quality protection benefits of the buffer. (Note that any disturbances within the buffer related to buffer enhancement are permitted and do not constitute construction disturbances.) For instance, you may want to target plantings where limited vegetation exists, or replace existing vegetation where invasive or noxious plant species (see http://plants.usda.gov/java/noxiousDriver) have taken over. In the case of invasive or noxious species, you may want to remove and replace them with a diversity of native trees, shrubs, and herbaceous plants that are well-adapted to the climatic, soil, and hydrologic conditions on the site. You are also encouraged to limit the removal of naturally deposited leaf litter, woody debris, and other biomass, as this material contributes to the ability of the buffer to retain water and filter pollutants.

If a portion of the buffer area adjacent to the receiving water is owned by another party and is not under your control, you are only required to retain and protect from construction activities the portion of the buffer area that is under your control. For example, if you comply with compliance alternative 1 (provide and maintain a 50-foot buffer), but 10 feet of land immediately adjacent to the receiving water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you must only retain and protect from construction activities the 40-foot buffer area that occurs adjacent to the property on which your construction activities are taking place. EPA would consider you to be in compliance with this requirement regardless of the activities that are taking place in the 10-foot area that is owned by a different party than the land on which your construction activities are taking place that you have no control over.

Discharges to the Buffer

You must ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls (*for example, you must comply with the Part 2.2.3 requirement to install sediment controls along any perimeter areas of the site that will receive pollutant discharges*), **and if necessary to prevent erosion caused by stormwater flows within the buffer, you must use velocity dissipation devices**. The purpose of this requirement is to decrease the rate of stormwater flow and encourage infiltration so that the pollutant filtering functions of the buffer will be achieved. To comply with this requirement, construction operators typically will use devices that physically dissipate stormwater flows so that the discharge entering the buffer is spread out and slowed down.

SWPPP Documentation

You are required to document in your SWPPP the natural buffer width that is retained. For example, if you are complying with alternative 1, you must specify in your SWPPP that you are providing a 50-foot buffer. Or, if you will be complying with alternative 2, you must document the reduced width of the buffer you will be retaining (and you must also describe the erosion and sediment controls you will use to achieve an equivalent sediment reduction, as required in Part F.2.4 below). Note that you must also show any buffers on your site map in your SWPPP consistent with Part 7.2.4.j. Additionally, if any disturbances related to the exceptions in Part F.2.2 occur within the buffer area, you must document this in the SWPPP.

F.2.4 Guidance for Providing the Equivalent Sediment Reduction as a 50-foot Buffer

This part of the appendix applies to you if you choose compliance alternative 2 (provide and maintain a buffer that is less than 50 feet that is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot buffer) or compliance alternative 3 (implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot buffer).

Determine Whether it is Feasible to Provide a Reduced Buffer

EPA recognizes that there will be a number of situations in which it will be infeasible to provide and maintain a buffer of any width. While some of these situations may exempt you from the buffer requirement entirely (see F.2.2), if you do not qualify for one of these exemptions, there still may be conditions or circumstances at your site that make it infeasible to provide a natural buffer. For example, there may be sites where a significant portion of the property on which the earth-disturbing activities will occur is located within the buffer area, thereby precluding the retention of natural buffer areas.

Therefore, you should choose compliance alternative 2 if it is feasible for you to retain some natural buffer on your site. (Note: For any buffer width retained, you are required to comply with the requirements in Part F.2.3, above, concerning the retention of vegetation and restricting earth disturbances.) Similarly, if you determine that it is infeasible to provide a natural buffer of any size during construction, you should choose alternative 3.

Design Controls That Provide Equivalent Sediment Reduction as 50-foot Buffer

You must next determine what additional controls must be implemented on your site that, alone or in combination with any retained natural buffer, achieve a reduction in sediment equivalent to that achieved by a 50-foot buffer.

Note that if only a portion of the natural buffer is less than 50 feet, you are only required to implement erosion and sediment controls that achieve the sediment load reduction equivalent to the 50-foot buffer for discharges through that area. You would not be required to provide additional treatment of stormwater discharges that flow through 50 feet or more of natural buffer. See Figure F-4.

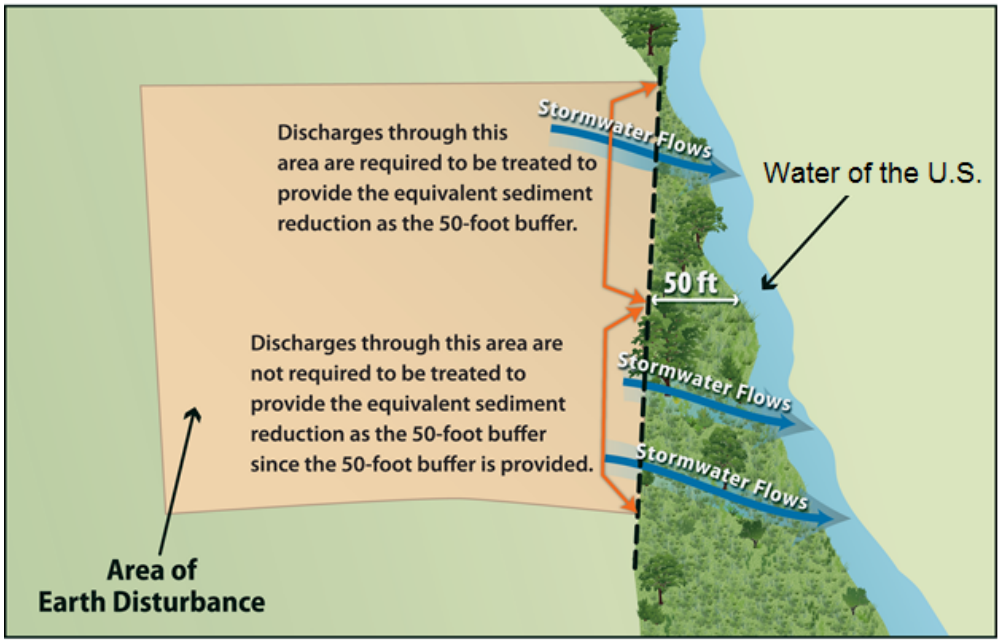

Figure F-4 Example of how to comply with the requirement to provide the equivalent sediment reduction when only a portion of your earth-disturbances discharge to a buffer of less than 50-feet.

Steps to help you meet compliance alternative 2 and 3 requirements are provided below.

Step 1 - Estimate the Sediment Reduction from the 50-foot Buffer

In order to design controls that match the sediment removal efficiency of a 50-foot buffer, you first need to know what this efficiency is for your site. The sediment removal efficiencies of natural buffers vary according to a number of site-specific factors, including precipitation, soil type, land cover, slope length, width, steepness, and the types of erosion and sediment controls used to reduce the discharge of sediment prior to the buffer. EPA has simplified this calculation by developing buffer performance tables covering a range of vegetation and soil types for the areas covered by the CGP. See

Attachment 1 of this Appendix, Tables F-8 through F-15. Note: buffer performance values in Tables F-8 through F-15 represent the percent of sediment captured through the use of perimeter controls (e.g., silt fences) and 50-foot buffers at disturbed sites of fixed proportions and slopes.[2]

Using Tables F-8 through F-15 (see Attachment 1 of this Appendix), you can determine the sediment removal efficiency of a 50-foot buffer for your geographic area by matching the vegetative cover type that best describes your buffer area and the type of soils that predominate at your site. For example, if your site is located in Massachusetts (Table F-9), and your buffer vegetation corresponds most closely with that of tall fescue grass, and the soil type at your site is best typified as sand, your site's sediment removal efficiency would be 81 percent.

In this step, you should choose the vegetation type in the tables that most closely matches the vegetation that would exist naturally in the buffer area on your site regardless of the condition of the buffer. However, because you are not required to plant any additional vegetation in the buffer area, in determining what controls are necessary to meet this sediment removal equivalency in Step 2 below, you will be able to take credit for this area as a fully vegetated "natural buffer."

Similarly, if a portion of the buffer area adjacent to the receiving water is owned by another party and is not under your control, you can treat the area of land not under your control as having the equivalent vegetative cover and soil type that predominates on the portion of the property on which your construction activities are occurring.

For example, if your earth-disturbances occur within 50 feet of a receiving water, but the 10 feet of land immediately adjacent to the receiving water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10 foot area adjacent to the stream as having the equivalent soil and vegetation type that predominates in

[2] EPA used the following when developing the buffer performance tables:

- The sediment removal efficiencies are based on the U.S. Department of Agriculture's RUSLE2 ("Revised Universal Soil Loss Equation 2") model for slope profiles using a 100-foot long denuded slopes.
- Sediment removal was defined as the annual sediment delivered at the downstream end of the 50-foot natural buffer (tons/yr/acre) divided by the annual yield from denuded area (tons/yr/acre).
- As perimeter controls are also required by the CGP, sediment removal is in part a function of the reduction due to a perimeter control (i.e., silt fence) located between the disturbed portion of the site and the upstream edge of the natural buffer and flow traveling through a 50-foot buffer of undisturbed natural vegetation.
- It was assumed that construction sites have a relatively uniform slope without topographic features that accelerate the concentration for erosive flows.
- It was assumed that vegetation has been removed from the disturbed portion of the site and a combination of cuts and fills have resulted in a smooth soil surface with limited retention of near-surface root mass.

To represent the influence of soil, EPA analyzed 11 general soil texture classifications in its evaluation of buffer performance. To represent different types of buffer vegetation, EPA evaluated 4 or more common vegetative types for each State/Territory covered under the permit. For each vegetation type evaluated, EPA considered only permanent, non-grazed, and non-harvested vegetation, on the assumption that a natural buffer adjacent to the receiving water will typically be undisturbed. EPA also evaluated slope steepness and found that sediment removal efficiencies present in Tables G-8 through G-15 are achievable for slopes that are less than nine percent.

the 40 foot area under your control. You would then make the same assumption in Step 2 for purposes of determining the equivalent sediment removal.

Alternatively, you may do your own calculation of the effectiveness of the 50-foot buffer based upon your site-specific conditions, and may use this number as your sediment removal equivalency standard to meet instead of using Tables F-8 through F-15. This calculation must be documented in your SWPPP.

Step 2 - Design Controls That Match the Sediment Removal Efficiency of the 50-foot Buffer

Once you determine the estimated sediment removal efficiency of a 50-foot buffer for your site in Step 1, you must next select stormwater controls that will provide an equivalent sediment load reduction. These controls can include the installation of a single control, such as a sediment pond or additional perimeter controls, or a combination of stormwater controls. Whichever control(s) you select, you must demonstrate in your SWPPP that the controls will provide at a minimum the same sediment removal capabilities as a 50-foot natural buffer (Step 1). You may take credit for the removal efficiencies of your required perimeter controls in your calculation of equivalency, because these were included in calculating the buffer removal efficiencies in Tables F-8 through F-15. (Note: You are reminded that the controls must be kept in effective operating condition until you complete final stabilization on the disturbed portions of the site discharging to the receiving water)

To make the determination that your controls and/or buffer area achieve an equivalent sediment load reduction as a 50-foot buffer, you should use a model or other type of calculation. As mentioned above, there are a variety of models available that can be used to support your calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other models. A couple of examples are provided in Attachment 3 to help illustrate how this determination could be made.

If you retain a buffer of less than 50 feet, you may take credit for the removal that will occur from the reduced buffer and only need to provide additional controls to make up the difference between the removal efficiency of a 50 foot buffer and the removal efficiency of the narrower buffer. For example, if you retain a 30 foot buffer, you can account for the sediment removal provided by the 30 foot buffer retained, and you will only need to design controls to make up for the additional removal provided by the 20 feet of buffer that is not being provided. To do this, you would plug the width of the buffer that is retained into RUSLE or another model, along with other stormwater controls that will together achieve a sediment reduction equivalent to a natural 50-foot buffer.

As described in Step 1 above, you can take credit for the area you retained as a "natural buffer" as being fully vegetated, regardless of the condition of the buffer area.

For example, if your earth-disturbances occur 30 feet from a receiving water, but the 10 feet of land immediately adjacent to the receiving water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10-foot area as a natural buffer, regardless of the activities that are taking place in the area. Therefore, you can assume (for purposes of your equivalency calculation) that your site is providing the sediment removal equivalent of a 30-foot buffer, and you will only need to design controls to make up for the additional removal provided by the 20-foot of buffer that is not being provided.

Step 3 - Document How Site-Specific Controls Will Achieve the Sediment Removal Efficiency of the 50-foot Buffer

In Steps 1 and 2, you determined both the expected sediment removal efficiency of a 50-foot buffer at your site, and you used this number as a performance standard to design controls to be installed at your site, which alone or in combination with any retained natural buffer, achieves the expected sediment removal efficiency of a 50-foot buffer at your site. The final step is to document in your SWPPP the information you relied on to calculate the equivalent sediment reduction as an undisturbed natural buffer.

EPA will consider your documentation to be sufficient if it generally meets the following:

- For Step 1, refer to the table in Attachment 1 that you used to derive your estimated 50-foot buffer sediment removal efficiency performance. Include information about the buffer vegetation and soil type that predominate at your site, which you used to select the sediment load reduction value in Tables F-8 through F-15. Or, if you conducted a site-specific calculation for sediment removal efficiency, provide the specific removal efficiency, and the information you relied on to make your site-specific calculation.
- For Step 2, (1) Specify the model you used to estimate sediment load reductions from your site; and (2) the results of calculations showing how your controls will meet or exceed the sediment removal efficiency from Step 1.

If you choose compliance alternative 3, you must also include in your SWPPP a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size.

F.3 SMALL RESIDENTIAL LOT COMPLIANCE ALTERNATIVES

EPA has developed two additional compliance alternatives applicable only to "small residential lots" that are unable to provide and maintain a 50 foot buffer.

A **small residential lot** is a lot or grouping of lots being developed for residential purposes that will disturb less than 1 acre of land, but that is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre.

The following steps describe how a small residential lot operator would achieve compliance with one these 2 alternatives.

F.3.1 Small Residential Lot Compliance Alternative Eligibility

In order to be eligible for the small residential lot compliance alternatives, the following conditions must be met:

a. The lot or grouping of lots meets the definition of "small residential lot"; and

b. The operator must follow the guidance for providing and maintaining a natural buffer in Part F.2.3 of this Appendix, including:

i. Ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls, and use velocity dissipation devices if necessary to prevent erosion caused by stormwater within the buffer;

ii. Document in the SWPPP the natural buffer width retained on the property, and show the buffer boundary on your site plan; and

iii. Delineate, and clearly mark off, with flags, tape, or other similar marking device, all natural buffer areas.

F.3.2 Small Residential Lot Compliance Alternatives

You must next choose from one of two small residential lot compliance alternatives and implement the stormwater control practices associated with that alternative.

Note: The compliance alternatives provided below are not mandatory. Operators of small residential lots can alternatively choose to comply with the any of the options that are available to other sites in Part 2.2.1.a and F.2.1 of this Appendix.

Small Residential Lot Compliance Alternative 1

Alternative 1 is a straightforward tiered-technology approach that specifies the controls that a small residential lot must implement based on the buffer width retained. To meet the requirements of small residential lot compliance alternative 1, you must implement the controls specified in Table F–1 based on the buffer width to be retained. See footnote 3, below, for a description of the controls you must implement.

For example, if you are an operator of a small residential lot that will be retaining a 35-foot buffer and you choose Small Residential Lot Compliance Alternative 1, you must implement double perimeter controls between earth disturbances and the receiving water

In addition to implementing the applicable control, you must also document in your SWPPP how you will comply with small residential lot compliance alternative 1.

Table F-1 Alternative 1 Requirements[3]

Retain 50-foot Buffer	Retain <50 and >30 foot Buffer	Retain ≤ 30 foot Buffer
No Additional Requirements	Double Perimeter Controls	Double Perimeter Controls and 7-Day Site Stabilization

Small Residential Lot Compliance Alternative 2

Alternative 2 specifies the controls that a builder of a small residential lot must implement based on both the buffer width retained and the site's sediment discharge risk. By incorporating the sediment risk, this approach may result in the implementation of controls that are more appropriate for the site's specific conditions.

Step 1 – Determine Your Site's Sediment Risk Level

To meet the requirements of Alternative 2, you must first determine your site's sediment discharge "risk level" based on the site's slope, location, and soil type. To help you to determine your site's sediment risk level, EPA developed five different tables for different slope conditions. You should select the table that most closely corresponds to your site's average slope.

For example, if your site's average slope is 7 percent, you should use Table G–4 to determine your site's sediment risk.

After you determine which table applies to your site, you must then use the table to determine the "risk level" (e.g., "low", "moderate", or "high") that corresponds to your site's location and predominant soil type.[4]

For example, based on Table F-3, a site located in New Hampshire with a 4 percent average slope and with predominately sandy clay loam soils would fall into the "moderate" risk level.

[3] **Description of Additional Controls Applicable to Small Residential Lot Compliance Alternatives 1 and 2:**

- **No Additional Requirements:** If you implement a buffer of 50 feet or greater, then you are not subject to any additional requirements. Note that you are required to install perimeter controls between the disturbed portions of your site and the buffer in accordance with Part 2.2.3.
- **Double Perimeter Control:** In addition to the reduced buffer width retained on your site, you must provide a double row of perimeter controls between the disturbed portion of your site and the receiving water spaced a minimum of 5 feet apart.
- **Double Perimeter Control and 7-Day Site Stabilization:** In addition to the reduced buffer width retained on your site and the perimeter control implemented in accordance with Part 2.2.3, you must provide a double row of perimeter controls between the disturbed portion of your site and the receiving water spaced a minimum of 5 feet apart, and you are required to complete the stabilization activities specified in Parts 2.2.14 within 7 calendar days of the temporary or permanent cessation of earth-disturbing activities.

[4] One source for determining your site's predominant soil type is the USDA's Web Soil Survey located at http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

Table F-2 Risk Levels for Sites with Average Slopes of ≤ 3 Percent

Soil Type / Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	Moderate	Moderate	Moderate	Moderate	High
Puerto Rico	Moderate	Moderate	Moderate	Moderate	High
Virgin Islands	Low	Moderate	Low	Moderate	Moderate
American Samoa	Moderate	Moderate	Moderate	Moderate	High
Massachusetts and New Hampshire	Low	Moderate	Low	Low	Moderate
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Low
Washington D.C.	Low	Moderate	Low	Low	Moderate

Table F-3 Risk Levels for Sites with Average Slopes of > 3 Percent and ≤ 6 Percent

Soil Type / Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	Moderate	Moderate	Moderate	Moderate	High
Puerto Rico	Moderate	Moderate	Moderate	Moderate	High
Virgin Islands	Moderate	Moderate	Moderate	Moderate	High
American Samoa	High	High	Moderate	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Low	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Moderate
Washington D.C.	Moderate	Moderate	Moderate	Moderate	High

Table F-4 Risk Levels for Sites with Average Slopes of > 6 Percent and ≤ 9 Percent

Soil Type / Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	Moderate	High	Moderate	High	High
Puerto Rico	Moderate	High	Moderate	Moderate	High
Virgin Islands	Moderate	Moderate	Moderate	Moderate	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Moderate	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Moderate
Washington D.C.	Moderate	Moderate	Moderate	Moderate	High

Table F-5 Risk Levels for Sites with Average Slopes of > 9 Percent and ≤ 15 Percent

Soil Type / Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	High	High	High	High	High
Puerto Rico	High	High	High	High	High
Virgin Islands	Moderate	High	Moderate	High	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Moderate	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Moderate	Low	Moderate	Moderate
Washington D.C.	Moderate	High	Moderate	Moderate	High

Table F-6 Risk Levels for Sites with Average Slopes of > 15 Percent

Soil Type / Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	High	High	High	High	High
Puerto Rico	High	High	High	High	High
Virgin Islands	High	High	High	High	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	High	High	Moderate	High	High
Idaho	Low	Low	Low	Low	Moderate
New Mexico	Moderate	Moderate	Moderate	Moderate	High
Washington D.C.	High	High	Moderate	High	High

Step 2 – Determine Which Additional Controls Apply

Once you determine your site's "risk level", you must next determine the additional controls you need to implement on your site, based on the width of buffer you plan to retain. Table F-7 specifies the requirements that apply based on the "risk level" and buffer width retained. See footnote 3, above, for a description of the additional controls that are required.

For example, if you are the operator of a small residential lot that falls into the "moderate" risk level, and you decide to retain a 20-foot buffer, using Table F-7 you would determine that you need to implement double perimeter controls to achieve compliance with small residential lot compliance alternative 2.

You must also document in your SWPPP your compliance with small residential lot compliance alternative 2.

Table F-7. Alternative 2 Requirements[2]

Risk Level Based on Estimated Soil Erosion	Retain ≥ 50' Buffer	Retain <50' and >30' Buffer	Retain ≤30' and >10' Buffer	Retain ≤ 10' Buffer
Low Risk	No Additional Requirements	No Additional Requirements	Double Perimeter Control	Double Perimeter Control
Moderate Risk	No Additional Requirements	Double Perimeter Control	Double Perimeter Control	Double Perimeter Control and 7-Day Site Stabilization
High Risk	No Additional Requirements	Double Perimeter Control	Double Perimeter Control and 7-Day Site Stabilization	Double Perimeter Control and 7-Day Site Stabilization

ATTACHMENT 1

Sediment Removal Efficiency Tables[5]

EPA recognizes that very high removal efficiencies, even where theoretically achievable by a 50-foot buffer, may be very difficult to achieve in practice using alternative controls. Therefore in the tables below, EPA has limited the removal efficiencies to a maximum of 90%. Efficiencies that were calculated at greater than 90% are shown as 90%, and this is the minimum percent removal that must be achieved by alternative controls.

Table F-8 Estimated 50-foot Buffer Performance in Idaho*

	Estimated % Sediment Removal				
Type of Buffer Vegetation**	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Tall Fescue Grass	42	52	44	48	85
Medium-density Weeds	28	30	28	26	60
Low-density Warm-season Native Bunchgrass (i.e., Grama Grass)	25	26	24	24	55
Northern Mixed Prairie Grass	28	30	28	26	50
Northern Range Cold Desert Shrubs	28	28	24	26	50

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

Table F-9 Estimated 50-foot Buffer Performance in Massachusetts and New Hampshire*

	Estimated % Sediment Removal				
Type of Buffer Vegetation**	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Warm-season Grass (i.e., Switchgrass, Lemongrass)	79	90	90	90	90
Cool-season Dense Grass (Kentucky Bluegrass, Smooth Bromegrass, Timothy)	78	90	90	90	90
Tall Fescue Grass	76	90	81	89	90
Medium-density Weeds	66	76	60	72	66

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

[5] The buffer performances were calculated based on a denuded slope upgradient of a 50-foot buffer and a perimeter controls, as perimeter controls are a standard requirement (see Part 2.2.3).

Table F-10 Estimated 50-foot Buffer Performance in New Mexico*

	Estimated % Sediment Removal				
Type of Buffer Vegetation **	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Tall Fescue grass	71	85	80	86	90
Medium-density Weeds	56	73	55	66	78
Low-density Warm-season Native Bunchgrass (i.e., Grama Grass)	53	70	51	62	67
Southern Mixed Prairie Grass	53	71	52	63	50
Southern Range Cold Desert Shrubs	56	73	55	65	53

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

Table F-11 Estimated 50-foot Buffer Performance in Washington, DC*

	Estimated % Sediment Removal				
Type of Buffer Vegetation **	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Warm-season Grass (i.e., Switchgrass, Lemongrass)	82	90	90	90	90
Cool-season Dense Grass (Kentucky Bluegrass, Smooth Bromegrass, Timothy)	81	90	90	90	90
Tall Fescue Grass	79	90	83	89	90
Medium-density Weeds	71	79	66	75	74

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

Table F-12 Estimated 50-foot Buffer Performance in American Samoa*

	Estimated % Sediment Removal				
Type of Buffer Vegetation **	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Bahiagrass (Permanent cover)	82	90	90	90	83
Warm-season Grass (i.e., Switchgrass, Lemongrass)	82	90	90	90	85
Dense Grass	82	90	90	90	83
Tall Fescue Grass	82	89	82	89	79
Medium-density Weeds	70	73	62	75	59

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

Table F-13 Estimated 50-foot Buffer Performance in CNMI and Guam*

	Estimated % Sediment Removal				
Type of Buffer Vegetation **	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Bahiagrass (Permanent cover)	80	90	90	90	89
Warm-season Grass (i.e., Switchgrass, Lemongrass)	80	90	90	90	90
Dense Grass	79	90	90	90	89
Tall Fescue Grass	76	90	80	88	87
Medium-density Weeds	63	73	53	68	61

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

Table F-14 Estimated 50-foot Buffer Performance in Puerto Rico*

	Estimated % Sediment Removal				
Type of Buffer Vegetation**	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Bahiagrass (Permanent cover)	83	90	90	90	90
Warm-season Grass (i.e., Switchgrass, Lemongrass)	83	90	90	90	90
Dense Grass	83	90	90	90	90
Tall Fescue Grass	82	90	84	90	89
Medium-density Weeds	72	78	65	76	64

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

Table F-15 Estimated 50-foot Buffer Performance in Virgin Islands*

Type of Buffer Vegetation**	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Bahiagrass (Permanent cover)	85	90	90	90	90
Warm-season Grass (i.e., Switchgrass, Lemongrass)	86	90	90	90	90
Dense Grass	85	90	90	90	90
Tall Fescue Grass	85	90	88	90	89
Medium-density Weeds	75	77	71	78	63

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

ATTACHMENT 2

Using the Sediment Removal Efficiency Tables – Questions and Answers

- *What if my specific buffer vegetation is not represented in Tables F-8 through F-15?* Tables F-8 through F-15 provide a wide range of factors affecting buffer performance; however, there are likely instances where the specific buffer vegetation type on your site is not listed. If you do not see a description of the type of vegetation present at your site, you should choose the vegetation type that most closely matches the vegetation type on your site. You can contact your local Cooperative Extension Service Office (http://nifa.usda.gov/partners-and-extension-map) for assistance in determining the vegetation type in Tables F-8 through F-15 that most closely matches your site-specific vegetation.
- *What if there is high variability in local soils?* EPA recognizes that there may be a number of different soil type(s) on any given construction site. General soil information can be obtained from USDA soil survey reports (http://websoilsurvey.nrcs.usda.gov) or from individual site assessments performed by a certified soil expert. Tables F-8 through F-15 present eleven generic soil texture classes, grouping individual textures where EPA has determined that performance is similar. If your site contains different soil texture classes, you should use the soil type that best approximates the predominant soil type at your site.
- *What if my site slope is greater than 9 percent after final grade is reached?* As indicated in the buffer performance tables, the estimated sediment removal efficiencies are associated with disturbed slopes of up to 9 percent grade. Where your graded site has an average slope of greater than 9 percent, you should calculate a site-specific buffer performance.
- *How do I calculate my own estimates for sediment reduction at my specific site?* If you determine that it is necessary to calculate your own sediment removal efficiency using site-specific conditions (e.g., slopes at your site are greater than 9 percent), you can use a range of available models that are available to facilitate this calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other equivalent models.
- *What is my estimated buffer performance if my site location is not represented by Tables F-8 through F-15?* If your site is located in an area not represented by Tables F-8 through F-15, you should use the table that most closely approximates conditions at your site. You may instead choose to conduct a site-specific calculation of the buffer performance.
- *What if only a portion of my site drains to the buffer area?* If only a portion of your site drains to a receiving water, where that water is within 50 feet of your earth disturbances, you are only required to meet the equivalency requirement for the stormwater flows corresponding to those portions of the site. See Example 2 below for an example of how this is expected to work.

ATTACHMENT 3

Examples of How to Use the Sediment Removal Efficiency Tables

Example 1. Comparatively Wet Location (7.5 acre site located in Massachusetts)

The operator of a 7.5-acre construction site in Massachusetts has determined that it is infeasible to establish a buffer of any size on the site, and is now required to select and install controls that will achieve an equivalent sediment load reduction as that estimated in F-9 for their site conditions. The first step is to identify what percentage of eroded sediment is estimated to be retained from a 50-foot buffer. For this example, it is assumed that the site has a relatively uniform gentle slope (3 percent), so Table F-9 can be used to estimate the 50-foot buffer sediment load reduction. If the site's buffer vegetation is best typified by cool-season dense grass and the underlying soil is of a type best described as loamy sand, the 50-foot buffer is projected to capture 90 percent of eroded sediment from the construction site.

The second step is to determine what sediment controls can be selected and installed in combination with the perimeter controls already required to be implemented at the site (see Part 2.2.3), which will achieve the 90 percent sediment removal efficiency from Table F-9. For this example, using the RUSLE2 profile model, it was determined that installing a pair of shallow-sloped diversion ditches to convey runoff to a well-designed and maintained sediment basin provides 99 percent sediment removal. Because the estimated sediment reduction is greater than the required 90 percent that a 50-foot buffer provides, the operator will have met the buffer requirements. See Figure F-5. The operator could also choose a different set of controls, as long as they achieve at least a 90 percent sediment removal efficiency.

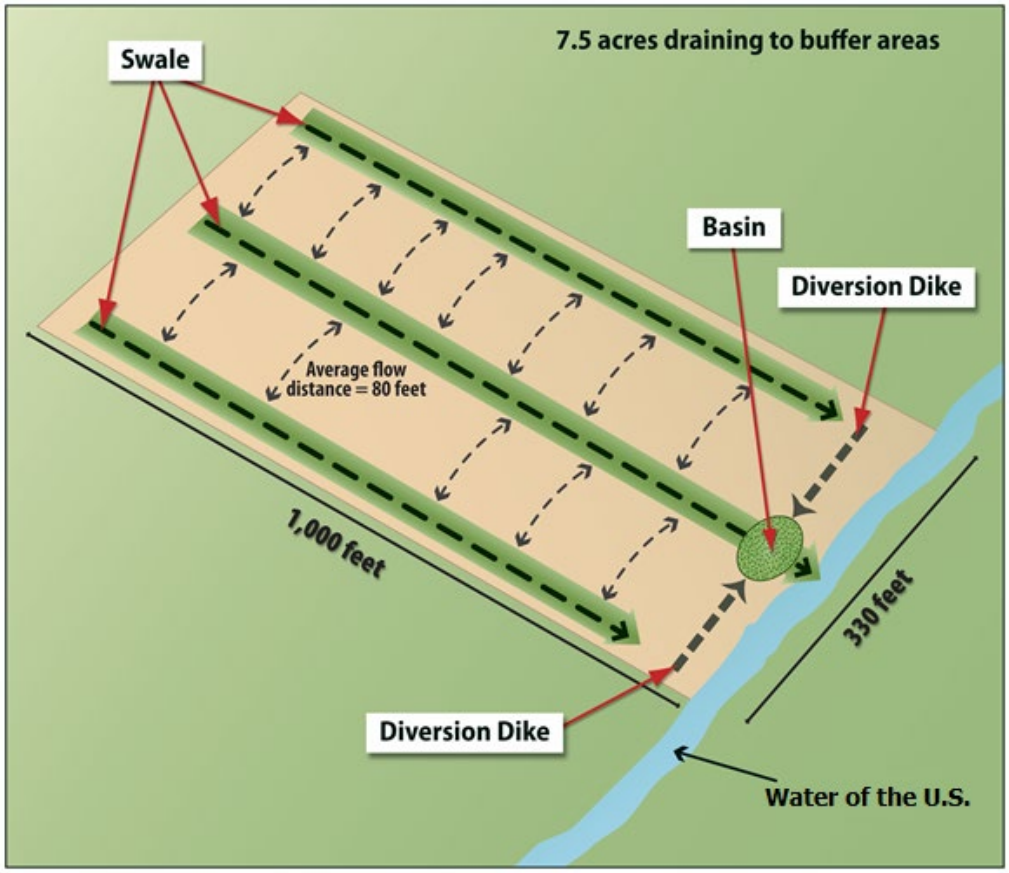

Figure F-5 Example 1 – Equivalent Sediment Load Reductions at a 7.5 ac Site in MA.

Example 2. Arid Location With Pre-existing Disturbances in the Natural Buffer (6.5 acre site located in New Mexico)

An operator of a site in New Mexico determines that it is not feasible to provide a 50-foot buffer, but a 28-foot buffer can be provided. Because the operator will provide a buffer that is less than 50 feet, the operator must determine which controls, in combination with the 28-foot buffer, achieve a sediment load reduction equivalent to the 50-foot buffer. In this example, the project will disturb 6.5 acres of land, but only 1.5 acres of the total disturbed area drains to the buffer area. Within the 28-foot buffer area is a preexisting concrete walkway. Similar to Example 1, the equivalence analysis starts with Step 1 in Part F.2.4 of this Appendix with a review of the New Mexico buffer performance (Table F-10). The operator determines that the predominate vegetation type in the buffer area is prairie grass, the soil type is similar to silt, and the site is of a uniform, shallow slope (e.g., 3 percent grade). Although the operator will take credit for the disturbance caused by the concrete walkway as a natural buffer in Step 2, here the operator can treat the entire buffer area as being naturally vegetated with prairie grass. Based on this information, the operator refers to Table F-10 to estimate that the 50-foot buffer would retain 50 percent of eroded soil.

The second step is to determine, based on the 50 percent sediment removal efficiency found in Table F-10, what sediment controls, in combination with the 28-foot buffer area, can be implemented to reduce sediment loads by 50 percent or more. The operator does not have to account the reduction in buffer function caused by the preexisting walkway, and can take credit for the entire 28-foot buffer being fully vegetated in the analysis. For this example, using the RUSLE2 profile model, the operator determined that installing a fiber roll barrier between the

silt fence (already required by Part 2.2.3) and the 28-foot buffer will achieve an estimated 84 percent sediment removal efficiency. See Figure F-6. Note that this operator is subject to the requirement in Part F.2.3 of this Appendix to ensure that discharges through the silt fence, fiber roll barrier, and 28-foot buffer do not cause erosion within the buffer. The estimated sediment reduction is greater than the required 50 percent; therefore the operator will have met the buffer alternative requirement.

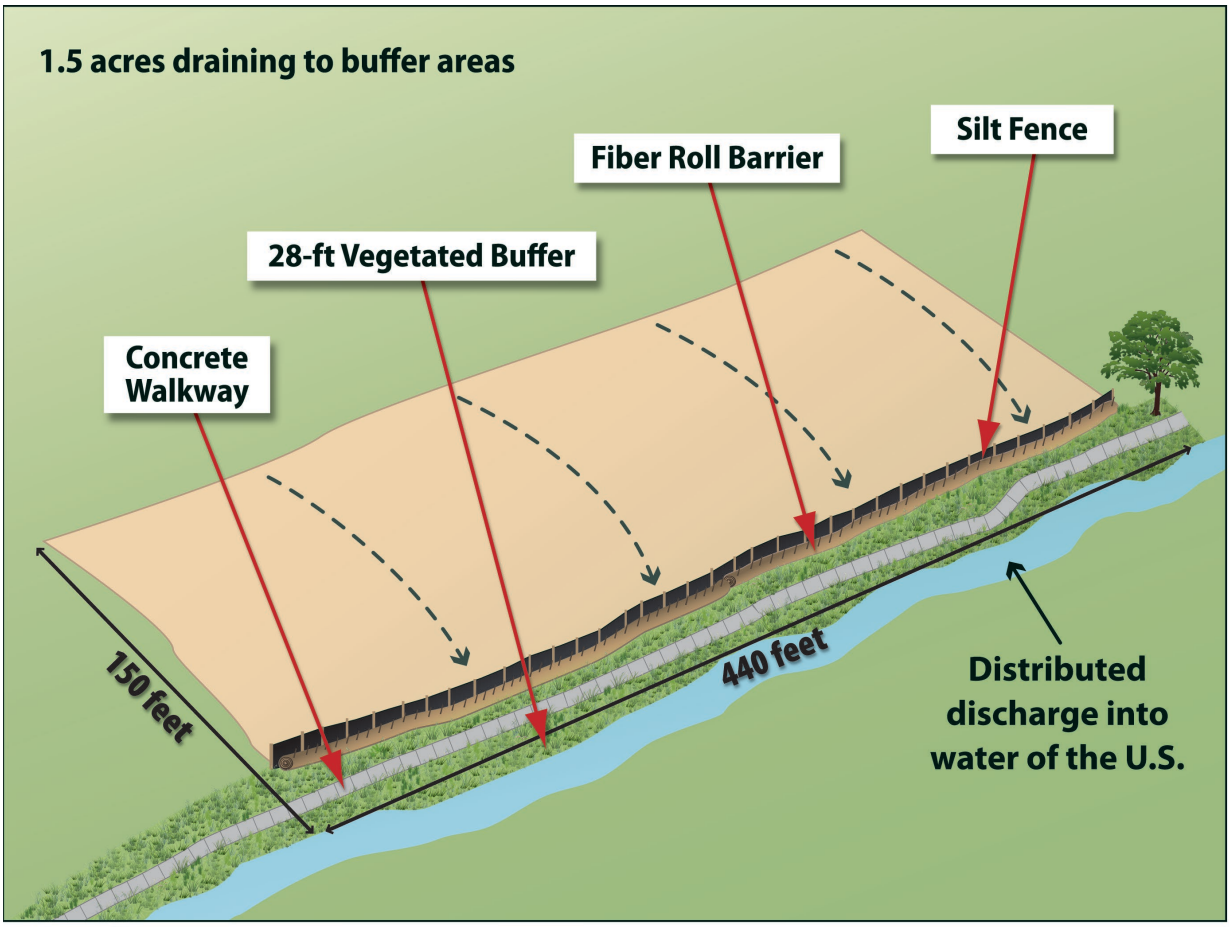

Figure F-6 Example 2 – Equivalent Sediment Load Reductions at a 6.5 ac Site in NM.

Appendix G - Standard Permit Conditions

Standard permit conditions in Appendix G are consistent with the general permit provisions required under 40 CFR 122.41.

G.1 Duty To Comply.

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

G.1.1 You must comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards, even if the permit has not yet been modified to incorporate the requirement.

G.1.2 Penalties for Violations of Permit Conditions: EPA and other federal agencies are required to adjust their maximum and minimum statutory civil penalty amounts through rulemaking by January 15 each year to account for inflation. EPA's annual rulemaking adjustments, codified in 40 C.F.R. § 19.4, are mandated by the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended through the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (28 U.S.C. § 2461 note). As such, the civil penalty amounts below may change in the future due to inflation. See 40 C.F.R. § 19.4 for the most up-to-date civil penalty amounts.

G.1.2.1 *Criminal Penalties.*

a. *Negligent Violations*. The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than two years, or both.

b. *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor morethan $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

c. *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, aperson shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision be subject to a fine of not more than $1,000,000 and can fined up to $2,000,000 for second or subsequent convictions.

d. *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

G.1.2.2 *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amount authorized by Section 309(d) of the Act, as adjusted pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 note), and codified at 40 CFR § 19.4.

G.1.2.3 *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

a. *Class I Penalty*. Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act of 1990 as amended by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (28 U.S.C. § 2461 note), and codified at 40 CFR § 19.4.

b. *Class II Penalty*. Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (28 U.S.C. § 2461 note), and codified at 40 CFR § 19.4.

G.2 Duty to Reapply.

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain authorization as required by the new permit once EPA issues it.

G.3 Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

G.4 Duty to Mitigate.

You must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G.5 Proper Operation and Maintenance.

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by you to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the

operation of backup or auxiliary facilities or similar systems which are installed by you only when the operation is necessary to achieve compliance with the conditions of this permit.

G.6 Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

G.7 Property Rights.

This permit does not convey any property rights of any sort, or any exclusive privileges.

G.8 Duty to Provide Information.

You must furnish to EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), within a reasonable time, any information that EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. You must also furnish to EPA or an authorized representative upon request, copies of records required to be kept by this permit.

G.9 Inspection and Entry.

You must allow EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), upon presentation of credentials and other documents as may be required by law, to:

G.9.1 Enter upon your premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

G.9.2 Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

G.9.3 Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

G.9.4 Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

G.10 Monitoring and Records.

G.10.1 Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.

G.10.2 You must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of EPA at any time.

G.10.3 Records of monitoring information must include:

G.10.3.1 The date, exact place, and time of sampling or measurements;

G.10.3.2 The individual(s) who performed the sampling or measurements;

G.10.3.3 The date(s) analyses were performed

G.10.3.4 The individual(s) who performed the analyses;

G.10.3.5 The analytical techniques or methods used; and

G.10.3.6 The results of such analyses.

G.10.4 Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.

G.10.5 The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

G.11 Signatory Requirements.

G.11.1 All applications, including NOIs and NOTs, must be signed as follows:

G.11.1.1 For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

G.11.1.2 For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

G.11.1.3 For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

G.11.2 Your SWPPP (including changes to your SWPPP inspection reports), corrective action log, turbidity monitoring report, site inspection and dewatering inspection reports, and any other compliance documentation required under this permit, must be signed by a person described in Appendix G, Subsection G.11.1 above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

G.11.2.1 The authorization is made in writing by a person described in Appendix G, Subsection G.11.1;

G.11.2.2 The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental

matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

G.11.2.3 The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

G.11.3 Changes to Authorization. If an authorization under this permit is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new NOI must be submitted to EPA. See Table 1 in Part 1.4.3 of the permit. However, if the only change that is occurring is a change in contact information or a change in the facility's address, the operator need only make a modification to the existing NOI submitted for authorization.

G.11.4 Any person signing documents in accordance with Appendix G, Subsections G.11.1 or G.11.2 above must include the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G.11.5 For persons signing NOIs electronically, in addition to meeting other applicable requirements in Appendix G, Subsection G.11, such signatures must meet the same signature, authentication, and identity-proofing standards set forth at 40 CFR § 3.2000(b) for electronic reports (including robust second-factor authentication).

G.11.6 The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

G.12 Reporting Requirements.

G.12.1 Planned changes. You must give notice to EPA as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

G.12.1.1 The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

G.12.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

G.12.2 Anticipated noncompliance. You must give advance notice to EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

G.12.3 Transfers. This permit is not transferable to any person except after notice to EPA. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination pursuant to Part 8. The new

owner or operator must submit a Notice of Intent in accordance with Part 1.4 and Table 1. See also requirements in Appendix G, Subsections G.11.1 and G.11.2.

G.12.4 Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.

G.12.4.1 Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by EPA for reporting results of monitoring of sludge use or disposal practices.

G.12.4.2 If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by EPA.

G.12.5 Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

G.12.6 Twenty-four hour reporting. In addition to reports required elsewhere in this permit:

G.12.6.1 You must report any noncompliance which may endanger health or the environment directly to the EPA Regional Office (see contacts at https://www2.epa.gov/national-pollutant-discharge-elimination-system-npdes/contact-us-stormwater#regional). Any information must be provided orally within 24 hours from the time you become aware of the circumstances. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

G.12.6.2 The following shall be included as information which must be reported within 24 hours under this paragraph.

a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(m)(3)(ii))

b. Any upset which exceeds any effluent limitation in the permit

c. Violation of a maximum daily discharge limit for any numeric effluent limitation. (See 40 CFR 122.44(g).)

G.12.6.3 EPA may waive the written report on a case-by-case basis for reports under Appendix G, Subsection G.12.6.2 if the oral report has been received within 24 hours.

G.12.7 Other noncompliance. You must report all instances of noncompliance not reported under Appendix G, Subsections G.12.4, G.12.5, and G.12.6, at the time monitoring reports are submitted. The reports must contain the information listed in Appendix G, Subsection G.12.6.

G.12.8 Other information. Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Permitting Authority, you must promptly submit such facts or information.

G.13 Bypass.

G.13.1 Definitions.

G.13.1.1 Bypass means the intentional diversion of waste streams from any portion of a treatment facility See 40 CFR 122.41(m)(1)(i).

G.13.1.2 Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).

G.13.2 Bypass not exceeding limitations. You may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix G, Subsections G.13.3 and G.13.4. See 40 CFR 122.41(m)(2).

G.13.3 Notice.

G.13.3.1 Anticipated bypass. If you know in advance of the need for a bypass, you must submit prior notice, if possible at least ten days before the date of the bypass. See 40 CFR 122.41(m)(3)(i).

G.13.3.2 Unanticipated bypass. You must submit notice of an unanticipated bypass as required in Appendix G, Subsection G.12.6 (24-hour notice). See 40 CFR 122.41(m)(3)(ii).

G.13.4 Prohibition of bypass. See 40 CFR 122.41(m)(4).

G.13.4.1 Bypass is prohibited, and EPA may take enforcement action against you for bypass, unless:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. You submitted notices as required under Appendix G, Subsection G.13.3.

G.13.4.2 EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above in Appendix G, Subsection G.13.4.1.

G.14 Upset.

G.14.1 Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).

G.14.2 Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Appendix G, Subsection G.14.3 are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. See 40 CFR 122.41(n)(2).

G.14.3 Conditions necessary for a demonstration of upset. See 40 CFR 122.41(n)(3). A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

G.14.3.1 An upset occurred and that you can identify the cause(s) of the upset;

G.14.3.2 The permitted facility was at the time being properly operated; and

G.14.3.3 You submitted notice of the upset as required in Appendix G, Subsection G.12.6.2.b (24 hour notice).

G.14.3.4 You complied with any remedial measures required under Appendix G, Subsection G.4.

G.14.4 Burden of proof. In any enforcement proceeding, you, as the one seeking to establish the occurrence of an upset, have the burden of proof. See 40 CFR 122.41(n)(4).

G.15 Retention of Records.

Copies of the SWPPP and all documentation required by this permit, including records of all data used to complete the NOI to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

G.16 Reopener Clause.

G.16.1 Procedures for modification or revocation. Permit modification or revocation will be conducted according to 40 CFR §122.62, §122.63, §122.64 and §124.5.

G.16.2 Water quality protection. If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, you may be required to obtain an individual permit, or the permit may be modified to include different limitations and/or requirements.

G.16.3 Timing of permit modification. EPA may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines that may be promulgated in the course of the current permit cycle.

G.17 Severability.

Invalidation of a portion of this permit does not necessarily render the whole permit invalid. EPA's intent is that the permit is to remain in effect to the extent possible; in the event that any part of this permit is invalidated, EPA will advise the regulated community as to the effect of such invalidation.

Appendix H - Notice of Intent (NOI) Form and Instructions

Part 1.4.1 requires you to use the NPDES eReporting Tool, or "NeT" system, to prepare and submit your NOI electronically. However, if the EPA Regional Office grants you a waiver to use a paper NOI form, and you elect to use it, you must complete and submit the following form.

NPDES Form 3510-9	EPA	U.S. Environmental Protection Agency Washington, DC 20460 Notice of Intent for the 2022 NPDES Construction General Permit	OMB No. 2040-0305 Exp. Date 01/31/2025

Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section III of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section II of this form. Submission of this NOI also constitutes notice that the operator identified in Section III of this form meets the eligibility requirements of Part 1.1 CGP for the project identified in Section IV of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in Part 8 of the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form.

SECTION I. APPROVAL TO USE PAPER NOI FORM

Paper NOI Form

Have you been granted a waiver from electronic reporting from the Regional Office*? ☐ Yes ☐ No

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:

☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.

☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver	Date approval obtained (MM/DD/YYYY)

*** Note: You are required to obtain approval from the applicable Regional Office prior to using this paper NOI form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT).**

SECTION II. PERMIT INFORMATION

Permit

NPDES ID (EPA Use Only)	Master Permit Number (see Appendix B of the CGP for the list of eligible permit numbers)

SECTION III. OPERATOR INFORMATION

Operator Information

Operator Name

Are you requesting coverage under this NOI as a "Federal Operator" or for a "Federal Facility" as defined in Appendix A? ☐ Yes ☐ No

Mailing Address

Street

City	State	ZIP Code

County or Similar Government Division

Operator Point of Contact Information:

First Name	Middle Initial	Last Name

Title

Phone Number	Email Address

NOI Preparer

Complete if NOI was prepared by someone other than the certifier:

First Name	Middle Initial	Last Name

Organization

Phone number	Email address

SECTION IV. PROJECT/SITE INFORMATION

Project/Site Address

Project/Site Name

Street/Location

City	State	ZIP Code

County or Similar Government Division:

For the project/site you are seeking permit coverage, provide the following information:

Latitude (in decimal degrees to four decimal places):	Longitude (in decimal degrees to four decimal places):
° N	° W

Latitude/Longitude Data Source: ☐ Map ☐ GPS ☐ Other (Specify):

Horizontal Reference Datum: ☐ NAD 27 ☐ NAD 83 ☐ WGS 84

Site Information

Is your site located in Indian country lands, or on a property of religious or cultural significance to an Indian Tribe? ☐ Yes ☐ No

If yes, provide the name of the Indian Tribe associated with the area of Indian country (including name of Indian reservation, if applicable), or if not in Indian country, provide the name of the Indian Tribe associated with the property:

Project Information

Estimated Project Start Date (MM/DD/YYYY)	Estimated Project Completion Date (MM/DD/YYYY)

Estimated Area to be Disturbed (to the nearest quarter acre):

Type of Construction Site (check all that apply):

☐ Single-Family Residential ☐ Multi-Family Residential ☐ Commercial

☐ Industrial ☐ Institutional ☐ Highway or Road

☐ Utility ☐ Other (Specify):

Was the pre-development land use used for agriculture (see Appendix A for definition of "agricultural land")? ☐ Yes ☐ No

Have earth-disturbing activities commenced on your project/site? ☐ Yes ☒ No

If yes, is your project an "emergency-related project" (see Appendix A)? ☒ Yes ☐ No

Project Information

Have stormwater discharges from your project/site been covered previously under an NPDES permit?	☐ Yes	☐ No
If yes, provide the NPDES ID (if you had coverage under EPA's 2017 CGP) or the NPDES permit number (if you had coverage under an EPA individual permit): _____		
Are there other operators that are covered under this permit for the same project site?	☐ Yes	☐ No
If yes, provide the NPDES ID number for all other operators at the site who have coverage under this permit: _____		
Will there be demolition of any structure built or renovated before January 1, 1980?	☐ Yes	☐ No
If yes, do any of the structures being demolished have at least 10,000 square feet of floor space?	☐ Yes	☐ No
Will you be discharging dewatering water from your site?	☐ Yes	☐ No
If yes, will you be discharging dewatering water from a current or former Federal or State remediation site?	☐ Yes	☐ No

SECTION V. DISCHARGE INFORMATION

Project Information

By indicating "Yes," I confirm that I understand that the CGP only authorizes the allowable stormwater discharges in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, State, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must be covered under another NPDES permit.	☐ Yes	
Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?	☐ Yes	☐ No
Are there any waters of the U.S. within 50 feet of your project's earth disturbances?	☐ Yes	☐ No

Receiving Waters Information

For each point of discharge, provide the following receiving water information. (Attach a separate list if necessary)

Point of Discharge ID	Provide the name of the first water of the U.S. that receives stormwater directly from the point of discharge and/or from the MS4 that the point of discharge discharges to:	If the receiving water is impaired (on the CWA 303(d) list), list the pollutants that are causing the impairment:	If a TMDL been completed for this receiving waterbody, providing the following information:
			TMDL Name and ID:
			Pollutant(s) for which there is a TMDL:
			TMDL Name and ID:
			Pollutant(s) for which there is a TMDL:

Receiving Waters Information

For each point of discharge, provide the following receiving water information. (Attach a separate list if necessary)			
Point of Discharge ID	**Provide the name of the first water of the U.S. that receives stormwater directly from the point of discharge and/or from the MS4 that the point of discharge discharges to:**	**If the receiving water is impaired (on the CWA 303(d) list), list the pollutants that are causing the impairment:**	**If a TMDL been completed for this receiving waterbody, providing the following information:**
			TMDL Name and ID: **Pollutant(s) for which there is a TMDL:**
			TMDL Name and ID: **Pollutant(s) for which there is a TMDL:**
			TMDL Name and ID: **Pollutant(s) for which there is a TMDL:**
			TMDL Name and ID: **Pollutant(s) for which there is a TMDL:**
			TMDL Name and ID: **Pollutant(s) for which there is a TMDL:**

Are any of the waters of the U.S. to which you discharge designated by the State or Tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? (See Appendix F). ☐ Yes ☐ No

If yes, name(s) of receiving water(s) and its designation (Tier 2, Tier 2.5 or Tier 3):

SECTION VI. CHEMICAL TREATMENT INFORMATION

Chemical Treatment

Will you use polymers, flocculants, or other treatment chemicals at your construction site? ☐ Yes ☐ No

If yes, will you use cationic treatment chemicals at your construction site*? ☐ Yes ☐ No

If yes, have you been authorized to use cationic treatment chemicals by your applicable EPA Regional Office in advance of filing your NOI*? ☐ Yes ☐ No

If you have been authorized to use cationic treatment chemicals by your applicable EPA Regional Office, attach a copy of your authorization letter and include documentation of the appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

Please indicate the treatment chemicals that you will use:

* Note: You are ineligible for coverage under this permit unless you notify your applicable EPA Regional Office in advance and the EPA office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

SECTION VII. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND PERSONNEL TRAINING INFORMATION

SWPPP

Has the SWPPP been prepared in advance of filing this NOI, as required? ☐ Yes ☐ No

By indicating "Yes," I confirm that all required personnel, including those conducting inspections at your site, will meet the training requirements in Part 6 of this permit. ☐ Yes

SWPPP Contact Information

First Name	Middle Initial	Last Name

Professional Title

Phone number	Email address

SECTION VIII. ENDANGERED SPECIES PROTECTION

Endangered Species Protection

In accordance with Part 1.1.5, if the EPA Regional Office grants you a waiver from electronic reporting, you must complete the worksheet in Appendix D to select your eligibility criteria with respect to the protection of Federally listed threatened or endangered species and Federally designated "critical habitat" under the Endangered Species Act (ESA) [hereinafter "ESA-listed species and designated critical habitat(s)"] from discharges and discharge-related activities authorized under this permit.

You must submit the ESA worksheet and all required supporting documentation with this NOI. If you do not submit the worksheet and the required supporting documentation with your NOI, your NOI will be considered incomplete. After you submit your NOI and before your NOI is authorized, EPA may notify you if any additional controls are necessary to ensure your discharges are not likely to result in any short- or long-term adverse effects on ESA-listed species and critical habitat.

By indicating "Yes," I confirm that you have included the completed ESA worksheet from Appendix D and all required supporting information for your criterion selection with the submission of this NOI. ☐ Yes

SECTION IX. HISTORIC PRESERVATION

Historic Preservation

Are you installing any stormwater controls as described in Appendix E that require subsurface earth disturbance? (Appendix E, Step 1) ☐ Yes ☐ No

If yes, have prior surveys or evaluations conducted on the site have already determined historic properties do not exist, or that prior disturbances have precluded the existence of historic properties? (Appendix E, Step 2) ☐ Yes ☐ No

If no, have you determined that your installation of subsurface earth-disturbing stormwater controls will have no effect on historic properties? (Appendix E, Step 3) ☐ Yes ☐ No

If no, did the SHPO, THPO, or other Tribal representative (whichever applies) respond to you within the 15 calendar days to indicate whether the subsurface earth disturbances caused by the installation of stormwater controls affect historic properties? (Appendix E, Step 4) ☐ Yes ☐ No

If yes, describe the nature of their response:

- ☐ Written indication that no historic properties will be affected by the installation of stormwater controls.
- ☐ Written indication that adverse effects to historic properties from the installation of stormwater controls can be mitigated by agreed upon actions.
- ☐ No agreement has been reached regarding measures to mitigate effects to historic properties from the installation of stormwater controls.
- ☐ Other (Specify):

SECTION X. CERTIFICATION INFORMATION

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name	Middle Initial	Last Name

Title

Signature	Date (MM/DD/YYYY)

Email Address

General Instructions

Who Must File an NOI Form?

Under the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et. seq.; the Act), Federal law prohibits stormwater discharges from certain construction activities to waters of the U.S. unless that discharge is covered under a National Pollutant Discharge Elimination System (NPDES) permit. Operators of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must obtain coverage under an NPDES general permit. For coverage under the 2022 CGP, each person, firm, public organization, or any other entity that meets either of the following criteria must file a Notice of Intent form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with the permit conditions. If you have questions about whether you need a NPDES stormwater permit, or if you need information to determine whether EPA or your State agency is the permitting authority, contact your EPA Regional Office.

Completing the Form

Obtain and read a copy of the 2022 CGP, viewable at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#cgp. To complete this form, type or print uppercase letters, in the appropriate areas only. Please place each character between the marks (abbreviate if necessary to stay within the number of characters allowed for each item). Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, telephone EPA's NOI Processing Center at (866) 352-7755. **Please submit the original document with signature in ink - do not send a photocopied signature.**

Section I. Approval to Use Paper NOI Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper NOI form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided.

See https://www.epa.gov/npdes/contact-us-stormwater#regional for a list of EPA Regional Office contacts.

Section II. Permit Information

Provide the master permit number of the permit under which you are applying for coverage (see Appendix B of the general permit for the list of eligible master permit numbers)

Section III. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this NOI. Refer to Appendix A of the permit for the definition of "operator".

Indicate whether you are seeking coverage under this permit as a "Federal Operator" or "Federal Facility" as defined in Appendix A.

Also provide a point of contact, the operator's mailing address, county, telephone number, and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the full name, organization, phone number, and email address of the NOI preparer.

Section IV. Project/Site Information

Enter the official or legal name and complete street address, including city, State, ZIP code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit coverage to be granted.

Provide the latitude and longitude of your facility in decimal degrees format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, and web-based siting tools, among others. For consistency, EPA requests that measurements be taken from the approximate center of the construction site. For linear construction sites, the measurement should be taken midpoint of the site. If known, enter the horizontal reference datum for your latitude and longitude. The horizontal reference datum is shown on the bottom left corner of USGS topographic maps; it is also available for GPS receivers.

Indicate whether the project is in Indian country lands or located on a property of religious or cultural significance to an Indian Tribe, and if so, provide the name of the Indian Tribe associated with the area of Indian country (including name of Indian reservation, if applicable), or if not in Indian country, provide the name of the Indian Tribe associated with the property.

Enter the estimated construction start and completion dates using four digits for the year (i.e., 10/06/2012). Indicate to the nearest quarter acre the estimated area to be disturbed. Indicate the type of construction site.

Indicate whether the pre-development land use of the site was used for agriculture Appendix A defines "agricultural land" as cropland, grassland, rangeland, pasture, and other agricultural land, on which agricultural and forest-related products or livestock are produced and resource concerns may be addressed. Agricultural lands include cropped woodland, marshes, incidental areas included in the agricultural operation, and other types of agricultural land used for the production of livestock.

Indicate whether earth-disturbing activities have already commenced on your project/site. If earth-disturbing activities have commenced on your site because stormwater discharges from the site have been previously covered under a NPDES permit, you must provide the 2017 CGP NPDES ID or

the NPDES permit number if coverage was under an individual permit.

Indicate if demolition is occurring, and if so, if the structure has at least 10,000 square feet of floor space.

Indicate if there are other operators covered under this permit for the same project site. If there are multiple operators, provide the NPDES ID number for the other operators at the site who have coverage under this permit.

Indicate whether you will be discharging dewatering water, as defined in Appendix A, during the course of the project. If you will be discharging dewatering water, indicate whether the site from which you will be dewatering is located on a current or former Federal or State remediation site. Federal remediation sites include cleanups covered by Superfund (both National Priorities List (NPL) sites and non-NPL sites), Resource Conservation and Recovery Act (RCRA) corrective actions sites, cleanups at Federal Facilities, and Federal, State, or Tribal brownfields sites. State remediation sites could include, for instance, brownfield site cleanups funded by the State, State superfund sites, and petroleum tank release sites. Operators may use online mapping resources, such as EPA's Cleanups in My Community Map, to help determine if they are located on a remediation site. The Cleanups in My Community Map is viewable at:

https://ordspub.epa.gov/ords/cimc/f?p=cimc:map::::71

Section V. Discharge Information

You must confirm that you understand that the CGP only authorizes the allowable stormwater discharges listed in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized under the CGP are not covered by the CGP or the permit shield provision of the CWA Section 402(k) and they cannot become authorized or shielded by disclosure to EPA, State, or local authorities via the NOI to be covered by the permit or by any other means (e.g., in the SWPPP or during an inspection). If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must either be eliminated or covered under another NPDES permit.

Indicate whether discharges from the site will enter into a municipal separate storm sewer system (MS4), as defined in Appendix A.

Also, indicate whether any waters of the U.S. exist within 50 feet from your site. Note that if "yes", you are required to comply with the requirement in Part 2.2.1 of the permit to provide natural buffers or equivalent erosion and sediment controls.

For each unique point of discharge you list, you must specify the name of the first water of the U.S. that receives stormwater directly from the point of discharge and/or from the MS4 that the point of discharge discharges to. You must specify whether any waters of the U.S. that you discharge to are listed as "impaired" as defined in Appendix A, and the pollutants for which the water is impaired. You must identify any Total Maximum Daily Loads (TMDL) that have been completed for any of the waters of the U.S. that you discharge to. Operators may find it useful to use EPA's Discharge Mapping Tool to determine whether the water of the U.S. is impaired, the pollutant causing the impairment, and whether a TMDL exists for the water body. The Discharge Mapping Tool is viewable at https://www.epa.gov/npdes/epas-stormwater-discharge-mapping-tools.

Indicate whether discharges from the site will enter into a water of the U.S. that is designated as a Tier 2, Tier 2.5, or Tier 3 water. A list of Tier 2, 2.5, and 3 waters is provided at https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates. If the answer is "yes", name all waters designated as Tier 2, Tier 2.5, or Tier 3 to which the site will discharge.

Section VI. Chemical Treatment Information

Indicate whether the site will use polymers, flocculants, or other treatment chemicals. Indicate whether the site will employ cationic treatment chemicals. If the answer is "yes" to either question, indicate which chemical(s) you will use. Note that you are not eligible for coverage under this permit to use cationic treatment chemicals unless you notify your applicable EPA Regional Office in advance and the EPA office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards. If you have been authorized to use cationic treatment chemicals by your applicable EPA Regional Office, attach a copy of your authorization letter and include documentation of the appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards. Examples of cationic treatment chemicals include, but are not limited to, cationic polyacrylamide (C-PAM), PolyDADMAC (POLY DIALLYL DIMETHYL AMMONIUM CHLORIDE), and chitosan.

Section VII. Stormwater Pollution Prevention Plan (SWPPP) and Personnel Training Information

All sites eligible for coverage under this permit are required to prepare a SWPPP in advance of filing the NOI, in accordance with Part 7. Indicate whether the SWPPP has been prepared in advance of filing the NOI.

Confirm that all required personnel, including those conducting inspections at your site, will meet the training requirements in Part 6 of this permit.

Indicate the street, city, State, and ZIP code where the SWPPP can be found. Indicate the contact information (name, organization, phone, and email) for the person who developed the SWPPP for this project.

Section VIII. Endangered Species Information

Confirm that you have included the completed ESA worksheet from Appendix D and all required supporting information for your criterion selection with the submission of this NOI.

Section IX. Historic Preservation

Use the instructions in Appendix E to complete the questions on the NOI form regarding historic preservation.

Section X. Certification Information

The NOI must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making

major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, State, Federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered eligible for permit coverage.

Modifying Your NOI

If you have been granted a waiver from your Regional Office from electronic reporting, and if after submitting your NOI you need to correct or update any fields on this NOI form, you may do so by indicating changes on this same form.

Paperwork Reduction Act Notice

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0305). Responses to this collection of information are mandatory (40 CFR 122.26). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information is estimated to be 3.3 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Submitting Your Form

Submit your NOI form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:
Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2022 CGP
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:
Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2022 CGP
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:

https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting

Appendix I - Notice of Termination (NOT) Form and Instructions

Part 8.3 requires you to use the NPDES eReporting Tool, or "NeT" system, to prepare and submit your NOT electronically. However, if the EPA Regional Office grants you a waiver to use a paper NOT form, and you elect to use it, you must complete and submit the following form.

NPDES Form 3510-13	EPA	U.S. Environmental Protection Agency Washington, DC 20460 Notice of Termination for the 2022 NPDES Construction General Permit	OMB No. 2040-0305 Exp. Date 01/31/2025

Submission of this Notice of Termination constitutes notice that the operator identified in Section III of this form is no longer authorized discharge pursuant to the NPDES Construction General Permit (CGP) from the site identified in Section IV of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

SECTION I. APPROVAL TO USE PAPER NOI FORM

Paper NOI Form

Have you been granted a waiver from electronic reporting from the Regional Office*? ☐ Yes ☐ No

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:

☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.

☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver	Date approval obtained (MM/DD/YYYY)

*** Note: You are required to obtain approval from the applicable Regional Office prior to using this paper NOI form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT).**

SECTION II. PERMIT INFORMATION

Permit

NPDES ID

Reason for Termination (Check only one):

☐ You have completed all construction activities at your site, and you have met all other requirements in Part 8.2.1.

Check this box to confirm that you have attached photographs as required by Part 8.2.1.a that document your compliance with the permit's final stabilization requirements.

Include the date each photograph was taken, and a brief description of the area of the site captured by the photograph (e.g., photo shows application of seed and erosion control mats to remaining exposed surfaces on northeast corner of site).

If any portion of your site is covered by one of the Part 2.2.14c.iii exceptions to the final stabilization criteria, indicate which exception applies and include a supplementary explanation with your photographs that provides the necessary context for why this portion of the site is in compliance even though it appears to be unstabilized.

☐ Another operator has assumed control over all areas of the site and that operator has submitted an NOI and obtained coverage under the CGP.

☐ You have obtained coverage under an individual permit or another general NPDES permit addressing stormwater discharges from the construction site.

SECTION III. OPERATOR INFORMATION

Operator Information

Operator Name

Mailing Address

Street

City	State	ZIP Code

County or Similar Government Division

Phone Number	Email Address

SECTION IV. PROJECT/SITE INFORMATION

Project/Site Address

Project/Site Name		
Street/Location		
City	State	ZIP Code
County or Similar Government Division:		

SECTION V. CERTIFICATION INFORMATION

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name	Middle Initial	Last Name
Title		
Signature		Date (MM/DD/YYYY)
Email Address		

General Instructions

Who May File an NOT Form?

Permittees who are presently covered under the EPA-issued 2022 Construction General Permit (CGP) for Stormwater Discharges Associated with Construction Activity may submit an NOT form when: (1) earth-disturbing activities at the site are completed and the conditions in Parts 8.2.1.a through 8.2.1.b are met; or (2) the permittee has transferred all areas under its control to another operator, and that operator has submitted and obtained coverage under this permit; or (3) the permittee has obtained coverage under a different NPDES permit for the same discharges.

Completing the Form

Type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions about this form, refer to https://www.epa.gov/npdes/stormwater-discharges-construction-activities#cgp or telephone EPA's NOI Processing Center at (866) 352-7755. **Please submit original document with signature in ink - do not send a photocopied signature.**

Section I. Approval to Use Paper NOI Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper NOT form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided.

See https://www.epa.gov/npdes/contact-us-stormwater#regional for a list of EPA Regional Office contacts.

Section II. Permit Information

Enter the existing NPDES ID assigned to the project . If you do not know the NPDES ID number, or contact EPA's NOI Processing Center at (866) 352-7755.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one. If you selected the first box, confirm that you have attached photographs as required by Part 8.2.1.a. All submitted photographs must: (1) be taken both before and after the site has met the final stabilization criteria in Part 2.2.14.c; (2) be clear and in focus, and in the original format and resolution; and (3) include the date each photograph was taken, and a brief description of the area of the site captured by the photograph (e.g., photo shows application of seed and erosion control mats to remaining exposed surfaces on northeast corner of site).

If any portion of your site is covered by one of the Part 2.2.14c.iii final stabilization exceptions, indicate which exception applies and provide an explanation with your photographs that describes why this portion of the site is in compliance even though it may appear to be unstabilized.

Section III. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this NOT and is covered by the NPDES ID identified in Section II. Enter the complete mailing address, telephone number, and email address of the operator.

Section IV. Project/Site Information

Enter the official or legal name and complete street address, including city, State, ZIP code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for termination of permit coverage to be valid.

Section V. Certification Information

The NOT, must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, State, Federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

Paperwork Reduction Act Notice

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0305). Responses to this collection of information are mandatory (40 CFR 122.26). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a

currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information is estimated to be 1.2 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Submitting Your Form

Submit your NOT form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:
Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2022 CGP
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:
Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2022 CGP
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:

https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting

Appendix J - Suggested Format for Request for Chemical Treatment

If you plan to add "cationic treatment chemicals" (as defined in Appendix A) to stormwater and/or authorized non-stormwater prior to discharge, Part 1.1.9 requires you to notify your applicable EPA Regional Office in advance of submitting your NOI. The EPA Regional Office will authorize coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will result in discharges that meet applicable water quality standards. To notify your EPA Regional Office, you may use following form.

NPDES Form 6100-066	EPA	U.S. Environmental Protection Agency Washington, DC 20460 Suggested Form for Notifying EPA about Proposed Use of Cationic Treatment Chemicals under the 2022 NPDES Construction General Permit	OMB No. 2040-0305 Exp. Date 01/31/2025

Under Part 1.1.9 of the 2022 CGP, if you plan to add "cationic treatment chemicals" (as defined in Appendix A) to stormwater and/or authorized non-stormwater prior to discharge, you may not submit your Notice of Intent (NOI) until you notify your applicable EPA Regional Office in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will result in discharges that meet applicable water quality standards. You may use this suggested form to notify your EPA Regional Office about your proposed use of cationic treatment chemicals.

SECTION I. OPERATOR INFORMATION

Operator Information

Operator Name		
Mailing Address		
Street		
City	State	ZIP Code
County or Similar Government Division		
Phone Number	Email Address	

SECTION II. PROJECT/SITE INFORMATION

Project/Site Information

Project/Site Name		
Project/Site Address		
Street/Location		
City	State	ZIP Code
County or Similar Government Division		
Site Contact Information (if different from operator)		
First Name	Middle Initial	Last Name
Phone Number		
Receiving Waterbodies		
Name(s) of Receiving Waterbodies:		

SECTION III. MAP

Map

Attach a map that illustrates the entire site including all of the below items. Include this map in your Stormwater Pollution Prevention Plan (SWPPP).
- All receiving waterbodies
- All proposed location(s) of chemical treatment system(s)
- All proposed point(s) of discharge to receiving waterbodies
- All soil types within areas to be disturbed
- All areas of earth disturbance
- Sufficient indication of topography to indicate where stormwater flows

Attach a schematic drawing of the proposed treatment system(s). Include all components of the treatment train, sample points, and pipe configurations. In addition to sufficient holding capacity upstream of treatment, the system must have the capacity to hold water for testing and to re-treat water that does not meet water quality standards.

SECTION IV. RESPONSIBLE PERSONNEL

Responsible Personnel

Treatment System Operator or Company Name (if subcontracted out):

Street/Location

City	State	ZIP Code

Responsible Personnel

List personnel who will be responsible for operating the chemical treatment systems and application of the chemicals.	Cite the training that the personnel have received in operation and maintenance of the treatment system(s) and use of the specific chemical(s) proposed.

SECTION V. PROPOSED TREATMENT

Proposed Treatment

Check proposed treatment system to be used:

- ☐ Chitosan enhanced sand filtration with discharge to infiltration (ground water).
- ☐ Chitosan enhanced sand filtration with discharge to temporary holding ponds (batch).
- ☐ Chitosan enhanced sand filtration with discharge to surface waters (flow-through).
- ☐ Other (describe below and submit documentation that the proposed system and chemical(s) demonstrate the ability to remove turbidity and produce non-toxic effluent/discharge):

Check proposed cationic chemical(s) to be used:

- ☐ FlocClear™ (2% chitosan acetate solution).
- ☐ StormKlear™ LiquiFloc™ (1% chitosan acetate solution).
- ☐ ChitoVan™ (1% chitosan acetate solution).
- ☐ StormKlear™ LiquiFloc™ (3% chitosan acetate solution).
- ☐ Other (Specify):

Estimated Treatment Period Start Date (MM/DD/YYYY)	Estimated Treatment Period End Date (MM/DD/YYYY)

Describe sampling and recordkeeping schedule. Attach additional sheets as needed:

Proposed Treatment

Explain why you have selected this proposed treatment system and chemicals. Include an explanation of why the use of cationic treatment chemicals is necessary at the site. Reference how the soil types on your site influenced your choices. Describe or provide an illustration of how the site of the discharge will be stabilized and why the discharge location will not cause erosion of the discharge water's bank or bed (please note that a permit from the Corps and State agencies may be necessary to place rock in the water body for this stabilization). Attach as many additional sheets as needed for a full explanation. If you have a report from a chemical treatment contractor describing their recommended approach you may attach that.

SECTION VI. CERTIFICATION INFORMATION

Certification Information

I have documented and hereby certify that the following information is correct and has been documented in the SWPPP for this project:

- The SWPPP includes a complete site-specific description of the chemical treatment system herein proposed for use, including specifications, design, and Material Safety Data Sheets for all chemicals to be used.
- The controls to be used on the site are compatible with the safe and effective use of cationic chemical treatment.
- I verified through jar tests that the site soil is conducive to chemical treatment.
- I verified that the chemical treatment system operators for this project received training.
- I read, understand, and will follow all conditions and design criteria in the applicable use designation(s).
- If the discharge is to Tribal waters, I notified the appropriate Tribal government of the intent to use chemical treatment on a site located within that jurisdiction.
- I will keep the use level designation, operation and maintenance manual, and training certificate on site prior to and during use of chemical treatment.
- A licensed engineer designed the system for this project including system sizing, pond sizing, and flow requirements.
- I verify that the discharge will not adversely affect downstream conveyance systems or stream channels (e.g., cause erosion).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Official

First Name	Middle Initial	Last Name

Title

Signature	Date (MM/DD/YYYY)

Email Address

Section I. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project. Refer to Appendix A of the permit for the definition of "operator." Provide the operator's mailing address, county, telephone number, and e-mail address.

Section II. Project/Site Information

Enter the official or legal name and complete street address, including city, State, ZIP code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34).

Provide site contact information, if different from the operator.

Provide the name of the receiving waterbodies to which your site/project will discharge.

Section III. Map

Attach a map of the entire site that includes the identified items. Attach a schematic of the proposed treatment system(s) that includes the identified items.

Section IV. Responsible Personnel

Provide the legal name of the treatment system operator or company and complete street address, including city, State, including city, State, and ZIP code.

List personnel who will be responsible for operating the chemical treatment systems and application of the chemicals. For each personnel listed, cite the training that the personnel have received in operation and maintenance of the treatment system(s) and use of the specific chemical(s) proposed.

Section V. Proposed Treatment

Indicate the proposed treatment system and proposed cationic chemicals to be used. Indicate the estimated treatment start and end dates. Describe the sampling and recordkeeping schedule. Explain why you have selected the proposed treatment system and chemicals.

Section VI. Certification Information

The form must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, State, Federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

Submitting Your Form

Submit this form to your applicable EPA Regional Office. Contact information can be found at: https://www.epa.gov/npdes/contact-us-stormwater#regional

Appendix K – Turbidity Monitoring Report Form and Instructions

Part 3.3 requires you to use the EPA NPDES eReporting Tool, or "NeT" system, to prepare and submit your report electronically. However, if the EPA Regional Office grants you a waiver to use a paper form, and you elect to use it, you must complete and submit the following form.

NPDES Form 6100-065	EPA	U.S. Environmental Protection Agency Washington, DC 20460 Turbidity Monitoring Report Form for Dewatering Discharges to Sensitive Waters Under the 2022 NPDES Construction General Permit	OMB No. 2040-0305 Exp. Date 01/31/2025

SECTION I. APPROVAL TO USE PAPER FORM

Paper Form

Have you been granted a waiver from electronic reporting from the Regional Office*? ☐ Yes ☐ No

If yes, check which waiver you have been granted, and provide the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:

☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.

☐ The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver	Date approval obtained (MM/DD/YYYY)

*** Note: You are required to obtain approval from the applicable Regional Office prior to using this paper form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT).**

SECTION II. PERMIT INFORMATION

Permit

NPDES ID

Does this report fulfill turbidity monitoring report obligations of other operators that are covered under this permit for the same project site? ☐ Yes ☐ No

If yes, provide the NPDES ID number(s) for all other such operators at the same project site: _____

SECTION III. OPERATOR INFORMATION

Operator Information

Operator Name

Mailing Address

Street

City	State	ZIP Code

County or Similar Government Division:

Phone Number	Email Address

Preparer

Complete if form was prepared by someone other than the certifier:

First Name	Middle Initial	Last Name

Organization

Phone Number	Email Address

SECTION IV. SITE INFORMATION

Site Address

Site Name

Site Address

Street/Location

City	State	ZIP Code

County or Similar Government Division:

SECTION IV. MONITORING QUARTER

Monitoring Quarter

Identify monitoring quarter (select only one):

- ☐ Quarter 1 (January 1 – March 31)
- ☐ Quarter 2 (April 1 – June 30)
- ☐ Quarter 3 (July 1 – September 30)
- ☐ Quarter 4 (October 1 – December 31)

SECTION IVI. TURBIDITY MONITORING DATA

Turbidity Monitoring Data

Discharge Point Description/ Name:

Was dewatering water discharged during the monitoring quarter? ☐ Yes (Enter the data below) ☐ No (Skip to Section VII)

Specific Week within Monitoring Quarter[1]	Weekly Average (NTU)[2]	Benchmark Threshold (NTU)	Alternate Benchmark Threshold (NTU)[3]	Average exceeds Benchmark?[4]
Week 1		50		☐ Yes ☐ No
Week 2		50		☐ Yes ☐ No
Week 3		50		☐ Yes ☐ No
Week 4		50		☐ Yes ☐ No
Week 5		50		☐ Yes ☐ No
Week 6		50		☐ Yes ☐ No
Week 7		50		☐ Yes ☐ No
Week 8		50		☐ Yes ☐ No
Week 9		50		☐ Yes ☐ No
Week 10		50		☐ Yes ☐ No
Week 11		50		☐ Yes ☐ No
Week 12		50		☐ Yes ☐ No
Week 13		50		☐ Yes ☐ No
Week 14		50		☐ Yes ☐ No

[1] Refer to Table K-1 to determine the specific monitoring week number for which you are reporting turbidity data for this quarter.

[2] Report to the nearest whole number. Enter "N/A" if no dewatering discharge occurred during any particular week.

[3] Prior approval from the EPA Regional Office is required pursuant to Part 3.3.2.b. Unless and until EPA approves your request to use an alternate benchmark, you are required to use the standard benchmark of 50 NTU and take any required corrective actions if an exceedance occurs. Enter "N/A" if you have not received approval for an alternate benchmark threshold.

[4] If "Yes," the operator must conduct follow-up corrective action pursuant to Part 5.2.2 and document any corrective action taken in the corrective action log in accordance with Part 5.4.

VII. CERTIFICATION INFORMATION

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name	Middle Initial	Last Name

Title

Signature	Date (MM/DD/YYYY)

Phone Number	Email Address

General Instructions

Who Must Submit A Turbidity Monitoring Report to EPA?

Sites covered under the Construction General Permit (CGP or permit) that are required to monitor pursuant to Part 3.3 of the permit must submit Turbidity Monitoring Reports consistent with the reporting requirements specified in Part 3.3.4 of the permit.

When Must I Submit A Turbidity Monitoring Report to EPA?

You must submit your report to EPA no later than 30 days following the end of each monitoring quarter. Submit a form for every quarter the site is active.

Monitoring Quarter #	Months	Reporting Deadline
1	January 1 – March 31	April 30
2	April 1 – June 30	July 30
3	July 1 – September 30	October 30
4	October 1 – December 31	January 30

Completing the Form

Obtain and read a copy of the 2022 CGP, viewable at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#cgp. To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please submit the original document with signature in ink - do not send a photocopied signature. **Photocopy your form for your records before you send the completed original form to the appropriate address.**

Section I. Approval to Use Paper Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided. See https://www.epa.gov/npdes/contact-us-stormwater for a list of EPA Regional Office contacts.

Section II. Permit Information

Provide the NPDES ID (i.e., NOI tracking number) assigned to the site for which this form is being submitted. Submit the form only for sites discharging dewatering water to a sediment-impaired water or a water designated as a Tier 2, Tier 2.5, or Tier 3 water.

Indicate whether this report fulfills turbidity monitoring report obligations of other operators that are covered under this permit for the same project site. If the answer is yes, provide all relevant NPDES ID numbers.

Section III. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that is considered the operator of the site. See Part 1.1.1 and Appendix A for the definition of "operator." Provide the operator's mailing address, phone number, and e-mail. The operator information in this Section should match the operator information provided on your NOI form.

If this form was prepared by someone other than the certifier, include the name, organization, phone number, and email address of the person who prepared this form.

Section IV. Site Information

Enter the official or legal name and complete street address, including city, State, ZIP code, and county or similar government subdivision of the site. If the site lacks a street address, indicate the general location (e.g., Intersection of State Highways 61 and 34). The site information in this Section should match the site information provided on your NOI form.

Section V. Monitoring Quarter

Indicate the appropriate monitoring quarter (Quarter 1, 2, 3, or 4). The monitoring quarters are specified in the table in the section titled "When Must I Submit A Turbidity Monitoring Report to EPA." Select only one quarter.

Section VI. Turbidity Monitoring Data

Provide the discharge point description/name if you are discharging dewatering water from more than one point at the site. If you are discharging from only one point at the site, leave the spaces blank.

Submit Section VI data for each dewatering discharge point. For example, if you are discharging dewatering water from two points at the site, then submit two Section VIs (one for each discharge point).

Indicate whether dewatering occurred during the monitoring quarter. If "Yes" enter the data in the data table. If "No" skip to Section VII.

For averaging purposes, a monitoring week starts with a Monday and ends on Sunday. A numerical value is assigned for each week, which is called a Week Number (e.g., 1, 2, 3 etc.). The form includes a Week Number for each week of the year. Refer to Table K-1 for the dates that correspond with each Week Number.

Next, calculate the weekly average turbidity value for the corresponding monitoring week. The weekly average is calculated by adding all of the individual turbidity results for that monitoring week and dividing by the total number of samples. The calculation for the weekly average includes only those days when dewatering discharge occurred. Days when no dewatering discharge occurred, and therefore do not have turbidity data associated with them, are not included in the calculation of the weekly average. For example, if turbidity samples from your dewatering discharge in week 1 result in values of 30 NTU on Tuesday, 40 NTU on Wednesday, and 45 NTU on Thursday, your weekly average turbidity value would be 38 NTU ((30+40+45) ÷ 3 = 38 NTU). If in week 2, your turbidity samples resulted in values of 45 NTU on Monday, 30 NTU on Tuesday, 25 NTU on Wednesday, and 15 NTU on Thursday, you would calculate a new average for that week, which would yield an average turbidity value of 29 NTU ((45+30+25+15) ÷ 4 = 29 NTU). By comparison, if your samples on consecutive days from Friday to Monday were 60

NTU, 45 NTU, 40 NTU, and 43 NTU, respectively, and there are no other dewatering discharges for the remainder of the week, you would calculate one weekly average for the Friday to Sunday to be 48 NTU ((60+45+40) ÷ 3 = 48 NTU), and a separate weekly average for the one Monday to be 43 NTU (43 ÷ 1 = 43 NTU).

If you collect and analyze more than one turbidity sample per day from your dewatering discharge, you must include any additional results in the calculation of your weekly average. For example, if during a monitoring week you take two turbidity samples on Tuesday with a value of 30 NTU and 35 NTU, three samples on Wednesday with a value of 40 NTU, 45 NTU, and 48 NTU, and one sample on Thursday with a value of 45 NTU, your weekly average turbidity value for this week would be 41 NTU ((30+35+40+45+48+45) ÷ 6 = 41 NTU).

Enter the weekly average turbidity values for the corresponding week into the table. Enter "N/A" into the table for the turbidity weekly average if no dewatering discharge occurred during the week.

The benchmark threshold for turbidity for this permit is 50 NTUs unless EPA has authorized the use of an alternate benchmark in accordance with Part 3.3.2.b. If you are using an alternate benchmark threshold, enter the number into the table for the corresponding week. Unless and until EPA approves your request to use an alternate benchmark, you are required to use the standard benchmark of 50 NTU and take any required corrective actions if an exceedance occurs. Enter "N/A" if you have not received approval for an alternate benchmark threshold.

For each week with a value for the weekly average, select "Yes" or "No" in the table to indicate whether the weekly average value exceeds the 50 NTU benchmark or the alternate turbidity benchmark (whichever is applicable). If "Yes", the operator must conduct follow-up corrective action pursuant to Part 5.2.2 and document any corrective action taken in the corrective action log in accordance with Part 5.4.

Section VII. Certification Information

Forms must be signed by a person described below, or by a duly authorized representative of that person.

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, State, Federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above;

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and

3. The written authorization is submitted to the Director.

An unsigned or undated form will be considered incomplete.

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper form, you must send your form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2022 CGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2022 CGP Reports
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:

https://epanet.zendesk.com/hc/en-us/sections/115000949868-CGP-Training-Material

Revisions to a Submitted Form

If you have previously submitted a form with an error, submit a revised form with the correct information. After discovering the error, submit the revised form as soon as possible. Make a notation on the revised form where the correction was made.

Paperwork Reduction Act Notice

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0305). Responses to this collection of information are mandatory (40 CFR 122.26). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information is

estimated to be 0.2 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Table K-1: 2022 CGP - Dates Corresponding to Monitoring Weeks for Each Monitoring Quarter

2022			
Monitoring Quarter	Week #	*Monday* Start Date	*Sunday* End Date
1	1	1/3/22	1/9/22
	2	1/10/22	1/16/22
	3	1/17/22	1/23/22
	4	1/24/22	1/30/22
	5	1/31/22	2/6/22
	6	2/7/22	2/13/22
	7	2/14/22	2/20/22
	8	2/21/22	2/27/22
	9	2/28/22	3/6/22
	10	3/7/22	3/13/22
	11	3/14/22	3/20/22
	12	3/21/22	3/27/22
	13	3/28/22	4/3/22
2	1	4/4/22	4/10/22
	2	4/11/22	4/17/22
	3	4/18/22	4/24/22
	4	4/25/22	5/1/22
	5	5/2/22	5/8/22
	6	5/9/22	5/15/22
	7	5/16/22	5/22/22
	8	5/23/22	5/29/22
	9	5/30/22	6/5/22
	10	6/6/22	6/12/22
	11	6/13/22	6/19/22
	12	6/20/22	6/26/22
	13	6/27/22	7/3/22
3	1	7/4/22	7/10/22
	2	7/11/22	7/17/22
	3	7/18/22	7/24/22
	4	7/25/22	7/31/22
	5	8/1/22	8/7/22
	6	8/8/22	8/14/22
	7	8/15/22	8/21/22
	8	8/22/22	8/28/22
	9	8/29/22	9/4/22
	10	9/5/22	9/11/22
	11	9/12/22	9/18/22
	12	9/19/22	9/25/22
	13	9/26/22	10/2/22
4	1	10/3/22	10/9/22
	2	10/10/22	10/16/22
	3	10/17/22	10/23/22
	4	10/24/22	10/30/22
	5	10/31/22	11/6/22
	6	11/7/22	11/13/22
	7	11/14/22	11/20/22
	8	11/21/22	11/27/22
	9	11/28/22	12/4/22
	10	12/5/22	12/11/22
	11	12/12/22	12/18/22
	12	12/19/22	12/25/22
	13	12/26/22	1/1/23

2023			
Monitoring Quarter	Week #	*Monday* Start Date	*Sunday* End Date
1	1	1/2/23	1/8/23
	2	1/9/23	1/15/23
	3	1/16/23	1/22/23
	4	1/23/23	1/29/23
	5	1/30/23	2/5/23
	6	2/6/23	2/12/23
	7	2/13/23	2/19/23
	8	2/20/23	2/26/23
	9	2/27/23	3/5/23
	10	3/6/23	3/12/23
	11	3/13/23	3/19/23
	12	3/20/23	3/26/23
	13	3/27/23	4/2/23
2	1	4/3/23	4/9/23
	2	4/10/23	4/16/23
	3	4/17/23	4/23/23
	4	4/24/23	4/30/23
	5	5/1/23	5/7/23
	6	5/8/23	5/14/23
	7	5/15/23	5/21/23
	8	5/22/23	5/28/23
	9	5/29/23	6/4/23
	10	6/5/23	6/11/23
	11	6/12/23	6/18/23
	12	6/19/23	6/25/23
	13	6/26/23	7/2/23
3	1	7/3/23	7/9/23
	2	7/10/23	7/16/23
	3	7/17/23	7/23/23
	4	7/24/23	7/30/23
	5	7/31/23	8/6/23
	6	8/7/23	8/13/23
	7	8/14/23	8/20/23
	8	8/21/23	8/27/23
	9	8/28/23	9/3/23
	10	9/4/23	9/10/23
	11	9/11/23	9/17/23
	12	9/18/23	9/24/23
	13	9/25/23	10/1/23
4	1	10/2/23	10/8/23
	2	10/9/23	10/15/23
	3	10/16/23	10/22/23
	4	10/23/23	10/29/23
	5	10/30/23	11/5/23
	6	11/6/23	11/12/23
	7	11/13/23	11/19/23
	8	11/20/23	11/26/23
	9	11/27/23	12/3/23
	10	12/4/23	12/10/23
	11	12/11/23	12/17/23
	12	12/18/23	12/24/23
	13	12/25/23	12/31/23

2024			
Monitoring Quarter	Week #	*Monday* Start Date	*Sunday* End Date
1	1	1/1/24	1/7/24
	2	1/8/24	1/14/24
	3	1/15/24	1/21/24
	4	1/22/24	1/28/24
	5	1/29/24	2/4/24
	6	2/5/24	2/11/24
	7	2/12/24	2/18/24
	8	2/19/24	2/25/24
	9	2/26/24	3/3/24
	10	3/4/24	3/10/24
	11	3/11/24	3/17/24
	12	3/18/24	3/24/24
	13	3/25/24	3/31/24
2	1	4/1/24	4/7/24
	2	4/8/24	4/14/24
	3	4/15/24	4/21/24
	4	4/22/24	4/28/24
	5	4/29/24	5/5/24
	6	5/6/24	5/12/24
	7	5/13/24	5/19/24
	8	5/20/24	5/26/24
	9	5/27/24	6/2/24
	10	6/3/24	6/9/24
	11	6/10/24	6/16/24
	12	6/17/24	6/23/24
	13	6/24/24	6/30/24
3	1	7/1/24	7/7/24
	2	7/8/24	7/14/24
	3	7/15/24	7/21/24
	4	7/22/24	7/28/24
	5	7/29/24	8/4/24
	6	8/5/24	8/11/24
	7	8/12/24	8/18/24
	8	8/19/24	8/25/24
	9	8/26/24	9/1/24
	10	9/2/24	9/8/24
	11	9/9/24	9/15/24
	12	9/16/24	9/22/24
	13	9/23/24	9/29/24
	14	9/30/24	10/6/24
4	1	10/7/24	10/13/24
	2	10/14/24	10/20/24
	3	10/21/24	10/27/24
	4	10/28/24	11/3/24
	5	11/4/24	11/10/24
	6	11/11/24	11/17/24
	7	11/18/24	11/24/24
	8	11/25/24	12/1/24
	9	12/2/24	12/8/24
	10	12/9/24	12/15/24
	11	12/16/24	12/22/24
	12	12/23/24	12/29/24
	13	12/30/24	1/5/25

2025			
Monitoring Quarter	Week #	*Monday* Start Date	*Sunday* End Date
1	1	1/6/25	1/12/25
	2	1/13/25	1/19/25
	3	1/20/25	1/26/25
	4	1/27/25	2/2/25
	5	2/3/25	2/9/25
	6	2/10/25	2/16/25
	7	2/17/25	2/23/25
	8	2/24/25	3/2/25
	9	3/3/25	3/9/25
	10	3/10/25	3/16/25
	11	3/17/25	3/23/25
	12	3/24/25	3/30/25
	13	3/31/25	4/6/25
2	1	4/7/25	4/13/25
	2	4/14/25	4/20/25
	3	4/21/25	4/27/25
	4	4/28/25	5/4/25
	5	5/5/25	5/11/25
	6	5/12/25	5/18/25
	7	5/19/25	5/25/25
	8	5/26/25	6/1/25
	9	6/2/25	6/8/25
	10	6/9/25	6/15/25
	11	6/16/25	6/22/25
	12	6/23/25	6/29/25
	13	6/30/25	7/6/25
3	1	7/7/25	7/13/25
	2	7/14/25	7/20/25
	3	7/21/25	7/27/25
	4	7/28/25	8/3/25
	5	8/4/25	8/10/25
	6	8/11/25	8/17/25
	7	8/18/25	8/24/25
	8	8/25/25	8/31/25
	9	9/1/25	9/7/25
	10	9/8/25	9/14/25
	11	9/15/25	9/21/25
	12	9/22/25	9/28/25
	13	9/29/25	10/5/25
4	1	10/6/25	10/12/25
	2	10/13/25	10/19/25
	3	10/20/25	10/26/25
	4	10/27/25	11/2/25
	5	11/3/25	11/9/25
	6	11/10/25	11/16/25
	7	11/17/25	11/23/25
	8	11/24/25	11/30/25
	9	12/1/25	12/7/25
	10	12/8/25	12/14/25
	11	12/15/25	12/21/25
	12	12/22/25	12/28/25
	13	12/29/25	1/4/26

2026			
Monitoring Quarter	Week #	*Monday* Start Date	*Sunday* End Date
1	1	1/5/26	1/11/26
	2	1/12/26	1/18/26
	3	1/19/26	1/25/26
	4	1/26/26	2/1/26
	5	2/2/26	2/8/26
	6	2/9/26	2/15/26
	7	2/16/26	2/22/26
	8	2/23/26	3/1/26
	9	3/2/26	3/8/26
	10	3/9/26	3/15/26
	11	3/16/26	3/22/26
	12	3/23/26	3/29/26
	13	3/30/26	4/5/26
2	1	4/6/26	4/12/26
	2	4/13/26	4/19/26
	3	4/20/26	4/26/26
	4	4/27/26	5/3/26
	5	5/4/26	5/10/26
	6	5/11/26	5/17/26
	7	5/18/26	5/24/26
	8	5/25/26	5/31/26
	9	6/1/26	6/7/26
	10	6/8/26	6/14/26
	11	6/15/26	6/21/26
	12	6/22/26	6/28/26
	13	6/29/26	7/5/26
3	1	7/6/26	7/12/26
	2	7/13/26	7/19/26
	3	7/20/26	7/26/26
	4	7/27/26	8/2/26
	5	8/3/26	8/9/26
	6	8/10/26	8/16/26
	7	8/17/26	8/23/26
	8	8/24/26	8/30/26
	9	8/31/26	9/6/26
	10	9/7/26	9/13/26
	11	9/14/26	9/20/26
	12	9/21/26	9/27/26
	13	9/28/26	10/4/26
4	1	10/5/26	10/11/26
	2	10/12/26	10/18/26
	3	10/19/26	10/25/26
	4	10/26/26	11/1/26
	5	11/2/26	11/8/26
	6	11/9/26	11/15/26
	7	11/16/26	11/22/26
	8	11/23/26	11/29/26
	9	11/30/26	12/6/26
	10	12/7/26	12/13/26
	11	12/14/26	12/20/26
	12	12/21/26	12/27/26
	13	12/28/26	1/3/27

2027			
Monitoring Quarter	Week #	*Monday* Start Date	*Sunday* End Date
1	1	1/4/27	1/10/27
	2	1/11/27	1/17/27
	3	1/18/27	1/24/27
	4	1/25/27	1/31/27
	5	2/1/27	2/7/27
	6	2/8/27	2/14/27
	7	2/15/27	2/21/27
	8	2/22/27	2/28/27
	9	3/1/27	3/7/27
	10	3/8/27	3/14/27
	11	3/15/27	3/21/27
	12	3/22/27	3/28/27
	13	3/29/27	4/4/27

WQCC-APPROVED

TOTAL MAXIMUM DAILY LOAD (TMDL)
FOR THE

Middle Rio Grande Watershed

APRIL 13, 2010

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COVER PHOTO: *Rio Grande at Los Padillas below Albuquerque WWTP, July 27, 2005.*

LIST OF ABBREVIATIONS AND DEFINITIONS

AU	Assessment Unit
BLM	Bureau of Land Management
BMP	Best management practices- effective, practical, structural or nonstructural methods which prevent or reduce the movement of pollutants from the land to surface water.
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CGP	Construction general storm water permit
CWA	Clean Water Act
^{o}C	Degrees Celsius
^{o}F	Degrees Fahrenheit
Ecoregion	Ecological regions based on geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology.
EQIP	Environmental Quality Incentive Program
GIS	Geographic Information Systems
HUC	Hydrologic unit code- a way of identifying all of the drainage basins in the United States in a catalogued arrangement from largest (Regions) to smallest (Cataloging Units).
LA	Load allocation
LFCC	Low Flow Conveyance Channel
mg/L	Milligrams per Liter
mi^2	Square miles
mL	Milliliters
MOS	Margin of safety
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Storm Water Permit
NM	New Mexico
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System-as authorized by the Clean Water Act, permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.
%	Percent
QAPP	Quality Assurance Project Plan
RFP	Request for proposal
STORET	Storage and Retrieval Database- a repository for water quality, biological, and physical data and is used by state environmental agencies, EPA and other federal agencies, universities, private citizens, and others.
SWPPP	Storm Water Pollution Prevention Plan-a written document that describes the construction operator's activities to comply with the requirements in the construction general permit
SWQB	Surface Water Quality Bureau
TMDL	Total maximum daily load
USDA	U.S. Department of Agriculture

USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
WLA	Waste load allocation
WQCC	Water Quality Control Commission- The commission is the state water pollution control agency for NM, and for all purposes of the federal Clean Water Act and the wellhead protection and sole source aquifer programs of the federal Safe Drinking Water Act.
WQS	Water quality standards (NMAC 20.6.4 as amended through 2007)
WRAS	Watershed Restoration Action Strategy
WWTP	Wastewater treatment plant

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EXECUTIVE SUMMARY

Section 303(d) of the Federal Clean Water Act requires states to develop Total Maximum Daily Load (TMDL) management plans for waterbodies determined to be water quality limited. A TMDL documents the amount of a pollutant a waterbody can assimilate without violating a state's or a Tribe'swater quality standard. It also allocates the load capacity to known point sources and nonpoint sources at a given flow. Total maximum daily loads are defined in 40 Code of Federal Regulations Part 130 as the sum of the individual Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources and background conditions, and includes a Margin of Safety (MOS). TMDL = WLA + LA + MOS

The Surface Water Quality Bureau (SWQB) held a pre-survey public meeting in Rio Rancho, NM on February 16, 2005 and conducted a surface water quality survey of the Middle Rio Grande watershed in 2005. Sampling stations were established along the streams in the watershed to evaluate the impact of tributary streams and to work toward establishing background conditions. As a result of assessing data generated during this monitoring effort, SWQB staff documented impairments of the New Mexico water quality standards for dissolved aluminum on Rio Grande (San Marcial at USGS Gage to Rio Puerco) and *E.coli* on Rio Grande (San Marcial at USGS Gage to Rio Puerco), Rio Grande (Rio Puerco to Isleta Pueblo boundary), Rio Grande (Isleta Pueblo boundary to Alameda Street Bride), and Rio Grande (non-Pueblo Alameda Street Bridge to Angostura Diversion). This TMDL document addresses the above noted impairments as summarized in the tables that follow.

The data used to develop this TMDL were collected during the 2005 survey and additional collections by SWQB and other agencies from 2000-2007.

The 2005 Middle Rio Grande Watershed study also identified other potential water quality impairments in this watershed which are not addressed in this document. Subsequent TMDLs will be prepared in the near future in a separate TMDL document. SWQB developed TMDLs for fecal coliform in 2001 for the Rio Grande from Isleta Pueblo boundary to Angostura Diversion. The following *E.coli* TMDLs were developed to reflect the change in the water quality standards from fecal coliform to *E.coli*.

Additional water quality data will be collected by New Mexico Environment Department during the standard rotational period for water quality stream surveys. As a result, targets will be re-examined and potentially revised as this document is considered to be an evolving management plan. In the event that new data indicate that the targets used in this analysis are not appropriate and/or if new standards are adopted, the load capacity will be adjusted accordingly. When water quality standards have been achieved, the reach will be moved to the appropriate attainment category on the Clean Water Act Integrated §303(d)/§305(b) list of waters (NMED/SWQB 2008a).

TOTAL MAXIMUM DAILY LOAD FOR *E.COLI* RIO GRANDE (NON-PUEBLO ALAMEDA TO ANGOSTURA DIVERSION)

New Mexico Standards Segment	Rio Grande Basin 20.6.4.106
Assessment Unit Identifier	Rio Grande (non-Pueblo Alameda to Angostura Diversion) NM-2105.1_00 (formerly NM-MRG3-30000)
Assessment Unit Length	11.66 miles
Parameters of Concern	*E.coli*
Designated Uses Affected	Secondary Contact
Geographic Location	Rio Grande-Albuquerque USGS Hydrologic Unit Code 13020203
Scope/size of Watershed	17, 006 square miles
Land Type	Arizona/New Mexico Plateau Ecoregion (22)
Land Use/Cover	Forest (94%), Barren/sand/clay (3%), Residential/commercial (1%), open water (1%)
Probable Sources	Avian Sources (waterfowl and/or other), Impervious Surface/Parking Lot Runoff, Municipal (Urbanized High Density Area), Municipal Point Source Discharges, On-site Treatment Systems (Septic Systems and Similar Decencentralized Systems), Source Unknown, Wastes from Pets.
Land Management	USFS (38%), Private (36%), BLM (10%), Pueblo (9%), State (4%)
IR Category	5/5C
Priority Ranking	High
TMDL for:	**WLA + LA + MOS = TMDL**
E.coli	
High	$3.15 \times 10^{11} + 4.93 \times 10^{12} + 2.77 \times 10^{11} = 5.54 \times 10^{12}$ cfu/100 mL/day
Moist	$9.11 \times 10^{10} + 1.43 \times 10^{12} + 3.26 \times 10^{12} = 8.06 \times 10^{10}$ cfu/100 mL/day
Dry	$3.26 \times 10^{10} + 5.10 \times 10^{11} + 1.15 \times 10^{12} = 2.92 \times 10^{10}$ cfu/100mL/day
Low	$1.68 \times 10^{10} + 2.63 \times 10^{11} + 7.93 \times 10^{9} = 2.96 \times 10^{9}$ cfu/100 mL/day

TOTAL MAXIMUM DAILY LOAD FOR *E.COLI* RIO GRANDE (ISLETA PUEBLO BOUNDARY TO ALAMEDA BRIDGE)

New Mexico Standards Segment	Rio Grande Basin 20.6.4.105
Assessment Unit Identifier	Rio Grande (Isleta Pueblo boundary to Alameda bridge) NM-2105_50 (formerly NM-MRG3-30000)
Assessment Unit Length	20.4 miles
Parameters of Concern	*E.coli*
Designated Uses Affected	Secondary Contact
Geographic Location	Rio Grande-Albuquerque USGS Hydrologic Unit Code 13020203
Scope/size of Watershed	17, 501 square miles
Land Type	Arizona/New Mexico Plateau Ecoregion (22)
Land Use/Cover	Forest (93%), Residential/commercial (3%), Barren/sand/clay (3%), Open water (1%)
Probable Sources	Avian Sources (waterfowl and/or other), Impervious Surface/Parking Lot Runoff, Municipal (Urbanized High Density Area), Municipal Point Source Discharges, On-site Treatment Systems (Septic Systems and Similar Decencentralized Systems), Source Unknown, Wastes from Pets.
Land Management	USFS (38%), Private (37%), BLM (10%), Pueblo (9%), State (4%)
IR Category	5/5B
Priority Ranking	High
TMDL for:	**WLA + LA + MOS = TMDL**
E.coli	
High	$5.08 \times 10^{11} + 3.36 \times 10^{12} + 1.40 \times 10^{12} = 5.27 \times 10^{12}$ cfu/100 mL/day
Moist	$2.28 \times 10^{11} + 8.41 \times 10^{11} + 5.77 \times 10^{11} = 1.65 \times 10^{12}$ cfu/100 mL/day
Mid-range	$1.98 \times 10^{11} + 5.66 \times 10^{11} + 1.38 \times 10^{11} = 9.03 \times 10^{11}$ cfu/100 mL/day
Dry	$1.58 \times 10^{11} + 2.09 \times 10^{11} + 2.10x\ 10^{11} = 5.77 \times 10^{11}$ cfu/100 mL/day
Low	$1.40 \times 10^{11} + 4.86 \times 10^{10} + 1.89 \times 10^{9} = 1.89 \times 10^{11}$ cfu/100 mL/day

TOTAL MAXIMUM DAILY LOAD FOR *E.COLI* RIO GRANDE (RIO PUERCO TO ISLETA PUEBLO BOUNDARY)

New Mexico Standards Segment	Rio Grande Basin 20.6.4.105
Assessment Unit Identifier	Rio Grande (Rio Puerco to Isleta Pueblo boundary) NM-2105_40 (formerly NM-MRG3-20000)
Assessment Unit Length	35.4 miles
Parameters of Concern	*E.coli*
Designated Uses Affected	Secondary Contact
Geographic Location	Rio Grande-Albuquerque USGS Hydrologic Unit Code 13020203
Scope/size of Watershed	18,841 square miles
Land Type	Arizona/New Mexico Plateau Ecoregion (22)
Land Use/Cover	Forest (92%), Barren/sand/clay (4%), Residential/commercial (3%), Open water (1%)
Probable Sources	Avian Sources (waterfowl and/or other), Impervious Surface/Parking Lot Runoff, Municipal (Urbanized High Density Area), Municipal Point Source Discharges, On-site Treatment Systems (Septic Systems and Similar Decencentralized Systems), Wastes from Pets.
Land Management	Private (39%), USFS (36%), Pueblo (10%), BLM (9%), State (4%)
IR Category	5
Priority Ranking	High
TMDL for:	**WLA + LA + MOS = TMDL**
E.coli	
High	$1.66 \times 10^{10} + 9.00 \times 10^{12} + 3.02 \times 10^{12} = 1.20 \times 10^{13}$ cfu/100 mL/day
Moist	$1.66 \times 10^{10} + 2.47 \times 10^{12} + 1.34 \times 10^{12} = 3.83 \times 10^{12}$ cfu/100 mL/day
Dry	$1.66 \times 10^{10} + 1.59 \times 10^{11} + 9.26 \times 10^{9} = 1.85 \times 10^{11}$ cfu/100 mL/day

TOTAL MAXIMUM DAILY LOAD FOR ALUMINUM AND *E.COLI*
RIO GRANDE (SAN MARCIAL AT USGS GAGE TO RIO PUERCO)

New Mexico Standards Segment	Rio Grande Basin 20.6.4.105
Assessment Unit Identifier	Rio Grande (San Marcial at USGS gage to Rio Puerco) NM-2105_10 (formerly NM-MRG3-10000)
Assessment Unit Length	59.39 miles
Parameters of Concern	Aluminum, *E.coli*
Designated Uses Affected	Marginal Warmwater Aquatic Life, Secondary Contact
Geographic Location	Rio Grande-Albuquerque USGS Hydrologic Unit Code 13020203
Scope/size of Watershed	27, 410 square miles
Land Type	Chihuahuan Desert Ecoregion (24)
Land Use/Cover	Forest (91%), Barren/sand/clay (5%), Residential/commercial (2%), Open water (1%)
Probable Sources	Avian Sources (waterfowl and/or other), Impervious Surface/Parking Lot Runoff, Municipal (Urbanized High Density Area), Municipal Point Source Discharges, Natural Sources, On-site Treatment Systems (Septic Systems and Similar Decencentralized Systems), Wastes from Pets.
Land Management	Private (37%), USFS (28%), Pueblo (15%), BLM (13%), State (5%)
IR Category	5
Priority Ranking	High
TMDL for:	**WLA + LA + MOS = TMDL**
Aluminum	
High	1.89 + 1171 + 558 = 1731 lbs/day
Dry	1.89 + 38.8 + 2.13 = 42.8 lbs/day
E.coli	
High	$6.21 \times 10^{9} + 7.72 \times 10^{12} + 3.67 \times 10^{12} = 1.14 \times 10^{13}$ cfu/100 mL/day
Moist	$6.21 \times 10^{9} + 2.16 \times 10^{12} + 1.23 \times 10^{12} = 3.40 \times 10^{12}$ cfu/100 mL/day
Mid-range	$6.21 \times 10^{9} + 1.10 \times 10^{12} + 5.56 \times 10^{11} = 1.66 \times 10^{12}$ cfu/100 mL/day
Dry	$6.21 \times 10^{9} + 2.61 \times 10^{11} + 1.40 \times 10^{10} = 2.81 \times 10^{11}$ cfu/100 mL/day

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1.0 INTRODUCTION

Under Section 303 of the Clean Water Act (CWA), states establish water quality standards, which are submitted and subject to approval of the U.S. Environmental Protection Agency (USEPA). Under Section 303(d)(1) of the CWA, states are required to develop a list of waters within a state that are impaired and establish a total maximum daily load (TMDL) for each pollutant. A TMDL is defined as "*a written plan and analysis established to ensure that a waterbody will attain and maintain water quality standards including consideration of existing pollutant loads and reasonably foreseeable increases in pollutant loads*" (USEPA 1999). A TMDL documents the amount of a pollutant a waterbody can assimilate without violating a state's or a tribe's water quality standards. It also allocates that load capacity to known point sources and nonpoint sources at a given flow. TMDLs are defined in 40 Code of Federal Regulations (CFR) Part 130 as the sum of the individual Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources and natural background conditions, and includes a margin of safety (MOS). This document provides TMDLs for assessment units within the Middle Rio Grande watershed that are impaired based on a comparison of measured concentrations with water quality criteria.

This document is divided into several sections. Section 2.0 provides background information on the location and history of the Middle Rio Grande watershed, provides applicable water quality standards for the assessment units addressed in this document, and briefly discusses the water quality survey conducted in the Middle Rio Grande in 2005. Section 3.0 presents the TMDLs developed for dissolved aluminum and Section 4.0 includes the *E.coli* TMDLs developed for the Middle Rio Grande watershed. Pursuant to Section 106(e)(1) of the Federal CWA, Section 5.0 provides a monitoring plan in which methods, systems, and procedures for data collection and analysis are discussed. Section 6.0 discusses implementation of TMDLs and the relationship between TMDLs and Watershed Restoration Action Strategies (WRAS). Section 7.0 discusses assurance, Section 8.0 public participation in the TMDL process, and Section 9.0 provides references.

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2.0 BACKGROUND

The Middle Rio Grande (MRG) watershed was sampled by the Surface Water Quality Bureau (SWQB) from March to October 2005. The Middle Rio Grande Basin includes the Rio Grande from San Marcial to Angostura Diversion. Surface water quality monitoring stations were selected to characterize water quality of the stream reaches. The SWQB has divided the MRG into four assessment units (AU) and all four AUs are addressed with TMDLs in this document. The 2005 MRG Tributary study also identified other potential water quality impairments in this watershed which are not addressed in this document. The results of water quality assessments performed following the MRG tributary survey are available on the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List. Subsequent TMDLs will be prepared in the near future in a separate TMDL document. SWQB developed fecal coliform TMDLs for the Rio Grande from the Isleta Pueblo boundary to Angostura Diversion in 2001 (NMED/SWQB, 2001). The *E.coli* TMDLs discussed in this document were developed to reflect the changes in the State of New Mexico Water Quality Standards from fecal coliform to *E.coli*.

2.1 Description and Land Ownership

The Rio Grande drainage extends from the southern Colorado Rockies and enters into New Mexico just north of the Rio Grande Gorge. The Middle Rio Grande watershed (US Geological Survey [USGS] Hydrologic Unit Code [HUC] 13020203) is located in Sandoval, Bernalillo, Valencia, and Socorro Counties in central New Mexico (NM).

The Rio Grande-Albuquerque HUC (13020203) covers approximately 3,204 square miles (mi^2) in central New Mexico (NM). Land use for the 13020203 HUC includes 57% shrubland, 24% grassland, 9% forest, 5% residential/commercial, 2% pasture/hay crops, and 2% barren rock/quarries (Figure 2.1). Land ownership for the 13020203 HUC is 52% private, 12% BLM, 9% USFS, 10% FWS, 10% Pueblo, 5% State, and 2% Department of Defense (Figure 2.2). The values listed in the Executive Summary describe the individual Assessment Unit watersheds.

Twenty-three river water quality sites and five drain and arroyo sites were sampled during this survey (Figures 2.1 through 2.3). Table 2.2 details location descriptions of sampling stations in each assessment unit (AU), station numbers, and STORET identification codes.

Natural Heritage New Mexico is a division of the Museum of Southwestern Biology at the University of New Mexico. The organization stores and retrieves data and maps of the distribution of plants and animals throughout New Mexico. Data from the Natural Heritage New Mexico website was used in the development of Table 2.1 which displays the state and federally listed endangered and threatened species within the HUC discussed in this TMDL.

2.2 History and Geology

The Rio Grande drainage extends from the southern Colorado Rockies through New Mexico and Texas where it finally reaches the Gulf of Mexico at sea level. Native American communities, including Pueblo, Navajo, and Apache groups have occupied the region since the early 1300's. Since early Spanish occupancy, the basin has experienced irrigated farming, grazing, fire suppression, and intensive hunting and along with the introduction of exotic plants, droughts, and floods the valley has undergone drastic changes since pre-colonial times (Scurlock, 1998). The acequia system of southern Colorado and northcentral New Mexico is the oldest, continuously operated water management system in the United States. The first acequias were established when Oñate established the first Spanish colony in New Mexico in 1598 (Rivera, 1999). Spanish settlements eventually extended down river to Cochiti and as far south as Socorro. Missions reached the Bernalillo to Isleta Pueblo reach of the Rio Grande by the mid-1620's. The Spanish providence in New Mexico was divided into two administrative units, the lower reach between Cochiti and Socorro was named Rio Abajo (Scurlock, 1998). Spanish land grants were issued in the late 1700's through the early 1800's and the farming and grazing that occurred on these land grants continue to be an important part of the cultural identity of the basin. The first non-Spanish Europeans in the Rio Grande valley were French trappers from the Mississippi Valley who came during the 18th and early 19th centuries. (Scurlock, 1998). The Santa Fe Trail was eventually established and linked up the with Camino Real that followed the Rio Grande into Mexico. Settlements in the Rio Grande Valley continued as the railroad was established in the region. The Middle Rio Grande Valley currently supports diverse land uses, from agriculture to the largest municipality in the state (Albuquerque, est 1706).

The MRG basin is primarily comprised of alluvial deposits, specifically the Quemado Formation and Upper Santa Fe Group (Figure 2.3). A number of gypsum mines operate in the basin below Cochiti Reservoir. Both the Ortiz and San Pedro Mountains in the Rio Grande basin contain Tertiary volcanic intrusions that pushed up on the east side of the Rio Grande Rift. An noteworthy result of this intrusions was the formation of turquoise, which has been mined in the area as early as 900 A.D. (Chronic, 1987). Gold, silver, anthracite coal, and lead were later mined in the mountains in the MRG basin. The 20-mile long Sandia Mountains flank the east side of Albuquerque. The Sandia Mountains are comprised of 1.4 billion year old Precambrian granite covered in 300-million year old Pennsylvanian sedimentary rocks and reach to over 10,000 feet in elevation (Chronic, 1987). South of the Sandia Mountains are the Manzano Mountains which are also fault block mountains. The Albuquerque volcanoes, west of the city, were last active in the Pleistocene Era and similar volcanoes exist south of Albuquerque near Isleta. Throughout this area, the Rio Grande Rift is much deeper than it seems and is filled with thousands of feet of alluvial deposits. The Albuquerque-Belen basin extends south of Albuquerque and is comprised of similar alluvial terraces as in the Albuquerque area. Small volcanoes also continue south of Albuquerque and include Sierra Lucero and Ladrone Peak (Chronic, 1987). The Rio Grande floodplain is broad and marshy downstream of the Rio Puerco and is the seasonal home to migratory birds. The floodplain is marshy near Socorro due to the Socorro Constriction from the surrounding mountain ranges. The Lemitar Mountains, southwest of the convergence of the Rio Salado with the Rio Grande, consist of a series of Precambrian and Paleozoic rocks. The southernmost end of this range consists of Tertiary lava flows that overlay the Paleozoic sedimentary rocks (Chronic, 1987). The mountains downstream of the Lemitar

Mountains include the Los Piños Mountains and the Socorro Mountains. The former is primarily Pennsylvanian and Permian sedimentary rocks and the latter is comprised of volcanic rocks from a former caldera. Continuing southward along the Rio Grande valley are the Magdalena, San Mateo, and Mimbres Mountains. Continuing southward along the Rio Grande valley to Elephant Butte Reservoir, the rocks to the west of the river continue to be volcanic.

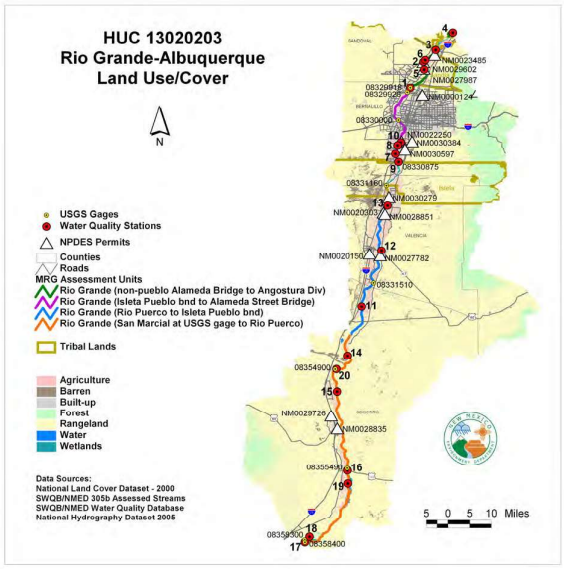

Figure 2.1 Middle Rio Grande Watershed Land Use/Land Cover

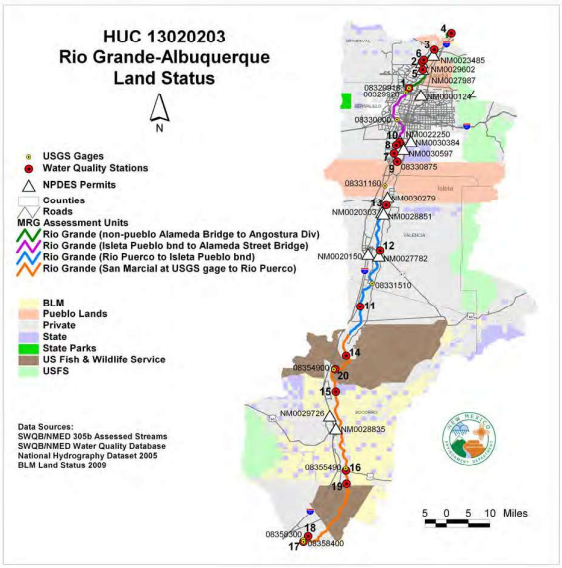

Figure 2.2 Middle Rio Grande Watershed Land Ownership

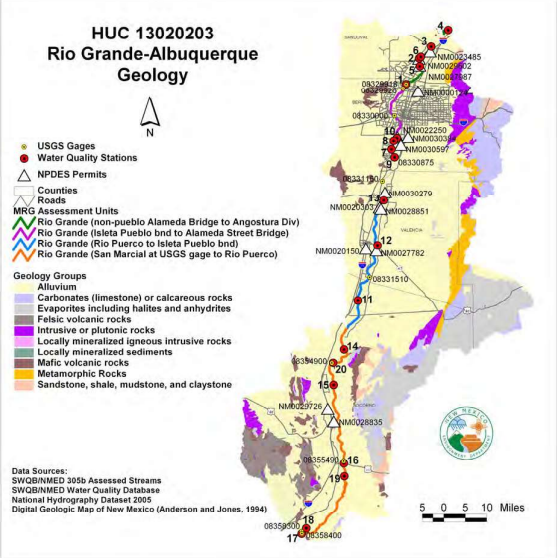

Figure 2.3 Middle Rio Grande Watershed Geology

Table 2.1 State and Federally Listed Endangered and Threatened Species

HUC	Common Name	Scientific Name	Status
13020203	Chupadera Springsnail	*Pyrgulopsis chupaderae*	C, E
13020203	Socorro Isopod	*Thermosphaeroma thermophilum*	LE, E
13020203	Socorro Springsnail	*Pyrgulopsis neomexicana*	LE, E
13020203	Rio Grande Silvery Minnow	*Hybognathus amarus*	LE, E
13020203	Bald Eagle	*Haliaeetus leucocephalus*	T
13020203	Common Black-Hawk	*Buteogallus anthracinus*	T
13020203	Piping Plover	*Charadrius melodus*	LE, LT, T
13020203	Western Yellow-billed Cuckoo	*Coccyzus americanus occidentalis*	C
13020203	Whooping Crane	*Grus americana*	LE, XN, E
13020203	Mexican Spotted Owl	*Strix occidentalis lucida*	LT
13020203	Southwestern Willow Flycatcher	*Empidonax traillii extimus*	LE, E
13020203	Bell's Vireo	*Vireo bellii*	T
13020203	Gray Vireo	*Vireo vicinior*	T
13020203	New Mexican Jumping Mouse	*Zapus hudsonius luteus*	E
13020203	Spotted Bat	*Euderma maculatum*	T

Notes:
C = Candidate taxa for which the USFWS has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species.
E = State of New Mexico-endangered status.
LE = Federally listed endangered species.
LT = Federally listed threatened species.
T = State of New Mexico-threatened status.
XN = nonessential experimental population

2.3 Water Quality Standards

The EPA-approved water quality standards (WQS) currently applicable to the Rio Grande are set forth in the following section of *New Mexico Standards for Interstate and Intrastate Surface Waters* (20.6.4 NMAC), effective August 2007:

20.6.4.105 RIO GRANDE BASIN - The main stem of the Rio Grande from the headwaters of Elephant Butte reservoir upstream to Alameda bridge (Corrales bridge) and intermittent water below the perennial reaches of the Rio Puerco that enters the main stem of the Rio Grande.

A. Designated Uses: irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat and secondary contact.

B. Applicable Criteria:
(1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the designated uses listed above in Subsection A of this section.
(2) The monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less; single sample 410 cfu/100 mL or less (see Subsection B of 20.6.4.14 NMAC).

20.6.4.106 RIO GRANDE BASIN - The main stem of the Rio Grande from Alameda bridge (Corrales bridge) upstream to the Angostura diversion works and intermittent water in the Jemez river below the Jemez pueblo boundary that enters the main stem of the Rio Grande.

A. Designated Uses: irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat and secondary contact.

B. Applicable Criteria:
(1) The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the designated uses listed above in Subsection A of this section.
(2) The monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less; single sample 410 cfu/100 mL or less (see Subsection B of 20.6.4.14 NMAC).

20.6.4.900 NMAC provides standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC. 20.6.4.13 NMAC lists general criteria that apply to all surface waters of the state at all times, unless a specified criterion is provided elsewhere in 20.6.4 NMAC.

Additionally, both the Pueblo of Sandia and the Pueblo of Isleta have standards for the Rio Grande that are applicable to tribal waters within the watershed discussed in this document. Section V, Part A of the Pueblo of Sandia Water Quality Standards (Pueblo of Sandia, 2008) reads:

A. The uses and standards are as follows for the segment of the Rio Grande that passes through the PUEBLO OF SANDIA Reservation, from a northernmost point located in Township 13 North, Range 4 East, Section 31, Southeast Quarter of the Northwest Quarter of the Southeast Quarter, to a southernmost point located in Township 11 North, Range 3 East, Section 3, Northeast Quarter of the Northwest Quarter of the Southwest Quarter, and the following waterways: Albuquerque Main Canal, Bernalillo Acequia, Corrales Main Canal, Sandia Acequia and Wasteway, Alameda Lateral, Bosque Lateral No. 2, and Sandia Lateral No. 2 (Station 426+00 at Albuquerque Main Canal).

Section V, Part A.2 (Pueblo of Sandia, 2008) lists the standard for E.coli as follows:

c. Escherichia coli

1. geometric mean maximum: 47 colonies/100 ml

2. single sample maximum of 88 colonies/100 ml, in accordance with an illness rate of 4 per 1,000 exposures

Likewise, Section V of the Pueblo of Isleta Water Quality Standards (Pueblo of Isleta, 2002) reads:

A. The designated uses are as follows for the segment of the Rio Grande that passes through the PUEBLO OF ISLETA Reservation, from a northernmost point located in Township 8 North, Range 2 East, Section 1, Southwest Quarter, approximately ¼ mile south of the I-25 overpass over the Rio Grande, to a southernmost point located in Township 7 North, Range 2 East, Section 15, Northeast Quarter, approximately two miles north of the State Road 49 bridge over the Rio Grande, including all tributaries thereof, except for water bodies such as Drains, that are especially designated in this Section (Section V):

1. Uses:

a. Warmwater fishery use
b. Primary contact ceremonial use
c. Primary contact recreational use
d. Agricultural water supply use
e. Industrial water supply use
f. Wildlife usage

The applicable WQS specific to both the Primary Contact Ceremonial Use and the Primary Contact Recreational Use are listed in Section IV, Parts D and E as follows:

a) Bacteria

- *Geometric mean maximum Escherichia coli (E.coli): 47 per 100 mL (geometric mean calculation based on a minimum of five samples taken over a maximum of 30 days)*
- *Single sample maximum: 88 colonies/100 mL.*

The appropriate tribal WQS will be used in the TMDL calculations in this document (Section 3.1 and Section 4.1). Assessment Units that are upstream of water with Tribal jurisdiction will have TMDLs calculated based on the Tribal, rather than the State, WQS. The regulations in 40 CFR §131.10(b) require the development of the TMDL using the Tribal standards in order to be protective of the downstream standards. The regulations in 40 CFR §122.4(d) require allocations and effluent limits to be developed using the Tribal standards in order to be protective of the downstream waters.

2.4 Water Quality Sampling

The Middle Rio Grande watershed was sampled by the SWQB in 2005. A brief summary of the survey and the hydrologic conditions during the sample period is provided in the following subsections. A more detailed description of the Middle Rio Grande survey can be found in *Water Quality Monitoring of the Middle Rio Grande: 2000-2007* (NMED/SWQB 2009b). Survey summary reports are also available by contacting SWQB at 505-827-0187 or by emailing the contacts listed on the SWQB website at http://www.nmenv.state.nm.us/swqb.

2.4.1 Survey Design

Surface water quality samples were collected monthly between March and October during the 2005 SWQB study. Surface water quality monitoring stations were selected to characterize water quality of various assessment units (i.e., stream reaches) throughout the watershed (Table 2.2, Figures 2.1 through 2.3). Stations were located to evaluate the impact of tributary streams and to determine ambient and background water quality conditions. Surface water grab and composite samples were analyzed for a variety of chemical/physical parameters. Data from grab samples and field measurements are housed in the SWQB provisional water quality database and were uploaded to USEPA's Storage and Retrieval (STORET) database.

Table 2.2 SWQB 2005 Middle Rio Grande Sampling Stations

Site Number	Assessment Unit	STORET ID	Station Description
1	Rio Grande (non-Pueblo Alameda to Angostura Diversion)	32RGrand445.4	Rio Grande above Alameda Bridge [a, c, t]
2		32RGrand458.0	Rio Grande above Rio Rancho WWTF #3
3		32RGrand464.2	Rio Grande abv Hwy 550 Bridge [a]
4		30RGrand473.7	Rio Grande Below Angostura Diversion Works [c]
5		32RGrand455.0	Rio Grande blw RR WWTF #2 [c]
6		32RGrand458.9	Rio Grande on Sandia Pueblo [b]
NM0023485		NM0023485	Bernalillo WWTP effluent
NM0027987		NM0027987	Rio Rancho #2 WWTP
7	Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge)	32RGrand419.7	Rio Grande @ Los Padillas [a, t]
8		32RGrand416.5	Rio Grande @ Los Padillas [d]
9		32RGrand413.2	Rio Grande @ I-25 Bridge [d]
10		32RGrand421.2	Rio Grande blw Abq WWTF [d]
NM0022250		NM0022250	Albuquerque WWTP effluent
11	Rio Grande (Rio Puerco to Isleta Pueblo bnd)	32RGrand361.7	Rio Grande @ Abeytas [s, t]
12		32RGrand385.5	Rio Grande at Belen (309 Bridge) [a, c]
13		32RGrand394.8	Rio Grande at Hwy 6 at Los Lunas, NM [a, c, t]
NM0020150		NM0020150	Belen WWTP effluent
NM0030279		NM0030279	Bosque Farms WWTP effluent
NM0020303		NM0020303	Los Lunas WWTP effluent
14	Rio Grande (San Marcial at USGS gage to Rio Puerco)	32RGrand341.2	Rio Grande @ La Joya [c, t]
15		32RGrand323.4	Rio Grande @ Lemitar [c]
16		32RGrand292.1	Rio Grande at San Antonio [a, c, t]
17		32RGrand258.0	Rio Grande at USGS gage near San Marcial [1]
18		32RGrand261.0	Rio Grande Conveyance Channel at San Marcial near USGS gage 0858300
19		32RGrand286.9	Rio Grande @ Bosque del Apache [d]
20		32RGrand332.5	Rio Grande at San Acacia above diversion dam [d]
NM0028835		NM0028835	Socorro WWTP effluent

[a] Grab and composite samples collected throughout 2005
[b] EMAP site
[c] SWQB MRG (2005) and BoR (2006-2007) grant site
[d] SWQB MRG BoR (2006-2007) grant site only
[s] Sonde deployed
[t] Water thermograph deployed

All sampling and assessment techniques used during the 2005 SWQB survey are detailed in the *Quality Assurance Project Plan* (QAPP) (NMED/SWQB 2009a) and assessment protocols (NMED/SWQB 2008b) both of which are available online or may be obtained by contacting the SWQB at 505-827-0187. As a result of the 2005 SWQB monitoring effort, several impairments were identified. Accordingly, these impairments were added to the 2008-2010 Integrated CWA §303 (d)/305(b) list (NMED/SWQB 2008a).

2.4.2 Hydrologic Conditions

There are 69 U.S. Geological Survey (USGS) gaging stations in the 13020203 HUC watershed. The real-time, active USGS gages on the Rio Grande in the 13020203 HUC are listed in Table 2.3. Tables 2.4-2.7 display the mean daily streamflow for the 4 USGS gages used in the TMDL calculations.

The Flood Control Act of 1948 established the MRG Project which authorized the Bureau of Reclamation to perform maintenance on the river channel and the Low Flow Conveyance Channel (LFCC). The initial work on the MRG Project in the 1950's and 1960's consisted of the construction of the LFCC between San Acacia Diversion Dam and Elephant Butte Reservoir. (USBR, 2007). The LFCC was constructed to reduce seepage losses as water moved downstream to Elephant Butte Reservoir. After 1959, most of the water from the Rio Grande was diverted to the LFCC at the San Acacia Diversion Dam and travelled 75 miles downstream to the head of Elephant Butte Reservoir (Price *et al*, 2007). The LFCC parallels the Rio Grande and serves as an riverside drain. (MRGESCP, 2004). During the irrigation season, the Rio Grande is intermittent in this reach. The March 2003 Biological Opinion specifies that the Bureau of Reclamation will pump water from the LFCC into the Rio Grande when intermittency is likely and these pumping actions are subject to permits from the Office of the State Engineer (MRGESCP, 2004).

The 2005 SWQB survey was performed over varying flow conditions from March to October. As stated in the Assessment Protocol (NMED/SWQB 2008b), data collected during all flow conditions, including low flow conditions (i.e., flows below the 4-day, 3-year low flow frequency [4Q3]), will be used to determine attainment status of designated or existing uses. In terms of assessing designated use attainment in ambient surface waters, WQS apply at all times under all flow conditions, unless the WQS specify a qualifier.

Table 2.3: Active real-time USGS gages on Rio Grande in HUC 13020203

Gage Number	Gage Name	Period of Record [1]	4Q3* (cfs)
08317400	Rio Grande below Cochiti Dam, NM	1974-2008	148
08329918	Rio Grande at Alameda Bridge at Alameda, NM	2003-2008	233
08329928	Rio Grande near Alameda, NM	1989-2008	191
08330000	Rio Grande at Albuquerque, NM	1942-2008	72.3
08330875	Rio Grande at Isleta Lakes near Isleta, NM	2002-2008	147
08331160	Rio Grande near Bosque Farms, NM	2006-2008	n/a
08331510	Rio Grande at State Hwy 346 near Bosque, NM	2005-2008	n/a
08354900	Rio Grande Floodway at San Acacia, NM	1958-2008	2.90
08355490	Rio Grande above US Hwy 380 near San Antonio, NM	2005-2008	n/a
08358400	Rio Grande Floodway at San Marcial, NM	1949-2008	0
08358300	Rio Grande Conveyance Channel at San Marcial, NM [2]	1951-2008	6.20

* 4Q3 calculated using USGS flow data and DFlow 3.1b software
[1] Impoundment of the Rio Grande behind Cochiti Reservoir began in 1973. The 4Q3 was calculated for the period of record beginning in 1974.
[2] Conveyance channel is managed by U.S. Bureau of Reclamation and is a diversion of the Rio Grande.
n/a = not available due to limited flow data

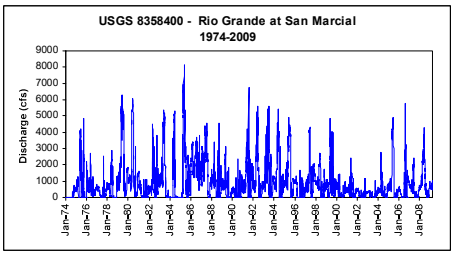

Figure 2.4 Daily Mean Streamflow: USGS 08358400 - Rio Grande at San Marcial

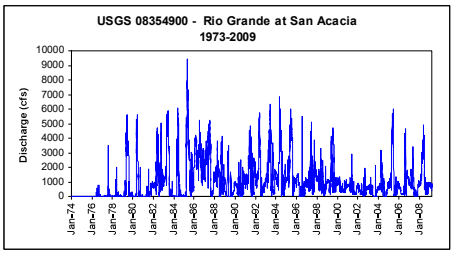

Figure 2.5 Daily Mean Streamflow: USGS 08354900 - Rio Grande at San Acacia

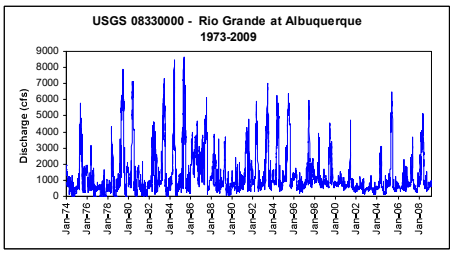

Figure 2.6 Daily Mean Streamflow: USGS 08330000 - Rio Grande at Albuquerque

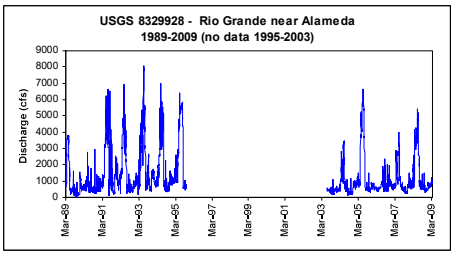

Figure 2.7 Daily Mean Streamflow: USGS 08329928 - Rio Grande near Alameda

3.0 ALUMINUM

Assessment of the data from the 2005 SWQB intensive water quality survey as well as other data collection efforts in the Middle Rio Grande watershed identified several exceedences of the New Mexico water quality standards for dissolved aluminum in Rio Grande (San Marcial at USGS gage to Rio Puerco). Consequently, this AU was listed on the 2008-2010 Integrated CWA §303(d)/§305(b) List (NMED/SWQB 2008a) for aluminum.

3.1 Target Loading Capacity

Target values for these aluminum TMDLs will be determined based on 1) the presence of numeric criteria 2) the degree of experience in applying the criterion, and 3) the ability to easily monitor and produce quantifiable and reproducible results. This TMDL is also consistent with New Mexico's antidegradation policy.

According to the New Mexico water quality standards (20.6.4.900 NMAC), the dissolved aluminum chronic criterion is 0.087 mg/L and the dissolved aluminum acute criterion is 0.75 mg/L for aquatic life uses. Of the values assessed for the 2008-2010 Integrated CWA §303(d)/§305(b) List, the chronic criterion was exceeded 4 of 8 times on the Rio Grande (San Marcial at USGS gage to Rio Puerco) AU. These exceedences are presented in Appendix C and Figure 3.2. The determination of these impairments was based on the application of the Assessment Protocol (NMED/SWQB 2008b). The samples that were not spatially or temporally independent were averaged and the Assessment Protocols were then applied to the averaged value.

High chronic levels of dissolved aluminum can be toxic to fish, benthic invertebrates, and some single-celled plants. Aluminum concentrations from 0.100-0.300 mg/L increase mortality, retard growth, gonadal development and egg production of fish (http://www.bae.ncsu.edu/programs/extension/wqg/). High acute levels of dissolved aluminum can be especially detrimental to aquatic life increasing mortality rates for many species of fish and macroinvertebrates.

3.2 Flow

Flow duration curve analysis looks at the cumulative frequency of historic flow data over a specified period. A flow duration curve relates flow values to the percent of time those values have been met or exceeded. The use of *"percent of time"* provides a uniform scale ranging between 0 and 100. Thus, the full range of stream flows is considered. Low flows are exceeded a majority of the time, while floods are exceeded infrequently (USEPA, 2007).

A basic flow duration curve runs from high to low along the x-axis. The x-axis represents the duration amount, or *"percent of time"*, as in a cumulative frequency distribution. The y-axis represents the flow value (e.g., cubic feet per second) associated with that *"percent of time"* (or duration). Flow duration curve development typically uses daily average discharge rates, which are sorted from the highest value to the lowest (Figures 3.1 and 3.2). Using this convention,

flow duration intervals are expressed as a percentage, with zero corresponding to the highest stream discharge in the record (i.e., flood conditions) and 100 to the lowest (i.e., drought conditions). Thus, a flow duration interval of sixty associated with a stream discharge of 357 cubic feet per second (cfs) implies that sixty percent of all observed daily average stream discharge values equal or exceed 357 cfs (Figure 3.1). It should be noted that impoundment of water in Cochiti Reservoir began in 1973. The flow regime of the Rio Grande changed significantly following the construction of this reservoir, therefore, flow data available before 1974 were not used in this analysis.

Duration curve analysis identifies intervals, which can be used as a general indicator of hydrologic condition (i.e., wet versus dry and to what degree). Flow duration curve intervals can be grouped into several broad categories or zones. These zones provide additional insight about conditions and patterns associated with the impairment. A common way to look at the duration curve is by dividing it into five zones, as illustrated in Figures 3.1 and 3.2: one representing *high flows (0-10%)*, another for *moist conditions (10-40%)*, one covering *mid-range flows (40-60%)*, another for *dry conditions (60-90%)*, and one representing *low flows (90-100%)* (Cleland 2003). This particular approach places the midpoints of the moist, mid-range, and dry zones at the 25th, 50th, and 75th percentiles respectively (i.e., the quartiles). The high zone is centered at the 5th percentile, while the low zone is centered at the 95th percentile.

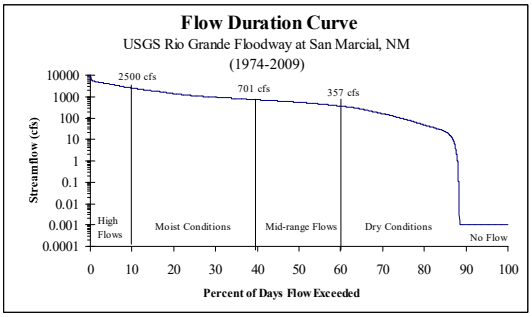

Figure 3.1 USGS 08358400 Rio Grande Floodway at San Marcial, NM (1974-2009)

The use of duration curves provides a technical framework for identifying *"daily loads"* in TMDL development, which accounts for the variable nature of water quality associated with different stream flow rates. Specifically, a maximum daily concentration limit can be used with basic hydrology and a duration curve to identify a TMDL that covers the full range of flow conditions. With this approach, ambient water quality data, taken with some measure or estimate

of flow at the time of sampling, can be used to compute an instantaneous load. Using the relative percent exceedence from the flow duration curve that corresponds to the stream discharge at the time the water quality sample was taken, the computed load can be plotted in a duration curve format (Figure 3.2).

By displaying instantaneous loads calculated from ambient water quality data and the daily average flow on the date of the sample (expressed as a flow duration curve interval), a pattern develops, which describes the characteristics of the water quality impairment. Loads that plot above the curve indicate an exceedence of the water quality criterion (chronic dissolved aluminum in this case), while those below the load duration curve show compliance. The pattern of impairment can be examined to see if it occurs across all flow conditions, corresponds strictly to high flow events, or conversely, only to low flows. Impairments observed in the low flow zone typically indicate the influence of point sources, while those further left generally reflect probable nonpoint source contributions. This concept is illustrated in Figure 3.2.

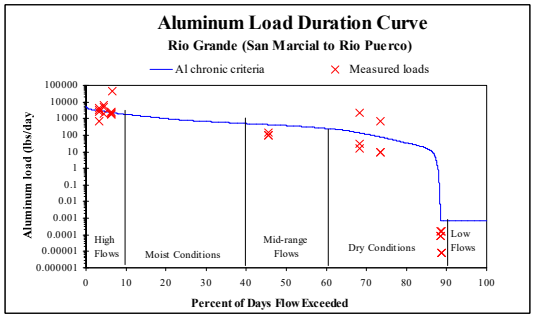

Figure 3.2 Aluminum Load Duration Curve – Rio Grande (San Marcial to Rio Puerco)

It is important to remember that the TMDL itself is a value calculated at a defined critical condition, and is calculated as part of planning processes designed to achieve water quality standards. Since flows vary throughout the year in these systems, the actual load at any given time will vary based on the changing flow. Management of the load to improve stream water quality should be a goal to be attained.

3.3 Calculations

A target load for dissolved aluminum is calculated based on a flow, the current water quality criterion, and a conversion factor (8.34) that is used to convert mg/L units to lbs/day (see Appendix A for Conversion factor derivation). The critical flow was converted from cfs to million gallons per day using **Equation 1**. The target loading capacity is calculated using **Equation 2**. The results are shown in Table 3.1.

$$flow\frac{ft^3}{\sec}\times 1{,}728\frac{in^3}{ft^3}\times 0.004329\frac{gal}{in^3}\times 86{,}400\frac{\sec}{day}\times 10^{-6}\,MG/gal = flow(MGD) \quad (Eq.\ 1)$$

Critical flow (MGD) x Criterion (mg/L) x 8.34 = Target Loading Capacity (Eq. 2)

Under the duration curve framework, the loading capacity is essentially the curve itself. The loading capacity, which sets the target load on any given day, is determined by the flow on the particular day of interest. However, a continuous curve that represents the loading capacity has some logistical drawbacks. It is often easier to communicate information with a set of fixed targets. Critical points along the curve can be used as an alternative method to quantify the loading capacity, such as the mid-point of each hydrologic zone (e.g., the 5th, 25th, 50th, 75th, and 95th percentiles). A unique loading capacity for each hydrologic zone allows the TMDL to reflect changes in dominant watershed processes that may occur under different flow regimes. The target loads (TMDLs) predicted to attain current standards were calculated using **Equation 1** and are shown in Table 3.1.

Table 3.1 Calculation of Target Loads: Rio Grande (San Marcial at to Rio Puerco)

	FLOW CONDITIONS				
	High	**Moist**[b]	**Mid-Range**[b]	**Dry**	**Low**[b]
Chronic dissolved aluminum criteria	0.087	-	-	0.087	-
Mid-point Flow (mgd)	2385	-	-	59	-
Conversion Factor[a]	8.34	-	-	8.34	-
TMDL	**1731 lbs/day**	**-**	**-**	**42.8 lbs/day**	**-**

a) Conversion factor is based on Equation 1.
b) There are no TMDL calculations for Moist, Mid-Range, or Low flow conditions because there were no observed exceedences during these flow regimes (refer to Figure 3.2).

It is important to remember that the TMDL is a planning tool to be used to achieve water quality standards. Since flows vary throughout the year in these systems the target load will vary based on the changing flow. Management of the load to improve stream water quality and meet water quality criteria should be a goal to be attained. Meeting the calculated TMDL may be a difficult objective.

3.4 Waste Load Allocations and Load Allocations

3.4.1 Waste Load Allocation

There are two NPDES permitted discharges in the Rio Grande (San Marcial at USGS gage to Rio Puerco) AU. The City of Socorro Wastewater Treatment Plant (WWTP) (NM0028835, December 31, 2009 expiration) discharges into the Luis Lopez Drain, thence to Socorro Riverside Drain, thence to the Rio Grande in Water Quality Standards Segment 20.6.4.105. The NPDES permit does not have a limit for aluminum. A final effluent sample was collected in February 2004 as part of the permit renewal process. This sample yielded a dissolved aluminum concentration of 0.023 mg/L which is below the chronic dissolved aluminum criteria of 0.087 mg/L. The current permit uses 1.3 mgd as the design flow. The permit application describes the periodic discharge from the WWTP as occurring for 25 minutes with an average flow of 0.037 mgd per discharge and an average daily flow rate as 0.66 mgd. A WLA will be assigned based on design flow and the chronic water quality standard for dissolved aluminum from 20.6.4.900 NMAC and is discussed further in Table 3.2.

The New Mexico Firefighters Training Academy (NM0029726) discharges into Dry Arroyo, then Diversion Channel, and finally to the Rio Grande in Segment 20.6.4.105. NM0029726 likewise does not have a permit limit for aluminum. The permit effective July 1, 2009 (June 30, 2014 expiration) does not have a permit requirement for aluminum. However, according to the draft permit from EPA R6, "because analytical result of aluminum was not reported with the 2004 application, a monitoring requirement of dissolved aluminum is established." Dissolved aluminum samples collected from the ponds in April 2009 showed maximum results of 0.022 mg/L. On-site lagoons will be drained of approximately 1.3 million gallons at 3 to 5 year intervals to allow for silt removal. In order to be conservative, a WLA will be assigned and is further discussed in Table 3.2.

SWQB recognizes the TMDL provides a WLA for dissolved aluminum, but permits are required to include a limit for total aluminum. The Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico (2009) states:

> *"Monitoring requirements in permits can be expressed in the dissolved form, but limitations must be expressed in the total recoverable form, per the requirements of 40 CFR 122.45(c). When a limitation is required, or when the only effluent or ambient data available is in the total recoverable form, a 1:1 conversion to the dissolved form will be made for water quality screens. The reverse process will be made to obtain a limitation in the total recoverable form. During the permit development or the public participation process of the permit, the permittee shall be allowed the opportunity to submit data in the dissolved form for a water quality screening directly with numeric criteria in the proper form."*

The TMDL document presents WLA values for dissolved aluminum that are protective of the NM WQS for chronic aquatic life as applicable to NMAC 20.6.4.105. SWQB anticipates the

facilities will monitor both dissolved and total aluminum in order to produce a relationship between the two constituents.

There are no Municipal Separate Storm Sewer System (MS4) storm water permits in this Assessment Unit. Sediment may be a component of some industrial and construction storm water discharges covered under General NPDES Permits, so the load from these discharges should be addressed. In contrast to discharges from other industrial storm water and individual process wastewater permitted facilities, storm water discharges from construction activities are transient because they occur mainly during the construction itself, and then only during storm events. Coverage under the NPDES construction general storm water permit (CGP) for construction sites greater than one acre requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) that includes identification and control of all pollutants associated with the construction activities to minimize impacts to water quality. In addition, the current CGP also includes state specific requirements that the SWPPP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion, and sediment control best management practices (BMPs) and/or other controls that are designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure that applicable standards in 20.6.4 NMAC, including the antidegradation policy, or WLAs are met. In this case, compliance with a SWPPP that meets the requirements of the CGP is generally assumed to be consistent with this TMDL.

Other industrial storm water facilities are generally covered under the current NPDES Multi-Sector General Storm Water Permit (MSGP). This permit also requires preparation of an SWPPP that includes identification and control of all pollutants associated with the industrial activities to minimize impacts to water quality. In this case, compliance with a SWPPP that meets the requirements of the MSGP is generally assumed to be consistent with this TMDL.

Individual wasteload allocations for the General Permits were not possible to calculate at this time in this watershed using available tools. Loads that are in compliance with the General Permits from facilities covered are therefore currently calculated as part of the watershed load allocation.

3.4.2 Load Allocation

In order to calculate the LA, the WLAs listed in Table 3.2 and the MOS were subtracted from the target capacity (TMDL), as shown below in **Equation 3**.

$$WLA + LA + MOS = TMDL \qquad (Eq.\ 3)$$
$$In\ other\ words,\ LA = TMDL - WLA - MOS$$

The MOS was developed using a combination of conservative assumptions and explicit recognition of potential errors (see Section 3.7 for details). Results are presented in Table 3.4

Table 3.2 TMDLs for Dissolved Aluminum: Rio Grande (San Marcial to Rio Puerco)

	FLOW CONDITIONS				
	High	**Moist**	**Mid-Range**	**Dry**	**Low**
TMDL	**1731 lbs/day**	**-**	**-**	**42.8 lbs/day**	**-**
NM0028835 [b]	0.943	-	-	0.943	-
NM0029726 [b]	0.943	-	-	0.943	-
Total Waste Load Allocation	**1.89**	**-**	**-**	**1.89**	**-**
Load Allocation	**1171**	**-**	**-**	**38.8**	**-**
Margin of Safety	**558**	**-**	**-**	**2.13**	**-**

a) There are no TMDL calculations for Moist, Mid-Range, or Low flow conditions because there were no observed exceedences during these flow regimes (refer to Figure 3.2).
b) WLA calculated as WQS x design flow x 8.34.

The extensive data collection and analyses necessary to determine background aluminum loads for the Middle Rio Grande watershed were beyond the resources available for this study. It is therefore assumed that a portion of the load allocation is made up of natural background loads.

3.5 Identification and Description of Pollutant Source(s)

Probable nonpoint sources that may be contributing to the observed load are displayed in Table 3.3:

Table 3.3 Pollutant source summary for Aluminum

Pollutant Sources	Magnitude	Location	Probable Sources[a]
Point: [b]	1.89 lbs/day [c]	Rio Grande (San Marcial at USGS Gage to Rio Puerco)	Municipal Point Source Discharges
Nonpoint:		Rio Grande (San Marcial at USGS Gage to Rio Puerco)	Avian Sources (waterfowl and/or other), Impervious Surface/Parking Lot Runoff, Municipal (Urbanized High Density Area), Natural Sources, On-site Treatment Systems (Septic Systems and Similar Decencentralized Systems), Wastes from Pets.

Notes:
(a) From the 2008-2010 Integrated CWA 303(d)/305(b) list (NMED/SWQB 2008a). This list of probable sources for all impairments is based on staff observation and known land use activities in the watershed. These sources are not confirmed or quantified at this time.
(b) Current probable point source contributions (based on WLA in Table 3.2).
(c) *Based on NPDES permit values.*

3.6 Linkage of Water Quality and Pollutant Sources

SWQB fieldwork includes an assessment of the potential sources of impairment. The Pollutant Source(s) Documentation Summary provides a visual analysis of probable sources along an impaired reach. Although this procedure is subjective, SWQB feels that it provides the best available information for the identification of potential sources of impairment in this watershed. Staff completing these forms identify probable sources of nonpoint source impairments along each reach as determined by field reconnaissance. It is important to consider not only the land directly adjacent to the stream, but also to consider upland and upstream areas in a more holistic watershed approach to implementing these TMDLs.

In general, increased metals in the water column can commonly be linked to sediment transport and accumulation, where the metals are a constituent part of the stream. This does not appear to be the case for the Rio Grande as evidenced by the fact that there is a very weak relationship between the dissolved aluminum and TSS concentrations according to the data used to determine the impairment (Figure 3.3). However, the degree to which sediment delivery and transport in this watershed is a natural phenomenon, or has been exacerbated by human activities, or is the result of a combination of both should be considered.

The Rio Puerco enters the Rio Grande just south of Bernardo, NM. When the Rio Puerco flows, it carries a heavy sediment load and is a major contributor of sediment to the Rio Grande (Chronic, 1987). Even though the highly erodible soils of the Rio Puerco Watershed are a significant source of sediment transport to the Rio Grande, the anthropogenic influence of highway construction, channelization, land development, and historical rangeland grazing practices may be contributing to impairment, particularly in the Rio Puerco and thus the Rio Grande. The geology in the Rio Puerco watershed contributes to the amount of sediment available for transport (NMED/SWQB, 2007). Two dissolved aluminum samples were collected at the Rio Puerco near Bernardo, NM USGS gage (08353000) in 2005. A sample collected on 2/24/2005 measured 0.0935 mg/L and a sample collected on 5/26/2005 measured 0.0012 mg/L. The February 2005 sample exceeds the chronic WQS of 0.087 mg/L for dissolved aluminum.

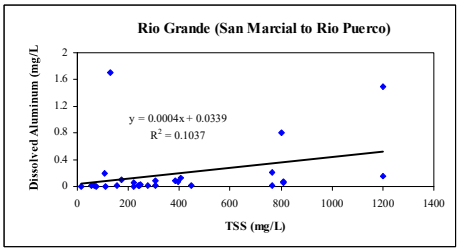

Figure 3.3 Relationship between dissolved aluminum and TSS

Normal aqueous chemical processes, enhanced by the slight natural acidity of snow and rain, are capable of rendering any naturally occurring aluminum available to the stream system. The fact that dissolved aluminum concentrations above the chronic aluminum criterion were measured during April, May, June, July, August, and October and during both High and Dry flow regimes is indicative of a year-round watershed source. Appendix C lists dissolved aluminum results along with daily USGS gage flows in relation to these samples.

3.7 Margin of Safety

TMDLs should reflect a margin of safety (MOS) based on the uncertainty or variability in the data, the point and nonpoint source load estimates, and the modeling analysis. For these aluminum TMDLs, the MOS was developed using a combination of conservative assumptions and explicit allocations. Therefore, this MOS is the sum of the following two elements:

- *Implicit Margin of Safety*

Treating aluminum as a conservative pollutant, that is a pollutant that does not readily degrade in the environment, was used as a conservative assumption in developing these loading limits.

- *Explicit Margin of Safety*

Using a duration curve framework, an explicit MOS can be identified for each listed reach and corresponding set of flow regimes. In this TMDL, the MOS was calculated based on the difference between the loading capacity at the midpoint of the relevant flow regimes (high and dry) and the loading capacity at the minimum flow in each flow regime. Given that the loading capacity is typically much less at the minimum flow of a zone as compared to the mid-point, a substantial MOS is provided. This explicit MOS ensures that allocations will not exceed the load associated with the minimum flow in each zone (USEPA 2006).

The MOS for the dry flow zone was determined using a different method because the lowest flow recorded was only 0.001 cfs. If the MOS was calculated as described above, the MOS

would constitute the majority of the target load. In other words, there would not be enough load to allocate to point and nonpoint sources under this flow regime. Similar to previous SWQB TMDLs which were based on 4Q3 low-flows, there is inherent error in all flow measurements. A conservative MOS of **5 percent** was therefore explicitly allocated to the dry flow hydrologic zone.

An explicit MOS identified using a duration curve framework is basically unallocated assimilative capacity intended to account for uncertainty (e.g., loads from tributary streams, effectiveness of controls, etc). As new information becomes available, this unallocated capacity may be attributed to nonpoint sources including tributary streams (which could then be added to the load allocation); or it may be attributed to point sources (and become part of the waste load allocations).

3.8 Consideration of Seasonal Variation

Federal regulations (40 CFR §130.7(c)(1)) require that TMDLs take into consideration seasonal variation in watershed conditions and pollutant loading. Seasonal variation was accounted for in these TMDLs by using 25 years of USGS flow records when estimating flows to develop flow exceedence percentiles.

During the 2005 water quality survey, dissolved aluminum exceedences occurred during spring, summer, and fall months. Higher flows may flush more nonpoint source runoff containing aluminum. It is also possible the criterion may be exceeded under a low flow condition when there is insufficient dilution of a point source. The use of duration curves provides a technical framework for identifying *"daily loads"* in TMDL development, which accounts for the variable nature of water quality associated with different stream flow rates during different seasons. Allocations within the TMDL are set in a way that reflects dominant concerns associated with appropriate hydrologic conditions.

3.9 Future Growth

Growth estimates by county are available from the New Mexico Bureau of Business and Economic Research. These estimates project growth to the year 2035. Table 3.4 shows the population estimates for the counties discussed in this TMDL.

Table 3.4 Population Estimates by County

County	2007*	2015	2025	2035	% Increase (2007-2035)
Sandoval	123,694	144,087	182,592	217,806	43
Bernalillo	644,023	811,861	993,650	1,166,590	45
Valencia	75,807	89, 045	107,294	123,212	38
Socorro	18,788	20,012	21, 167	21,837	14

**estimate revised 11/2008*

According to the calculations, the overwhelming source of aluminum loading is from nonpoint sources (Table 3.2). Estimates of future growth are not anticipated to lead to a significant increase in aluminum concentrations that cannot be controlled with BMP implementation and appropriate NPDES permit limits in this watershed. However, it is imperative that BMPs continue to be utilized and improved upon in this watershed while continuing to improve watershed conditions and adhering to SWPPP requirements related to construction and industrial activities covered under the general permit. The existing Middle Rio Grande-Albuquerque Reach Watershed Restoration Action Strategy (Middle Rio Grande-Albuquerque Reach Watershed Group, 2008) defines framework for design, implementation, and maintenance of BMPs in the northern portion of the watershed addressed by this TMDL. Section 6.0 provides details on this WRAS.

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4.0 BACTERIA

During the 2005 SWQB sampling monitoring effort in the Middle Rio Grande watershed, E. coli data showed several exceedences of the New Mexico water quality standard for secondary contact use in several assessment units. This data was combined with other sources of data to determine overall impairment for these assessment units. As a result, four assessment units in the Middle Rio Grande watershed were determined to be impaired with *E. coli* as a pollutant of concern (see summary in Table 4.1 and data in Appendix D). The determination of these impairments was based on the application of the Assessment Protocol (NMED/SWQB 2008b). The samples that were not spatially or temporally independent were averaged and the Assessment Protocols were then applied to the averaged value. When water quality standards have been achieved, the reach will be moved to the appropriate category on the Clean Water Act Integrated §303(d)/§305(b) list of assessed waters. Presence of E. coli bacteria is an indicator of the possible presence of other bacteria that may limit beneficial uses and present human health concerns. There are probable nonpoint and point sources of E. coli bacteria throughout the basin that could be contributing to the E. coli levels.

According to the New Mexico Water Quality Standards (WQS), the *E. coli* standard reads:

> *20.6.4.105 NMAC: The monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less; single sample 410 cfu/100 mL or less.*
> *20.6.4.106 NMAC: The monthly geometric mean of E. coli bacteria 126/100mL or less; single sample 410/100mL or less.*

The Pueblo of Sandia and the Pueblo of Isleta have the following *E.coli* WQS (See Section 2.3):

Escherichia coli

1. *geometric mean maximum: 47 colonies/100 ml*
2. *single sample maximum of 88 colonies/100 ml, in accordance with an illness rate of 4 per 1,000 exposures*

Table 4.1. Summary of Bacteria Data in the Middle Rio Grande

Assessment Unit	New Mexico Standards Segment	*E. coli*: # Exceedences/ Total Samples [a]	*E. coli*[b] %Exceedence
Rio Grande (non-Pueblo Alameda to Angostura Diversion)	20.6.4.106	6/17	35%
Rio Grande (Isleta Pueblo bnd to Alameda Bridge)	20.6.4.105	4/16	25%
Rio Grande (Rio Puerco to Isleta Pueblo bnd)	20.6.4.105	2/7	29%
Rio Grande (San Marcial to Rio Puerco)	20.6.4.105	14/35	40%

Notes:

a) Of the values assessed for the 2008-2010 Integrated CWA §303(d)/§305(b) List
b) Exceedence rates ≥ 15% result in a determination of Non Support based on the assessment protocol (NMED/SWQB 2008b)

4.1 Target Loading Capacity

Overall, the target values for bacteria TMDLs will be determined based on (1) the presence of numeric criteria, (2) the degree of experience in applying the indicator and (3) the ability to easily monitor and produce quantifiable and reproducible results. For this TMDL document, target values for bacteria are based on the reduction in bacteria necessary to achieve numeric criteria. This TMDL is also consistent with New Mexico's antidegradation policy.

The segment-specific criteria leading to an assessment of use impairment for the four MRG Assessment Units is the numeric criteria stating that "The monthly geometric mean of *E. coli* bacteria 126cfu/100 mL or less; single sample 410cfu/100 mL or less" for the designated contact use (20.6.4.105 NMAC and 20.6.4.106 NMAC). However, in order to be protective of downstream waters, the WQS for the Pueblo of Sandia will be used for the TMDL calculations for the Rio Grande (non-Pueblo Alameda to Angostura) Assessment Unit. Likewise, the WQS for the Pueblo of Isleta will be used for the Rio Grande (Isleta Pueblo bnd to Alameda bridge) Assessment Unit.

4.2 Flow

Flow duration curve analysis looks at the cumulative frequency of historic flow data over a specified period. A flow duration curve relates flow values to the percent of time those values have been met or exceeded. The use of *"percent of time"* provides a uniform scale ranging between 0 and 100. Thus, the full range of stream flows is considered. Low flows are exceeded a majority of the time, while floods are exceeded infrequently (USEPA, 2007).

A basic flow duration curve runs from high to low along the x-axis. The x-axis represents the duration amount, or *"percent of time"*, as in a cumulative frequency distribution. The y-axis represents the flow value (e.g., cubic feet per second) associated with that *"percent of time"* (or duration). Flow duration curve development typically uses daily average discharge rates, which are sorted from the highest value to the lowest (Figures 4.1-4.4). Using this convention, flow duration intervals are expressed as a percentage, with zero corresponding to the highest stream discharge in the record (i.e., flood conditions) and 100 to the lowest (i.e., drought conditions). Thus, a flow duration interval of sixty associated with a stream discharge of 357 cubic feet per second (cfs) implies that sixty percent of all observed daily average stream discharge values equal or exceed 357 cfs (Figure 4.1). It should be noted that impoundment of water in Cochiti Reservoir began in 1973. The flow regime of the Rio Grande changed significantly following the construction of this reservoir, therefore, flow data available before 1974 were not used in this analysis.

Duration curve analysis identifies intervals, which can be used as a general indicator of hydrologic condition (i.e., wet versus dry and to what degree). Flow duration curve intervals can be grouped into several broad categories or zones. These zones provide additional insight about conditions and patterns associated with the impairment. A common way to look at the duration curve is by dividing it into five zones, as illustrated in Figures 4.1 and 4.4: one representing *high flows (0-10%)*, another for *moist conditions (10-40%)*, one covering *mid-range flows (40-60%)*, another for *dry conditions (60-90%)*, and one representing *low flows (90-100%)* (Cleland 2003).

This particular approach places the midpoints of the moist, mid-range, and dry zones at the 25th, 50th, and 75th percentiles respectively (i.e., the quartiles). The high zone is centered at the 5th percentile, while the low zone is centered at the 95th percentile.

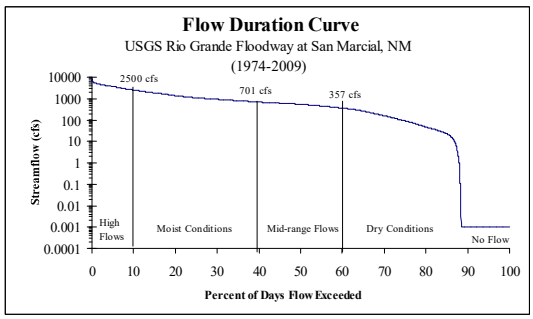

Figure 4.1 Flow Duration Curve: USGS 08358400 Rio Grande Floodway at San Marcial

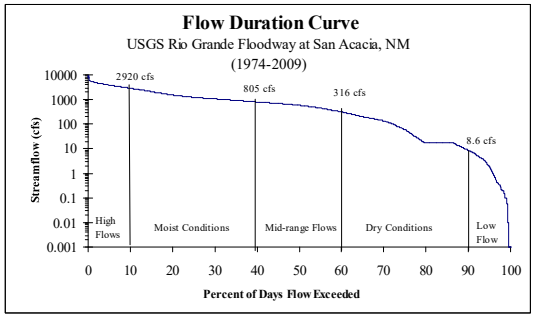

Figure 4.2 Flow Duration Curve: USGS 08354900 Rio Grande Floodway at San Acacia

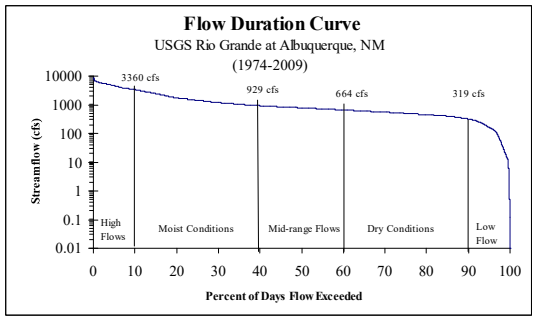

Figure 4.3 Flow Duration Curve: USGS 08330000 Rio Grande at Albuquerque, NM

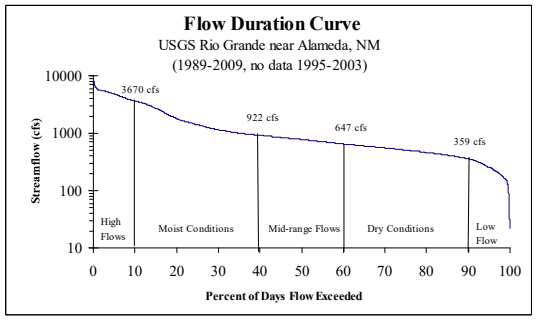

Figure 4.4 Flow Duration Curve: USGS 08329928 Rio Grande near Alameda, NM

The use of duration curves provides a technical framework for identifying *"daily loads"* in TMDL development, which accounts for the variable nature of water quality associated with different stream flow rates. Specifically, a maximum daily concentration limit can be used with basic hydrology and a duration curve to identify a TMDL that covers the full range of flow

conditions. With this approach, ambient water quality data, taken with some measure or estimate of flow at the time of sampling, can be used to compute an instantaneous load. Using the relative percent exceedence from the flow duration curve that corresponds to the stream discharge at the time the water quality sample was taken, the computed load can be plotted in a duration curve format (Figures 4.1 - 4.4).

By displaying instantaneous loads calculated from ambient water quality data and the daily average flow on the date of the sample (expressed as a flow duration curve interval), a pattern develops, which describes the characteristics of the water quality impairment. Loads that plot above the curve indicate an exceedence of the water quality criterion, whereas those below the load duration curve show compliance. The pattern of impairment can be examined to see if it occurs across all flow conditions, corresponds strictly to high flow events, or conversely, only to low flows. Impairments observed in the low flow zone typically indicate the influence of point sources, while those further left generally reflect probable nonpoint source contributions. This concept is illustrated in Figures 4.5 – 4.8.

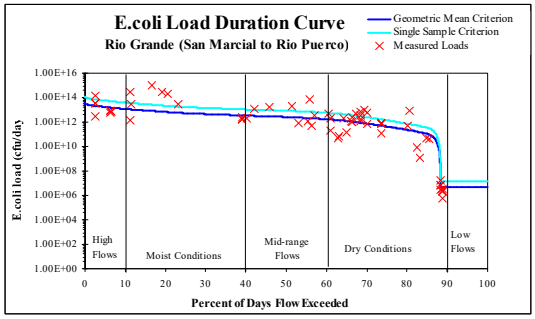

Figure 4.5 *E. coli* Load Duration Curve – Rio Grande (San Marcial to Rio Puerco)

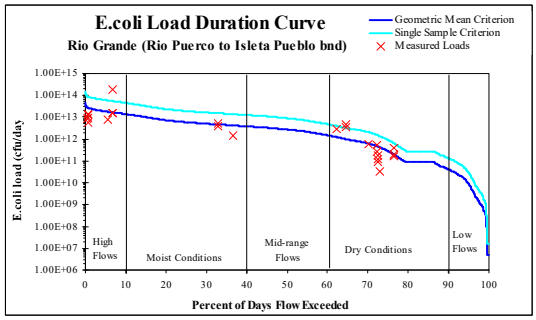

Figure 4.6 *E. coli* Load Duration Curve – Rio Grande (Rio Puerco to Isleta Pueblo bnd)

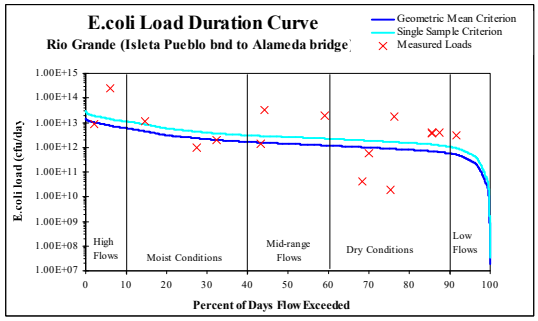

Figure 4.7 *E. coli* Load Duration Curve–Rio Grande (Isleta Pueblo bnd to Alameda bridge)

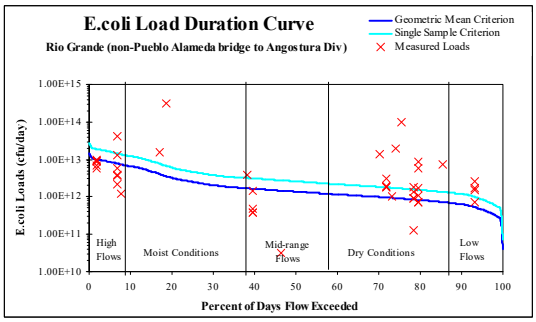

Figure 4.8 ***E. coli* Load Duration Curve–Rio Grande (non-Pueblo Alameda bridge to Angostura)**

It is important to remember that the TMDL itself is a value calculated at a defined critical condition, and is calculated as part of planning processes designed to achieve water quality standards. Since flows vary throughout the year in these systems, the actual load at any given time will vary based on the changing flow. Management of the load to improve stream water quality should be a goal to be attained.

4.3 Calculations

Bacteria standards are expressed as colony forming units (cfu) per unit volume. The *E. coli* geometric mean criteria are listed in Tables 4.2 through 4.5. Target loads for bacteria are calculated based on flow values, current and proposed WQS, and conversion factors (**Equation 4**). The more conservative monthly geometric mean criteria are utilized in TMDL calculations to provide an implicit MOS. In addition, if the single sample criteria were used as targets, the geometric mean criteria may not be reached.

C as cfu/100 mL * 1,000 mL/1 L * 1 L/ 0.264 gallons * 1,000,000 gallons/MG *Q as MG/day = cfu/day **(Eq. 4)**

Where C = water quality standard criterion for bacteria,
Q = stream flow in million gallons per day (mgd)

Under the duration curve framework, the loading capacity is essentially the curve itself. The loading capacity, which sets the target load on any given day, is determined by the flow on the particular day of interest and the numerical criterion for *E.coli*. However, a continuous curve

that represents the loading capacity has some logistical drawbacks. It is often easier to communicate information with a set of fixed targets. Critical points along the curve can be used as an alternative method to quantify the loading capacity, such as the mid-point of each hydrologic zone (e.g., the 5th, 25th, 50th, 75th, and 95th percentiles). A unique loading capacity for each hydrologic zone allows the TMDL to reflect changes in dominant watershed processes that may occur under different flow regimes. The target loads (TMDLs) predicted to attain current standards were calculated using **Equation 4** and are shown in Tables 4.2 and 4.5.

Table 4.2. Calculation of Target Loads: Rio Grande (San Marcial at USGS gage to Rio Puerco)

	FLOW CONDITIONS				
	High	**Moist**	**Mid-Range**	**Dry**	**Low**[c]
***E. coli* geometric mean criterion (cfu/100mL)**[a]	126	126	126	126	-
Mid-point Flow (mgd)	2385	711	347	59	-
Conversion Factor[b]	3.79 x 10^7	3.79 x 10^7	3.79 x 10^7	3.79 x 10^7	-
TMDL (cfu/100mL/day)	**1.14 x 10^{13}**	**3.40 x 10^{12}**	**1.66 x 10^{12}**	**2.81 x 10^{11}**	-

[a] *Per 20.6.4.105 NMAC*
[b] Conversion factor is based on Equation 4.
[c] There are no TMDL calculations for Low flow conditions because there were no observed exceedences during this flow regime (refer to Figure 4.5).

Table 4.3. Calculation of Target Loads: Rio Grande (Rio Puerco to Isleta Pueblo bnd)

	FLOW CONDITIONS				
	High	**Moist**[b]	**Mid-Range**[c]	**Dry**	**Low**[b]
***E. coli* geometric mean criterion (cfu/100mL)**[a]	126	126	-	126	-
Mid-point Flow (mgd)	2521	801	-	39	-
Conversion Factor[b]	3.79 x 10^7	3.79 x 10^7	-	3.79 x 10^7	-
TMDL (cfu/100mL/day)	**1.20 x 10^{13}**	**3.83 x 10^{12}**	**-**	**1.85 x 10^{11}**	**-**

[a] *Per 20.6.4.102 NMAC*
[b] Conversion factor is based on Equation 4.
[c] There are no TMDL calculations for Mid-Range or Low flow conditions because there were no observed exceedences during these flow regimes (refer to Figure 4.6 and Appendix D). No exceedences of the single sample criterion were observed during Moist conditions, but calculations were included to be conservative because geometric mean exceedences were observed.

Table 4.4. Calculation of Target Loads: Rio Grande (Isleta Pueblo bnd to Alameda Bridge)

	FLOW CONDITIONS				
	High	**Moist**	**Mid-Range**	**Dry**	**Low**
***E. coli* geometric mean criterion (cfu/100mL)**[a]	47	47	47	47	47
Mid-point Flow (mgd)	2960	924	507	324	106
Conversion Factor[b]	3.79 x 10^7	3.79 x 10^7	3.79 x 10^7	3.79 x 10^7	3.79 x 10^7
TMDL (cfu/100mL/day)	**5.27 x 10^{12}**	**1.65 x 10^{12}**	**9.03 x 10^{11}**	**5.77 x 10^{11}**	**1.89 x 10^{11}**

[a] *Per Pueblo of Isleta water quality standards*
[b] Conversion factor is based on Equation 4.

Table 4.5. Calculation of Target Loads: Rio Grande (non-pueblo Alameda Bridge to Angostura Diversion)

	FLOW CONDITIONS				
	High	**Moist**	**Mid-Range**[c]	**Dry**	**Low**
***E. coli* geometric mean criterion (cfu/100mL)**[a]	47	47	-	47	47
Mid-point Flow (mgd)	3109	905	-	328	166
Conversion Factor[b]	3.79 x 10^7	3.79 x 10^7	-	3.79 x 10^7	3.79 x 10^7
TMDL (cfu/100mL/day)	**5.54 x 10^{12}**	**1.61 x 10^{12}**	**-**	**5.84 x 10^{11}**	**2.96 x 10^{11}**

[a] *Per Pueblo of Sandia water quality standards*
[b] Conversion factor is based on Equation 4.
[c] There are no TMDL calculations for Mid-Range flow conditions because there were no observed exceedences during this flow regime (refer to Figure 4.8).

It is important to remember that the TMDL is a planning tool to be used to achieve water quality standards. Since flows vary throughout the year in these systems the target load will vary based on the changing flow. Management of the load to improve stream water quality and meet water quality criteria should be a goal to be attained. Meeting the calculated TMDL may be a difficult objective.

4.4 Waste Load Allocations and Load Allocations

4.4.1 Waste Load Allocation

There are numerous NPDES permitted facilities in the Assessment Units in the 13020203 HUC. Not all NPDES permitted facilities have been assigned a WLA for *E.coli*. The permits to which a WLA is assigned are discussed in Table 4.8 and those without a WLA are in Table 4.6. Those not assigned a WLA either do not contribute flow to the Rio Grande or have shown no reasonable potential to discharge *E.coli*.

Table 4.6. Summary of NPDES Permits in 13020203 HUC without a WLA

Assessment Unit	Permit Number	Facility	Receiving Water	*E.coli* permit limits	Design Flow (mgd)
Rio Grande (San Marcial at USGS gage to Rio Puerco)	NM0029726 (June 30, 2014 expiration)	New Mexico Firefighters Training Academy	Dry arroyo to diversion channel to Rio Grande 20.6.4.105	500 colonies/100mL 7-day and 30-day average * [1]	n/a
Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge)	NM0030384 (July 31, 2009 expiration)	PNM/Person Station	AMAFCA South Diversion Channel to Rio Grande 20.6.4.105	None	n/a
	NM0030376 (July 31, 2009 expiration)	Delta-Person Generating Station	AMAFCA South Diversion channel, never reaching Rio Grande 20.6.4.105	None	0.032 facility flow
	NM0030597 (July 31, 2009 expiration)	Valero Logistics Operations	Unnamed arroyo, never reaching Rio Grande 20.6.4.105	None	Intermittent and variable flow
Rio Grande (non-pueblo Alameda Bridge to Angostura Div)	NM0000124 (June 30, 2009 expiration)	Public Service Co. of NM/Reeves Station	AMAFCA North Diversion Channel, then to Rio Grande 20.6.4.106	None	Discharge during emergency circumstances

Notes: * [1] fecal coliform permit limit for permit expiring May 2009. Fecal limit proposed to be removed in new permit. Draft permit says "facility would have no reasonable potential to contribute *E.coli* because it ceased pumping domestic wastewater into the sedimentation ponds."

Excess bacteria levels may be a component of some storm water discharges so these discharges should be addressed. On September 29, 2006, EPA Region 6 issued general permits for discharges from regulated small municipal separate storm sewer system (sMS4s) in New Mexico

and on Indian Country lands in New Mexico and Oklahoma. This permit became effective on July 1, 2007. The general permits offer coverage for discharges of storm water from sMS4s that are regulated under Phase II of the National Pollutant Discharge Elimination System (NPDES) Storm Water Program to various waters of the United States in New Mexico and Oklahoma. In New Mexico, some of the major impacts to small MS4s are as follows: operators of MS4s located in urbanized areas (UAs) must develop, implement, and enforce a storm water management program to reduce the discharge of pollutants from its MS4 to the "maximum extent practicable" and protect water quality; operators of "regulated" MS4s must obtain NPDES permit coverage; the permit application (Notice of Intent [NOI]) must include six "minimum control measures" (using Best Management Practices, or BMPs) and measurable goals; the BMPs must be fully implemented within 5 years of permit issuance; and, operators must submit yearly progress reports to EPA.

There are nine municipalities along the Rio Grande (non-Pueblo Alameda to Angostura) and Rio Grande (Isleta Pueblo bnd to Alameda Street bridge) assessment units that are eligible for coverage under the Albuquerque urbanized area, general sMS4 permit (#NMR040000). These permittees are outlined in Table 4.7. In addition to the general sMS4 permit, there are numerous NPDES permitted facilities in the region as listed in Tables 4.6 and 4.8.

Table 4.7: Phase II NPDES permittees

NPDES Tracking Number	Phase II Permittee
NM R04 A001	SSCAFCA
NM R04 A002	Town of Bernalillo[1]
NM R04 A003	Sandoval County
NM R04 A004	Corrales
NM R04 A006	Los Ranchos de Albuquerque
NM R04 A007	City of Rio Rancho
NM R04 A008	Bernalillo County
NM R04 A009	Kirtland AFB
NM R04 A0010	NM DOT Dist 3

Notes: [1] Individual small MS4 permit

The waste load allocation (WLA) for sMS4s was based on the percent jurisdictional area approach (see Appendix F). For each zone, the amount available for nonpoint source load allocations (LAs) and the sMS4 WLA was the TMDL for that zone minus the margin of safety (MOS) and the WLAs for WWTPs. In the case of the Middle Rio Grande area, both the Phase I permit and the sMS4 Phase II permittees are assigned WLAs. The total contributing area to these assessment units includes the eight 10-digit USGS HUCs displayed in Figure 4.9.

Four entities are authorized to discharge under the Phase I MS4 permit: City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), New Mexico Department of Transportation District 3, and University of New Mexico. The Phase I permit states:

> *"This permit covers all areas, except agricultural lands, within the corporate boundary of the City of Albuquerque, New Mexico served by, or otherwise contributing to discharges from municipal separate storm sewers owned or operated by the permittees listed above."*

Based on the square miles of the incorporated city limits of the City of Albuquerque and the contributing drainages (see Figure 4.9), 9 percent of the watershed falls within the jurisdiction of the Phase I MS4 communities in the Rio Grande (Isleta Pueblo boundary to Alameda Street Bridge) AU and 1% of the watershed falls within the jurisdiction of the Phase I MS4 communities in the Rio Grande (Alameda Street Bridge to Angostura Diversion) AU. Further details are in Appendix F.

The nine sMS4 permittees eligible for coverage under the general Phase II MS4 permit are listed in Table 4.7. The Phase II sMS4 permit (NMR040000) reads:

> *"This permit authorizes the discharge of storm water from small municipal separate storm sewer systems (MS4s) provided the MS4 is located fully or partially within an urbanized area as determined by the 2000 Decennial Census."*

Based on the square miles of urbanized area and the contributing drainages (see Figure 4.9), 1 percent of the watershed falls within the jurisdiction of the Phase II MS4 communities in the Rio Grande (Isleta Pueblo boundary to Alameda Street Bridge) AU and 5% of the watershed falls within the jurisdiction of the Phase II MS4 communities in the Rio Grande (Alameda Street Bridge to Angostura Diversion) AU. Further details are in Appendix F.

The remaining ninety percent was designated for nonpoint sources and natural background as the LA for each zone in the Rio Grande (Isleta Pueblo boundary to Alameda Street Bridge) AU. The remaining ninety four percent was designated for nonpoint sources and natural background as the LA for each zone in the Rio Grande (Alameda Street Bridge to Angostura Diversion). Individual waste load allocations for all NPDES permits in the impaired assessment units are shown in Table 4.8.

In contrast to discharges from other industrial storm water and individual process wastewater permitted facilities, storm water discharges are transient because they occur during storm events. Coverage under Phase II of the NPDES Storm Water Program requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) that includes identification and control of all pollutants associated with urban activities to minimize impacts to water quality. In this case, compliance with a SWPPP that meets the requirements of the CGP is generally assumed to be consistent with this TMDL. In the case of the Middle Rio Grande, compliance by those municipalities within the terms of their individual MS4 permits will fulfill any obligations they have toward implementing this TMDL.

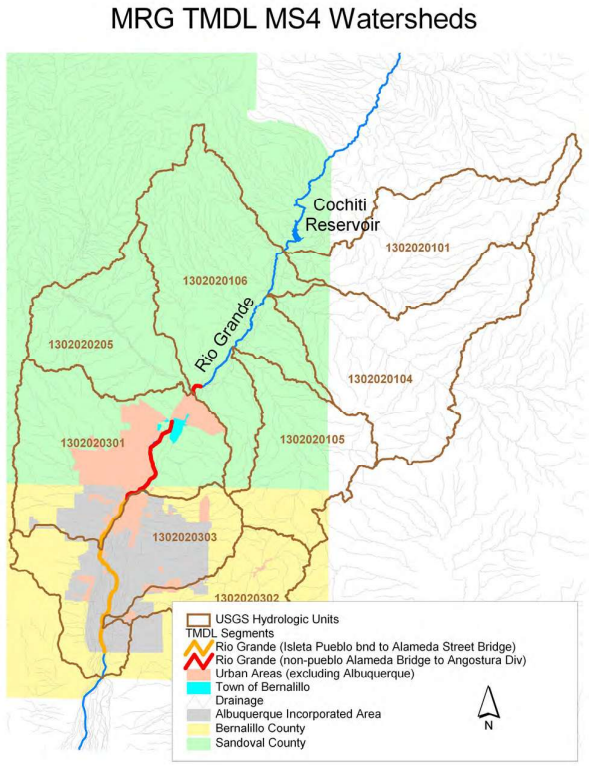

Figure 4.9. Albuquerque-area MS4 jurisdictions

Table 4.8. Waste Load Allocations for *E. coli*

Assessment Unit	Facility	Design Capacity Flow (mgd)	Proposed *E. coli* Effluent limits[a] (cfu/100mL)	Conversion Factor[b]	Waste Load Allocations (cfu/day)
Rio Grande (non-Pueblo Alameda Bridge to Angostura Div)	**NM0023485** Town of Bernalillo WWTP (January 31, 2009 expiration)	0.8	47	3.79×10^7	1.43×10^9
	NM0027987 City of Rio Rancho, No. 2 (January 31, 2009 expiration)	5.5	47	3.79×10^7	9.80×10^9
	NM0029602 City of Rio Rancho, No. 3 (January 31, 2009 expiration)	0.85	47	3.79×10^7	1.51×10^9
	NMS000101 Albuquerque Phase I MS4 (November 30, 2008 expiration)	--	--	--	Variable[c]
	NMR040000 Phase II MS4s (June 30, 2012 expiration)	--	--	--	Variable[c]
Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge)	**NM0022250** Albuquerque Bernalillo County Water Utility Authority (April 30, 2010 expiration)	76	47	3.79×10^7	1.35×10^{11}
	NM0027863 Sandia Peak Ski Company (February 28, 2010 expiration)	0.0075--	47	3.79×10^7	1.34×10^7
	NMS000101 Albuquerque Phase I MS4	--	--	--	Variable[c]
	NMR040000 Phase II MS4s (June 30, 2012 expiration)	--	--	--	Variable[c]

Assessment Unit	Facility	Design Capacity Flow (mgd)	Proposed *E. coli* Effluent limits[a] (cfu/100mL)	Conversion Factor[b]	Waste Load Allocations (cfu/day)
Rio Grande (Rio Puerco to Isleta Pueblo bnd)	**NM0020150** City of Belen WWTP (September 30, 2009 expiration)	1.2	126	3.79×10^{7}	5.73×10^{9}
	NM0020303 Village of Los Lunas WWTP (June 30, 2012 expiration)	0.9	126	3.79×10^{7}	4.30×10^{9}
	NM0027782 NM Water Service Co/Rio Communities (October 31, 2012 expiration)	0.3	126	3.79×10^{7}	1.43×10^{9}
	NM0028851 NMCD/Central NM Correctional Facility WWTP (January 31, 2010 expiration)	0.285	126	3.79×10^{7}	1.36×10^{9}
	NM0030279 Village of Bosque Farms (March 31, 2012 expiration)	0.5	126	3.79×10^{7}	2.39×10^{9}
	NM0030414 NM Water Service Co./Rio del Oro WWTF (October 31, 2009 expiration)	0.3	126	3.79×10^{7}	1.43×10^{9}
Rio Grande (San Marcial at USGS gage to Rio Puerco)	**NM0028835** City of Socorro WWTP (December 31, 2009 expiration)	1.3	126	3.79×10^{7}	6.21×10^{9}

Notes:

[a] Based on current in-stream New Mexico WQS for segment 20.6.4.105 and 20.6.4.106 NMAC as well as the Pueblo of Sandia and Pueblo of Isleta WQS.

[b] Based on equation 4.

[c] The waste load allocation for the storm water MS4 permit was based on the percent jurisdictional area approach. Thus, the MS4 waste load allocation is a percentage of the available allocation for each hydrologic zone, where the available allocation = TMDL – WLA – MOS. See Tables 4.11 and 4.12 for details and Appendix F for details.

4.4.2 Load Allocation

In order to calculate the LA, the WLAs listed in table 4.8 and the MOS were subtracted from the target capacity (TMDL), as shown below in **Equation 2**.

$$WLA + LA + MOS = TMDL \quad \textbf{(Eq. 5)}$$
$$\text{or,} \quad LA = TMDL - WLA - MOS$$

The MOS was developed using a combination of conservative assumptions and explicit recognition of potential errors (see Section 4.7 for details). Results are presented in Tables 4.9-4.12.

Table 4.9. TMDLs for *E. coli*: Rio Grande (San Marcial at USGS gage at Rio Puerco)

	FLOW CONDITIONS				
	High	**Moist**	**Mid-Range**	**Dry**	**Low**
TMDL	**1.14×10^{13}**	**3.40×10^{12}**	**1.66×10^{12}**	**2.81×10^{11}**	-
Load Allocation	**7.72×10^{12}**	**2.16×10^{12}**	**1.10×10^{12}**	**2.61×10^{11}**	-
Waste Load Allocation [a]	**6.21×10^{9}**	**6.21×10^{9}**	**6.21×10^{9}**	**6.21×10^{9}**	-
Margin of Safety	**3.67×10^{12}**	**1.23×10^{12}**	**5.56×10^{11}**	**1.40×10^{10}**	-

[a] WLA for NM0028835

Table 4.10. TMDLs for *E. coli*: Rio Grande (Rio Puerco to Isleta Pueblo bnd)

	FLOW CONDITIONS				
	High	**Moist**	**Mid-Range**	**Dry**	**Low**
TMDL	**1.20×10^{13}**	**3.83×10^{12}**	-	**1.85×10^{11}**	-
NM0020150	5.73×10^{9}	5.73×10^{9}	-	5.73×10^{9}	-
NM0020303	4.30×10^{9}	4.30×10^{9}	-	4.30×10^{9}	-
NM0027782	1.43×10^{9}	1.43×10^{9}	-	1.43×10^{9}	-
NM0028851	1.36×10^{9}	1.36×10^{9}	-	1.36×10^{9}	-
NM0030279	2.39×10^{9}	2.39×10^{9}	-	2.39×10^{9}	-
NM0030414	1.43×10^{9}	1.43×10^{9}	-	1.43×10^{9}	-
Total Waste Load Allocation	**1.66×10^{10}**	**1.66×10^{10}**	-	**1.66×10^{10}**	-
Load Allocation	**9.00×10^{12}**	**2.47×10^{12}**	-	**1.59×10^{11}**	-
Margin of Safety	**3.02×10^{12}**	**1.34×10^{12}**	-	**9.26×10^{9}**	-

Table 4.11. TMDLs for *E. coli*: Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge)

	FLOW CONDITIONS				
	High	**Moist**	**Mid-Range**	**Dry**	**Low**
TMDL	**5.27×10^{12}**	**1.65×10^{12}**	**9.03×10^{11}**	**5.77×10^{11}**	**1.89×10^{11}**
NM0022250	1.35×10^{11}	1.35×10^{11}	1.35×10^{11}	1.35×10^{11}	1.35×10^{11}
NM0027873	1.34×10^{7}	1.34×10^{7}	1.34×10^{7}	1.34×10^{7}	1.34×10^{7}
NMS000101	3.36×10^{11}	8.41×10^{10}	5.66×10^{10}	2.09×10^{10}	4.67×10^{9}
NMR040000	3.73×10^{10}	9.35×10^{9}	6.29×10^{9}	2.32×10^{9}	5.19×10^{8}
Total Waste Load Allocation	**5.08×10^{11}**	**2.28×10^{11}**	**1.98×10^{11}**	**1.58×10^{11}**	**1.40×10^{11}**
Load Allocation	**3.36×10^{12}**	**8.41×10^{11}**	**5.66×10^{11}**	**2.09×10^{11}**	**4.86×10^{10}**
Margin of Safety	**1.40×10^{12}**	**5.77×10^{11}**	**1.38×10^{11}**	**2.10×10^{11}**	**1.89×10^{9}**

Table 4.12. TMDLs for *E. coli*: Rio Grande (non-Pueblo Alameda Bridge to Angostura Div)

	FLOW CONDITIONS				
	High	**Moist**	**Mid-Range**	**Dry**	**Low**
TMDL	**5.54×10^{12}**	**1.61×10^{12}**	-	**5.85×10^{11}**	**2.96×10^{11}**
NM0023485	1.43×10^{9}	1.43×10^{9}	-	1.43×10^{9}	1.43×10^{9}
NM0027987	9.80×10^{9}	9.80×10^{9}	-	9.80×10^{9}	9.80×10^{9}
NM0029602	1.51×10^{9}	1.51×10^{9}	-	1.51×10^{9}	1.51×10^{9}
NMS000101	5.25×10^{10}	1.52×10^{10}	-	5.43×10^{9}	2.80×10^{9}
NMR040000	2.62×10^{11}	7.59×10^{10}	-	2.71×10^{10}	1.40×10^{10}
Total Waste Load Allocation	**3.28×10^{11}**	**1.04×10^{11}**	-	**4.53×10^{10}**	**2.95×10^{10}**
Load Allocation	**4.93×10^{12}**	**1.43×10^{12}**	-	**5.10×10^{11}**	**2.63×10^{11}**
Margin of Safety	**2.77×10^{11}**	**8.06×10^{10}**	-	**2.92×10^{10}**	**2.96×10^{9}**

The extensive data collection and analyses necessary to determine background *E. coli* loads for the Middle Rio Grande watershed were beyond the resources available for this study. It is therefore assumed that a portion of the load allocation is made up of natural background loads.

4.5 Identification and Description of Pollutant Sources

Based on measured loads and potential contributions from existing point sources, probable point and nonpoint pollutant sources that may be contributing to observed *E. coli* loads are displayed in Table 4.13.

Table 4.13. Pollutant Source Summary for *E. coli*

Pollutant Sources	Magnitude (cfu/day)	Assessment Unit	Probable Sources[a]
Point: [b]	6.21×10^{9}	Rio Grande (San Marcial at USGS gage to Rio Puerco)	Municipal Point Sources Discharges
	1.66×10^{10}	Rio Grande (Rio Puerco to Isleta Pueblo bnd)	Municipal Point Sources Discharges
	5.08×10^{11} – 3.66×10^{10}	Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge)	Municipal Point Sources Discharges
	2.65×10^{11} - 5.91×10^{10}	Rio Grande (non-pueblo Alameda Bridge to Angostura Diversion)	Municipal Point Sources Discharges
Nonpoint:		Rio Grande (San Marcial at USGS gage to Rio Puerco)	Avian Sources (waterfowl and/or other), Impervious surface/parking lot runoff, municipal (urbanized high density area), natural sources, wastes from pets, On-site Treatment Systems (septic systems and similar decentralized systems).
		Rio Grande (Rio Puerco to Isleta Pueblo bnd)	Avian Sources (waterfowl and/or other), Impervious surface/parking lot runoff, municipal (urbanized high density area), wastes from pets, On-site Treatment Systems (septic systems and similar decentralized systems).
		Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge)	Avian sources (waterfowl and/or other), Impervious surface/parking lot runoff, municipal (urbanized high density area), source unknown, wastes from pets, On-site Treatment Systems (septic systems and similar decentralized systems).
		Rio Grande (non-pueblo Alameda Bridge to Angostura Diversion)	Avian sources (waterfowl and/or other), Impervious surface/parking lot runoff, municipal (urbanized high density area), source unknown, wastes from pets, On-site Treatment Systems (septic systems and similar decentralized systems).

[a] From the 2008-2010 Integrated CWA 303(d)/305(b) Report (NMED/SWQB 2008a). This list of probable sources is based on staff observation and known land use activities in the watershed. These sources are not confirmed or quantified at this time.

[b] Current probable point source contributions (based on WLA calculations from NPDES permits)

4.6 Linkage Between Water Quality and Pollutant Sources

SWQB fieldwork includes an assessment of the probable sources of impairment. The Source Documentation Sheet provides a visual analysis of a pollutant source along an impaired reach. Although this procedure is subjective, SWQB feels that it provides the best available information for the identification of probable sources of impairment in this watershed. Table 4.17 (Pollutant Source Summary) identifies and quantifies probable sources of nonpoint source impairments along the reach as determined by field reconnaissance and assessment.

Among the probable sources of bacteria are municipal point sources discharges such as wastewater treatment facilities and storm water systems, poorly maintained or improperly installed (or missing) septic tanks, impervious surface/parking lot runoff, livestock grazing of valley pastures and riparian areas, upland livestock grazing, in addition to wastes from pets, waterfowl, and other wildlife. Very high *E. coli* concentrations have been measured in water sampled from SWQB monitoring stations along the Middle Rio Grande. Howell et. al. (1996) found that bacteria concentrations in underlying sediment increase when cattle (*Bos taurus*) have direct access to streams, such as may be the case in parts of the Middle Rio Grande valley. Natural sources of bacteria are also present in the form of other wildlife such as waterfowl, elk, deer, and any other warm-blooded mammals. *E. coli* concentrations may be subject to elevated levels as a result of re-suspension of bacteria laden sediment during storm events. Temperature can also play a role in *E. coli* concentrations. Howell et. al. (1996) observed that bacteria re-growth increases as water temperature increases.

E. coli Data

E. coli data used during the development of this TMDL are shown in Appendix D. Rainfall measurements collected at the NOAA stations at South Bosque del Apache, Los Lunas, Albuquerque, NM were used to identify trends between elevated *E. coli* levels and rainfall. The Pearson correlation coefficient was used to assess whether a statistical association existed between *E. coli* and rainfall. The Pearson correlation coefficient, denoted by *r*, measures the strength and direction of a *linear* relationship between *X* and *Y* variables. Higher r-values indicate stronger correlations between the variables compared.

$$r = \frac{\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2 \sum_{i=1}^{n}(y_i - \bar{y})^2}}$$

The available data for the Rio Grande (San Marcial at USGS gage to Rio Puerco), shows no relationship between *E. coli* and rainfall events (Figure 4.5, r = -0.01). Data in Table D.4 of Appendix D that show elevated *E. coli* levels occur during both rainfall and non-rainfall events. In fact, of the 63 water quality samples collected in this AU, rainfall was only recorded on four days. On two of those four days, the *E.coli* concentrations were 1000 cfu/100 mL and 520 cfu/100 mL, respectively.

The available data (Table D.3 of Appendix D) for the Rio Grande (Rio Puerco to Isleta Pueblo bnd) shows a positive association between *E. coli* and rainfall events (r = 0.47). This potentially shows that along this segment of the Rio Grande sources of bacteria are delivered to the river partially during rainfall events.

No rainfall was recorded for the day preceding the sampling events in the Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge) AU. The four exceedences of the single sample criteria,

ranging from 730-1553 cfu/100 mL, all occurred during non-rainfall events. See Table D.2 of Appendix D for the associated data.

The available data (Table D.1 of Appendix D) for the Rio Grande (non-pueblo Alameda to Angostura Diversion) shows a positive association between *E. coli* and rainfall events (r = 0.77). This potentially shows that along this segment of the Rio Grande sources of bacteria are delivered to the river partially during rainfall events. The highest exceedence of the single sample *E.coli* criteria was 5300 cfu/100 mL and occurred on the one day when rainfall was recorded for the available samples.

SWQB collected *E.coli* samples from seven WWTPs that discharge into the Middle Rio Grande area from July – November 2005. Data in Appendix D show that there were no exceedences of the single sample *E.coli* criterion, except in October and November at Bosque Farms WWTP in the Rio Grande (Rio Puerco to Isleta bnd) AU.

Discussion

The bacteria loading probably originates from a combination of drought-related impacts, municipal wastewater treatment facilities, septic systems and similar decentralized systems, and livestock and wildlife wastes that are transported downstream during runoff events. Additonally, recent national studies show that bacteria concentrations in stormwater runoff are often above the contact recreation standard regardless of the land use in the watershed (Clary *et. al.,* 2008).

The duration curve method, by itself, is limited in the ability to track individual source loadings or relative source contributions within a watershed. Additional analysis is needed to identify pollutant contributions from different types of probable sources and activities (i.e., construction zone versus agricultural area) or individual sources of a similar source category (i.e., WWTF #1 versus WWTF #2). Practitioners interested in more precise source characterization should consider supplementing the duration curve framework with a separate analysis. An added analytical tool might aid in evaluating allocation scenarios and tracking individual sources or source categories. This could allow for improved targeting of restoration activities.

One method of characterizing sources of bacteria is a Bacterial Source Tracking (BST) study. In 2002 a BST study (Parsons, 2005), jointly funded by NMED, Bernalillo County, and Albuquerque Metropolitan Arroyo Flood Control Authority was conducted in the MRG basin from the Angostura Diversion to the Isleta Diversion Dam. The results of the extensive study showed that avian sources were the largest contributor to bacteria in this portion of the Rio Grande, followed by dogs and cats, other wildlife, humans, and livestock. This study has led agencies in the area to fund bacterial remediation projects, such as outreach campaigns designed to encourage pet owners to properly discard of pet waste and storm water quality projects.

4.7 Margin of Safety (MOS)

TMDLs should reflect a MOS based on the uncertainty or variability in the data, the point and nonpoint source load estimates, and the modeling analysis. For these bacteria TMDLs, the MOS was developed using a combination of conservative assumptions and explicit allocations. Therefore, this MOS is the sum of the following two elements:

Implicit Margin of Safety

Treating *E. coli* as a relatively conservative pollutant, that is a pollutant that does not readily degrade in the environment, was used as a conservative assumption in developing these loading limits.

A more conservative limit of the geometric mean value, rather than the current single sample criterion which allows for higher concentrations in individual grab samples, was used to calculate loading values.

Explicit Margin of Safety

Using a duration curve framework, an explicit MOS can be identified for each listed reach and corresponding set of flow zones. In this TMDL, the MOS was based on the difference between the loading capacity as calculated at the mid-point of each flow zones and the loading capacity calculated at the minimum flow in each zone. Given that the loading capacity is typically much less at the minimum flow of a zone as compared to the mid-point, a substantial MOS is provided. This explicit MOS ensures that allocations will not exceed the load associated with the minimum flow in each zone (USEPA 2006).

In some cases, the MOS for the dry and low flow zones was determined using a different method because the lowest flow recorded were very close to zeo. If the MOS was calculated as described above, the MOS would constitute the majority of the target load. In other words, there would not be enough load to allocate to point and nonpoint sources under this flow regime. In particular, this was the case with all flow regimes in the Rio Grande (non-pueblo Alameda Street Bridge to Angostura Diversion) assessment unit. Similar to previous SWQB bacteria TMDLs which were based on 4Q3 low-flows, there is inherent error in all flow measurements. A conservative MOS of **5 percent** was therefore explicitly allocated to the low flow hydrologic zone.

An explicit MOS identified using a duration curve framework is basically unallocated assimilative capacity intended to account for uncertainty (e.g., loads from tributary streams, effectiveness of controls, etc). As new information becomes available, this unallocated capacity may be attributed to nonpoint sources including tributary streams (which could then be added to the load allocation); or it may be attributed to point sources (and become part of the waste load allocations).

4.8 Consideration of Seasonal Variability

Federal regulations (40 CFR §130.7(c)(1)) require that TMDLs take into consideration seasonal variation in watershed conditions and pollutant loading. Seasonal variation was accounted for in these TMDLs by using 25 years of USGS flow records when estimating flows to develop flow exceedence percentiles.

During the 2004 water quality survey, bacteria exceedences occurred during spring, summer, and fall months. Higher flows may flush more nonpoint source runoff containing *E. coli*. It is also possible the water quality criterion may be exceeded under a low flow condition when there is insufficient dilution of a point source. The use of duration curves provides a technical framework for identifying *"daily loads"* in TMDL development, which accounts for the variable nature of water quality associated with different stream flow rates during different seasons. Allocations within the TMDL are set in a way that reflects dominant concerns associated with appropriate hydrologic conditions.

4.9 Future Growth

Growth estimates by county are available from the New Mexico Bureau of Business and Economic Research. These estimates project growth to the year 2035. Table 4.14 shows the population estimates for the counties discussed in this TMDL.

Table 4.14 Population Estimates by County

County	2007*	2015	2025	2035	% Increase (2007-2035)
Sandoval	123,694	144,087	182,592	217,806	43
Bernalillo	644,023	811,861	993,650	1,166,590	45
Valencia	75,807	89, 045	107,294	123,212	38
Socorro	18,788	20,012	21, 167	21,837	14

**estimate revised 11/2008*

The MRG AUs experienced impacts from both point and nonpoint sources depending on the flow conditions. Estimates of future growth are not anticipated to lead to a significant increase in bacteria concentrations that cannot be controlled with BMP implementation and appropriate NPDES permit limits in this watershed. However, it is imperative that BMPs continue to be utilized and improved upon in this watershed while continuing to improve watershed conditions and adhering to SWPPP requirements related to construction and industrial activities covered under the general permit. The existing Middle Rio Grande-Albuquerque Reach Watershed Restoration Action Strategy (Middle Rio Grande-Albuquerque Reach Watershed Group, 2008) defines framework for design, implementation, and maintenance of BMPs in the northern portion of the watershed addressed by this TMDL. Section 6.0 provides details on this WRAS.

5.0 MONITORING PLAN

Pursuant to Section 106(e)(1) of the Federal CWA, the SWQB has established appropriate monitoring methods, systems and procedures in order to compile and analyze data on the quality of the surface waters of New Mexico. In accordance with the New Mexico Water Quality Act, the SWQB has developed and implemented a comprehensive water quality monitoring strategy for the surface waters of the State.

The monitoring strategy establishes methods for identifying and prioritizing water quality data needs, specifies procedures for acquiring and managing water quality data, and describes how these data are used to progress toward three basic monitoring objectives: to develop water quality-based controls, to evaluate the effectiveness of such controls, and to conduct water quality assessments.

The SWQB utilizes a rotating basin system approach to water quality monitoring. In this system, a select number of watersheds are monitored each year with an established return frequency of approximately every eight years. Based on an 8-year rotation throughout the state, the next tentatively scheduled monitoring date for the Middle Rio Grande watershed is 2013. The SWQB maintains current quality assurance and quality control plans for the respective sample year to cover all monitoring activities. This document, called the QAPP, is updated and certified annually by USEPA Region 6. In addition, the SWQB identifies the data quality objectives required to provide information of sufficient quality to meet the established goals of the program. Current priorities for monitoring in the SWQB are driven by the CWA Section 303(d) list of streams requiring TMDLs. Short-term efforts were directed toward those waters that are on the USEPA TMDL consent decree list (U.S. District Court for the District of New Mexico 1997), however NMED/SWQB completed the final remaining TMDL on the consent decree in December 2006 and USEPA approved this TMDL in August 2007. The U.S. District Court dismissed the Consent Decree on April 21, 2009.

Once assessment monitoring is completed, those reaches showing impacts and requiring a TMDL will be targeted for more intensive monitoring. The methods of data acquisition include fixed-station monitoring, water quality surveys of priority assessment units (including biological assessments), and compliance monitoring of industrial, federal, and municipal dischargers, as specified in the SWQB assessment protocols (NMED/SWQB 2008b).

Long-term monitoring for assessments will be accomplished through the establishment of sampling sites that are representative of the waterbody and which is revisited approximately every eight years. This information will provide time relevant information for use in CWA Section 303(d) listing and 305(b) report assessments and to support the need for developing TMDLs. The approach provides:

- a systematic, detailed review of water quality data which allows for a more efficient use of valuable monitoring resources;
- information at a scale where implementation of corrective activities is feasible;

- an established order of rotation and predictable sampling in each basin which allows for enhanced coordinated efforts with other programs; and
- program efficiency and improvements in the basis for management decisions.

SWQB routinely develops a 10-year monitoring strategy and submits it to USEPA. The strategy details both the extent of monitoring that can be accomplished with existing resources plus expanded monitoring strategies that could be implemented given additional resources. According to the rotational cycle, which assumes the existing level of resources, the next time SWQB will sample the Middle Rio Grande watershed is during 2013.

It should be noted that a watershed would not be ignored during the years in between sampling. The rotating basin program will be supplemented with other data collection efforts such as the funding of long-term USGS water quality gaging stations for long-term trend data, and on-going studies being performed by USGS and USEPA. Data will be analyzed and field studies will be conducted to further characterize acknowledged problems and TMDLs will be developed and implemented accordingly. Both long-term monitoring and short-term water quality surveys can both contribute to the State's Integrated §303(d)/§305(b) listing process for waters requiring TMDLs.

6.0 IMPLEMENTATION OF TMDLS

6.1 WRAS and BMP Coordination

Watershed public awareness and involvement will be crucial to the successful implementation of these plans to improve water quality. Staff from SWQB have worked with stakeholders to develop a WRAS for the Middle Rio Grande Watershed north of Isleta Pueblo (MRG-Albuquerque Reach Watershed Group, 2008). The WRAS is a written plan intended to provide a long-range vision for various activities and management of resources in a watershed. It details opportunities for private landowners and public agencies to reduce and prevent impacts to water quality. This long-range strategy will become instrumental in coordinating and achieving constituent levels consistent with New Mexico's WQS, and will be used to prevent water quality impacts in the watershed. The WRAS is essentially the Implementation Plan, or Phase Two of the TMDL process. The completion of the TMDLs and WRAS leads directly to the development of on-the-ground projects to address surface water impairments in the watershed.

Specifically, a watershed group was formed consisting of technical experts, traditional, rural and urban water users, and members of surface water regulatory agencies. The watershed group utilized the *Middle Rio Grande Microbial Source Tracking Study* (Parsons, 2005) as a key reference in the planning and writing of the WRAS. Two other surface water quality studies utilized include the *Middle Rio Grande Total Maximum Daily Load (TMDL) for Fecal Coliform in Storm Water* (NMED/SWQB, 2002), and the *City of Albuquerque Antibiotic Resistance Analysis of Contamination in Storm Water Final Report* (City of Albuquerque, 2002).

The Watershed Group, using these studies and input from a broad range of stakeholders, developed a multi-phased and multi-tiered approach to reduce non-point source storm water pollution. The approach consists of a framework of four goals, listed below:

1. The 2002 TMDL for fecal coliform in storm water for the Albuquerque reach of the Rio Grande is being addressed through education, engineering, and enforcement.
2. There is increased public understanding of watershed approaches and increased participation in water quality improvement activities.
3. Water quality data is shared across jurisdictions to facilitate project implementation.
4. Regulations and local policies support watershed improvement initiatives.

The Watershed Group and NMED are developing a new 319-funded project that includes, among other tasks, revision of the WRAS to utilize information developed for this revised TMDL, and to more clearly address the planning elements identified by EPA in the *Nonpoint Source Program and Grants Guidelines for States and Territories* (EPA, 2003) . SWQB staff will continue to assist with technical assistance such as selection and application of BMPs and estimating load reductions associated with BMPs needed to meet WRAS goals. Stakeholder public outreach and involvement in the implementation of this TMDL will be ongoing. Stakeholders in this process will include SWQB as well as land owners, and other agencies in the implementation of this TMDL.

Implementation of BMPs within the watershed to reduce pollutant loading from nonpoint sources will be encouraged. Any reductions from point sources will be addressed in revisions to NPDES discharge permits. SWQB will communicate to designated federal land management agencies the intent of the TMDL and desire that BMPs be developed through the above coordination process.

6.2 Clean Water Act §319(h) Funding Opportunities

The Watershed Protection Section of the SWQB manages a grant program of CWA §319(h) funding to assist in planning and implementation of BMPs to address water quality problems on reaches listed as Category 4 or 5 waters (ie: impaired waters) on the Integrated CWA §303(d)/§305(b) list. These monies are available to all private, for profit and nonprofit organizations that are authenticated legal entities, or governmental jurisdictions including: municipalities, counties, tribal entities, Federal agencies, or agencies of the State. Proposals are submitted by applicants at least once a year through a Request for Proposal (RFP) process and require a non-federal match of 40% of the total project cost consisting of funds and/or in-kind services. Funding is available for both projects to develop watershed plans and on-the-ground projects to implement those plans.

South of Isleta Pueblo, the Watershed Protection Section will begin with initial outreach to inform stakeholders of the significance of the TMDL, and will include the affected assessment units among eligible stream reaches in RFPs for watershed planning projects. Once a watershed plan meeting the nine elements identified in the *Nonpoint Source Program and Grants Guidelines for States and Territories* (USEPA, 2003) has been developed, projects to address the load allocation portions of the TMDL will be eligible for funding with Section 319 funds.

Further information on New Mexico's Nonpoint Source Management Program and funding from the CWA §319 (h) can be found at the SWQB website: http://www.nmenv.state.nm.us/swqb.

6.3 Other Funding Opportunities and Restoration Efforts in the Middle Rio Grande Basin

Development of a watershed plan is expected to increase eligibility for other funding sources as well. The New Mexico Nonpoint Source Management Program utilizes locally-driven stakeholder processes to develop watershed plans, and as such implementation of the watershed plan should have the support of staff of agencies and organizations with specific relevant responsibilities in the area. Several other sources of funding exist to address impairments discussed in this TMDL document. NMED's Construction Programs Bureau assists communities in need of funding for WWTP upgrades and improvements to septic tank configurations (such as the design of cluster systems). The Construction Programs Bureau can also provide matching funds for appropriate CWA §319(h) projects using state revolving fund monies. The United States Department of Agriculture (USDA) Environmental Quality Incentive Program (EQIP) program can provide assistance to agricultural producers in the basin. The Bureau of Land Management and USDA Forest Service align their missions to protect lands they manages with the TMDL process, and are additional potential sources of assistance.

Note: *Section 6.4 is standardized language regarding MS4 allocations and MS4 permits added at the request of EPA Region 6. It is the responsibility of EPA Permit Writers to develop a permit that complies with the allocations provided in the TMDL. The exact manner in which this in implemented (specific BMPs, numeric effluent limits etc.) to achieve this goal is up to the discretion of the EPA permit writer and need not follow this implementation guidance.*

6.4 Storm water permitting Requirements and Presumptive Best Management Practices (BMPs) Approach

A. Background

The National Pollutant Discharge Elimination System (NPDES) permitting program for stormwater discharges was established under the Clean Water Act as the result of a 1987 amendment. The Act specifies the level of control to be incorporated into the NPDES stormwater permitting program depending on the source (industrial versus municipal). These programs contain specific requirements for the regulated communities/facilities to establish a comprehensive stormwater management program (SWMP) or storm water pollution prevention plan (SWPPP) to implement any requirements of the total maximum daily load (TMDL) allocation. [See 40 CFR §130.]

Storm water discharges are highly variable both in terms of flow and pollutant concentration, and the relationships between discharges and water quality can be complex. For municipal stormwater discharges in particular, the current use of system-wide permits and a variety of jurisdiction-wide BMPs, including educational and programmatic BMPs, does not easily lend itself to the existing methodologies for deriving numeric water quality-based effluent limitations. These methodologies were designed primarily for process wastewater discharges which occur at predictable rates with predictable pollutant loadings under low flow conditions in receiving waters. EPA has recognized these problems and developed permitting guidance for stormwater permits. (USEPA, 1996)

Due to the nature of storm water discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations (expressed as concentration and mass), EPA recommends an interim permitting approach for NPDES storm water permits which is based on BMPs. "The interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards." (*ibid.*)

A monitoring component is also included in the recommended BMP approach. "Each storm water permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits." (*ibid.*) This approach was further elaborated in an EPA guidance memo (USEPA, 2002): "The policy outlined in this memorandum affirms the appropriateness of an iterative, adaptive management BMP approach, whereby permits include effluent limits (e.g., a

combination of structural and nonstructural BMPs) that address storm water discharges, implement mechanisms to evaluate the performance of such controls, and make adjustments (i.e., more stringent controls or specific BMPs) as necessary to protect water quality. …… If it is determined that a BMP approach (including an iterative BMP approach) is appropriate to meet the storm water component of the TMDL, EPA recommends that the TMDL reflect this." This BMP-based approach to stormwater sources in TMDLs is also recognized and described in the most recent EPA guidance (USEPA, 2008).

This TMDL adopts the EPA recommended approach and relies on appropriate BMPs for implementation. No numeric effluent limitations are required or anticipated for municipal stormwater discharge permits.

B. SPECIFIC SWMP/SWPPP REQUIREMENTS

As noted in Section 4.0 of the TMDL, National Pollutant Discharge Elimination System (NPDES)-permitted facilities and non-point sources (e.g., wildlife, agricultural activities and domesticated animals, urban runoff, failing onsite wastewater disposal system, and domestic pets) could contribute to exceedences of the water quality criteria. In particular, stormwater runoff from the Phase 1 and II municipal separate storm sewer systems (MS4s) is likely to contain elevated bacteria concentrations. Permits for these discharges must comply with the provisions of this TMDL. Table 4.7 provides a list of Phase 1 and II MS4s that are affected by this TMDL.

Agricultural activities and other nonpoint sources of bacteria are unregulated. Voluntary measures and incentives should be used and encouraged wherever possible and such sources should strive to attain the loads established in this TMDL.

To ensure compliance with the TMDL requirements under the permit, stormwater permittees must develop strategies designed to achieve progress toward meeting the loads established in the TMDL. Relying primarily upon a Best Management Practices (BMP) approach, permittees should take advantage of existing information on BMP performance and select a suite of BMPs appropriate to the local community that are expected to result in progress toward meeting the loads established in the TMDL. The permittee should provide guidance on BMP installation and maintenance, as well as a monitoring and/or inspection schedule.

After EPA approves the final TMDL, existing MS4 permittees will be notified of the TMDL provisions and schedule. Industrial stormwater permittees are not expected to be a significant source of bacteria but if any are identified, similar actions will be required. Compliance with the following provisions will constitute compliance with the WLA requirements of this TMDL.

1. Develop A Bacteria Reduction Plan

Permittees should consider submitting an approvable Bacteria Reduction Plan to the EPA within 12 months of notification. Unless disapproved within 60 days of submission, the

plan should be approved then implemented by the permittee. This plan shall, at a minimum, include the following:

a. Consideration of ordinances or other regulatory mechanisms to require bacteria pollution control, as well enforcement procedures for noncompliance;
b. Evaluation of the existing SWMP in relation to TMDL loads;
c. An evaluation to identify potential significant sources of bacteria entering your MS4.
d. Develop (or modify an existing program as necessary) and implement a program to reduce the discharge of bacteria in municipal storm water contributed by any other significant source identified in the source identification evaluation
e. Educational programs directed at reducing bacterial pollution. Implement a public education program to reduce the discharge of bacteria in municipal storm water contributed (if applicable) by pets, recreational and exhibition livestock, and zoos;
f. Investigation and implementation of BMPs that prevent additional storm water bacteria pollution associated with new development and re-development;
g. Develop (or modify an existing program as necessary) and implement a program to reduce the discharge of bacteria in municipal storm water contributed by areas within your MS4 served by on-site wastewater treatment systems
h. Implementation of BMPs applicable to bacteria. EPA can provide summary information on some BMPs that should be considered. Permittees are not limited to BMPs on this list and should select BMPs appropriate to the local community that are expected to result in progress toward meeting the loads established in the TMDL.
i. Modifications to the dry weather field screening and illicit discharge detection and elimination provisions of the SWMP to consider storm water sampling and other measures intended to specifically identify bacterial pollution sources and high priority areas for bacteria reductions.
j. Periodic evaluation of the effectiveness of the bacteria reduction plan to ensure progress toward attainment of water quality standards.
k. An implementation schedule leading to modification of the SWMP and full implementation of the plan within 3 years of notification.

2. Develop Or Participate In A Bacteria Monitoring Program

Permittees may participate in a coordinated regional bacteria monitoring program or develop their own individual program. The monitoring program should be designed to establish the effectiveness of the selected BMPs and demonstrate progress toward achieving the loads of the TMDL and eventual attainment of water quality standards.

a. Within 18 months of notification, the permittee should prepare and submit to the EPA either a TMDL monitoring plan or a commitment to participate in a coordinated regional monitoring program. Unless disapproved by the Director within 60 days of submission, the plan should be approved then implemented by the permittee. The plan or program should include:
b. A detailed description of the goals, monitoring, and sampling and analytical methods;
c. A list and map of the selected TMDL monitoring sites;
d. The frequency of data collection to occur at each station or site;

e. The parameters to be measured, as appropriate for and relevant to the TMDL;
f. A Quality Assurance Project Plan that complies with EPA requirements (EPA, 2001)
g. The monitoring program should be fully implemented within 3 years of notification.

3. Annual Reporting

The permittee should include a TMDL implementation report as part of their annual report. The TMDL implementation report should include the status and actions taken by the permittee to implement the Bacteria Reduction Plan and monitoring program. The TMDL implementation report should document relevant actions taken by the permittee that affect MS4 storm water discharges to the waterbody segment that is the subject of the TMDL. This TMDL implementation report also should identify the status of any applicable TMDL implementation schedule milestones.

7.0 ASSURANCES

New Mexico's Water Quality Act (Act) authorizes the WQCC to "promulgate and publish regulation to prevent or abate water pollution in the state" and to require permits. The Act authorizes a constituent agency to take enforcement action against any person who violates a water quality standard. (§74-6-10(A) NMSA 1978) Several statutory provisions on nuisance law could also be applied to nonpoint source water pollution. The Water Quality Act also states in §74-6-12(A):

> *The Water Quality Act (this article) does not grant to the commission or to any other entity the power to take away or modify the property rights in water, nor is it the intention of the Water Quality Act to take away or modify such rights.*

In addition, the State of New Mexico Surface Water Quality Standards (see Subsection C of 20.6.4.62) (NMAC 2007) state:

> *Pursuant to Subsection A of Section 74-6-12 NMSA 1978, this part does not grant to the water quality control commission or to any other entity the power to take away or modify property rights in water.*

New Mexico policies are in accordance with the federal Clean Water Act §101(g):

> *It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this Act. It is the further policy of Congress that nothing in this Act shall be construed to supersede or abrogate rights to quantities of water which have been established by any State. Federal agencies shall co-operate with State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.*

New Mexico's 319 Program has been developed in a coordinated manner with the State's 303(d) process. All 319 watersheds that are targeted in the annual RFP process coincide with the State's biennial impaired waters list as approved by USEPA. The State has given a high priority for funding, assessment, and restoration activities to these watersheds.

As a constituent agency, NMED has the authority under Chapter 74, Article 6-10 NMSA 1978 to issue a compliance order or commence civil action in district court for appropriate relief if NMED determines that actions of a "person" (as defined in the Act) have resulted in a violation of a water quality standard including a violation caused by a nonpoint source. Proving causation by a nonpoint source of a violation of a water quality standard would be very difficult, and to date NMED has not brought an enforcement action on this basis. Instead, the NMED nonpoint source water quality management program has historically strived for and will continue to promote voluntary compliance to nonpoint source water pollution concerns by utilizing a voluntary, cooperative approach. NMED believes this is the best and most effective approach to addressing impairment of streams as a result of nonpoint source issues. The State provides technical support and grant monies for implementation of BMPs and other nonpoint source

prevention mechanisms through §319 of the Clean Water Act. Since portions of this TMDL will be implemented through nonpoint source control mechanisms, the New Mexico Watershed Protection Program will target its efforts towards this and other watersheds with TMDLs.

In order to obtain reasonable assurances for implementation in watersheds with multiple landowners, including federal, State and private land, NMED has previously established Memoranda of Understanding (MOUs) with various federal agencies, in particular the USFS and the Bureau of Land Management. MOUs in the past have also been developed with other State agencies, such as the New Mexico State Highway and Transportation Department. These MOUs provided for coordination and consistency in dealing with nonpoint source issues.

The time required to attain standards for all reaches is estimated to be approximately 10-20 years. This estimate includes watershed projects that may not be starting immediately, and also contemplates response to earlier projects. This timeframe is intended to provide some measure of watershed response to projects but is not intended to be a fixed goal. Stakeholders in this process will include SWQB, and other stakeholders involved with the development and implementation of the WRAS. The cooperation of watershed stakeholders will be pivotal in the implementation of these TMDLs as well.

8.0 PUBLIC PARTICIPATION

Public participation was solicited in development of this TMDL (Figure 8.1). The draft TMDL will be made available for a 45-day comment period on September 16, 2009. The draft document notice of availability was extensively advertised via newsletters, email distribution lists, webpage postings (http://www.nmenv.state.nm.us), and press releases to the Albuquerque Journal, Santa Fe New Mexican, and El Defensor Chieftain. TMDL staff presented the TMDL to the Middle Rio Grande Water Quality Workgroup on Tuesday, September 22, 2009 at 9am. A public meeting was be held on Tuesday, September 29, 2009 in Albuquerque, NM at the NMED District 1 Offices from 6-8pm. Eight sets of comments were received and the Response to Comments are included as Appendix E of this document.

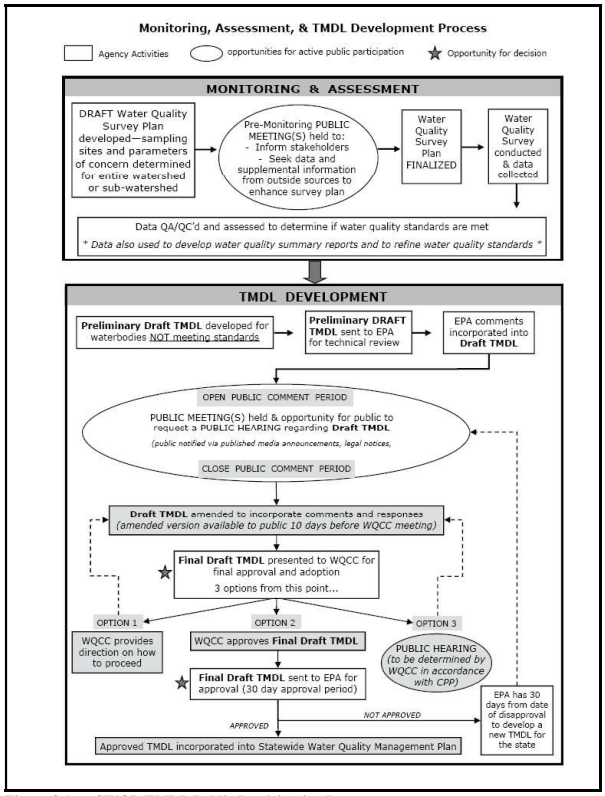

Figure 8.1. SWQB TMDL Public Participation Process

9.0 REFERENCES

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APPENDIX A
CONVERSION FACTOR DERIVATION

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Flow (as million gallons per day [MGD]) and concentration values (milligrams per liter [mg/L]) must be multiplied by a conversion factor in order to express the load in units "pounds per day." The following expressions detail how the conversion factor was determined:

TMDL Calculation:

$$Flow\,(MG/day) \times Concentration\left(\frac{mg}{L}\right) \times CF\left(\frac{L-lb}{MG-mg}\right) = Load\left(\frac{lb}{day}\right)$$

Conversion Factor Derivation:

$$CF = 10^6\ gal/MG \times \frac{3.785\,L}{gal} \times \frac{1lb}{454{,}000\,mg} = 8.34\,\frac{L-lb}{MG-mg}$$

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APPENDIX B
SELECTIONS FROM 2008-2010 CWA §303 (d)/305(b) List

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Rio Grande (non-pueblo Alameda Bridge to Angostura Div) **Rio Grande-Albuquerque**

Assessment Unit ID:	Size (mi or ac):	WQS reference:	Monitoring Schedule:	Cycle Last Assessed:	IR Category:
NM-2105.1_00	11.66	20.6.4.106	2013	2008	5/5C

Use Information:

Designated Use (s):	Attainment:
Irrigation	Fully Supporting
Livestock Watering	Fully Supporting
Marginal Warmwater Aquatic Life	Not Supporting
Secondary Contact	Not Supporting
Wildlife Habitat	Fully Supporting

Assessment Information:

Probable Causes of Impairment:	TMDL Schedule:
Ambient Bioassays – Acute, Aquatic Toxicity	2009
E. coli	2009
Oxygen, Dissolved	2009

Probable Sources of Impairment:

Avian Sources (waterfowl and/or other)
Impervious Surface/Parking Lot Runoff
Municipal (Urbanized High Density Area)
Municipal Point Source Discharges
On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
Source Unknown
Wastes from Pets

Assessment Unit Comments:

TMDL for fecal coliform. De-listed for fecal coliform because this criteria was replaced with E. coli during the 2005 triennial. The dissolved oxygen impairment may indicate excessive nutrients. Protocols for nutrients in large rivers are under development.

NOTE (2/13/09): EPA's Record of Decision states that "EPA concludes that the *public participation process* regarding the listing of two assessment units/dissolved oxygen pollutant combinations, i.e., NM-2105_50 and NM-2105.1_00, is inconsistent with federal requirements and the New Mexico Water Quality Control Commission Continuing Planning Process (CPP) and Water Quality Management Plan (WQMP). ...Consequently, EPA is taking a disapproval action and de-listing these assessment units/dissolved oxygen pollutant-combinations." EPA requested that NMED Public Notice the addition of these assessment units/dissolved oxygen pollutant-combination to the New Mexico § 303(d) List during either an addendum to the 2008 Integrated List or during the New Mexico 2010 Integrated List submission.

Rio Grande (Isleta Pueblo bnd to Alameda Bridge) **Rio Grande-Albuquerque**

Assessment Unit ID:	Size (mi or ac):	WQS reference:	Monitoring Schedule:	Cycle Last Assessed:	IR Category:
NM-2105_50	20.4	20.6.4.105	2013	2008	5/5B

Use Information:

Designated Use (s):	Attainment:
Irrigation	Fully Supporting
Livestock Watering	Fully Supporting
Marginal Warmwater Aquatic Life	Not Supporting
Secondary Contact	Not Supporting
Wildlife Habitat	Fully Supporting

Assessment Information:

Probable Causes of Impairment:	TMDL Schedule:
E. coli	2009
Oxygen, Dissolved	2009

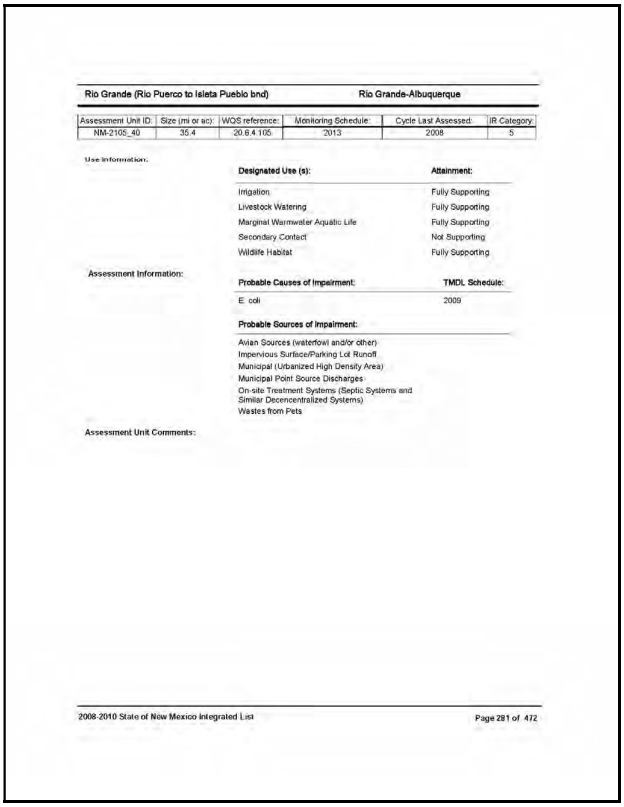
Probable Sources of Impairment:

Avian Sources (waterfowl and/or other)
Impervious Surface/Parking Lot Runoff
Municipal (Urbanized High Density Area)
Municipal Point Source Discharges
On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
Source Unknown
Wastes from Pets

Assessment Unit Comments:

TMDL for fecal coliform. De-listed for fecal coliform because this criteria was replaced with E. coli during the 2005 triennial. The dissolved oxygen impairment may indicate excessive nutrients. Protocols for nutrients in large rivers are under development.

NOTE (2/13/09): EPA's Record of Decision states that "EPA concludes that the *public participation process* regarding the listing of two assessment units/dissolved oxygen pollutant combinations, i.e., NM-2105_50 and NM-2105.1_00, is inconsistent with federal requirements and the New Mexico Water Quality Control Commission Continuing Planning Process (CPP) and Water Quality Management Plan (WQMP). ...Consequently, EPA is taking a disapproval action and de-listing these assessment units/dissolved oxygen pollutant-combinations." EPA requested that NMED Public Notice the addition of these assessment units/dissolved oxygen pollutant-combination to the New Mexico § 303(d) List during either an addendum to the 2008 Integrated List or during the New Mexico 2010 Integrated List submission.



Rio Grande (Rio Puerco to Isleta Pueblo bnd) **Rio Grande-Albuquerque**

Assessment Unit ID:	Size (mi or ac):	WQS reference:	Monitoring Schedule:	Cycle Last Assessed:	IR Category:
NM-2105_40	35.4	20.6.4.105	2013	2008	5

Use Information:

Designated Use (s):	Attainment:
Irrigation	Fully Supporting
Livestock Watering	Fully Supporting
Marginal Warmwater Aquatic Life	Fully Supporting
Secondary Contact	Not Supporting
Wildlife Habitat	Fully Supporting

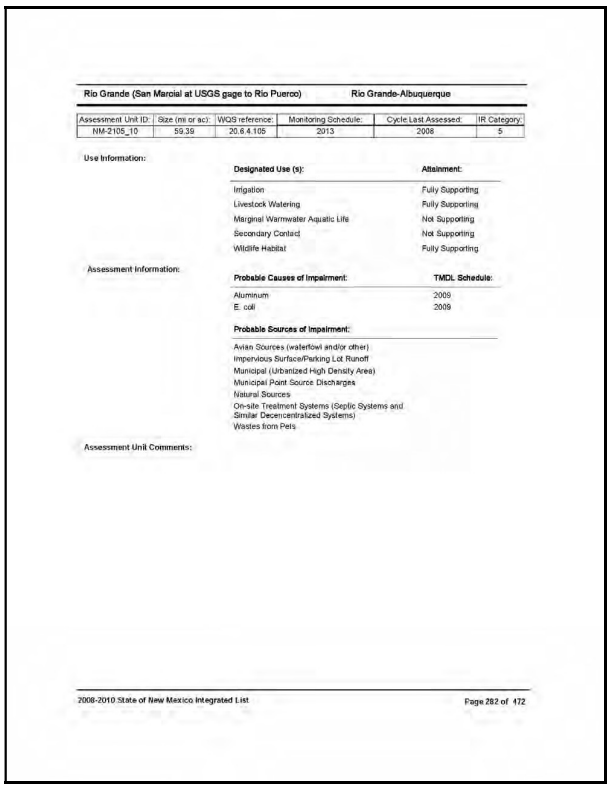
Assessment Information:

Probable Causes of Impairment:	TMDL Schedule:
E. coli	2009

Probable Sources of Impairment:

Avian Sources (waterfowl and/or other)
Impervious Surface/Parking Lot Runoff
Municipal (Urbanized High Density Area)
Municipal Point Source Discharges
On-site Treatment Systems (Septic Systems and Similar Decencentralized Systems)
Wastes from Pets

Assessment Unit Comments:



Rio Grande (San Marcial at USGS gage to Rio Puerco) **Rio Grande-Albuquerque**

Assessment Unit ID:	Size (mi or ac):	WQS reference:	Monitoring Schedule:	Cycle Last Assessed:	IR Category:
NM-2105_10	59.39	20.6.4.105	2013	2008	5

Use Information:

Designated Use (s):	Attainment:
Irrigation	Fully Supporting
Livestock Watering	Fully Supporting
Marginal Warmwater Aquatic Life	Not Supporting
Secondary Contact	Not Supporting
Wildlife Habitat	Fully Supporting

Assessment Information:

Probable Causes of Impairment:	TMDL Schedule:
Aluminum	2009
E. coli	2009

Probable Sources of Impairment:

Avian Sources (waterfowl and/or other)
Impervious Surface/Parking Lot Runoff
Municipal (Urbanized High Density Area)
Municipal Point Source Discharges
Natural Sources
On-site Treatment Systems (Septic Systems and Similar Decencentralized Systems)
Wastes from Pets

Assessment Unit Comments:

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APPENDIX C
Aluminum Data

Table F.1- Rio Grande (San Marcial to Rio Puerco)

Station	Date	Result (mg/L)	Flow (cfs) [1]
32RGrand323.4	3/30/2005	0.02	608
32RGrand341.2	3/30/2005	0.03	608
32RGrand292.1	3/30/2005	0.02	608
32RGrand341.2	4/28/2005	0.06	3880
32RGrand323.4	4/28/2005	**0.21**	3880
32RGrand292.1	4/28/2005	**0.16**	3880
32RGrand323.4	5/17/2005	0.09	4190
32RGrand341.2	5/17/2005	**0.13**	4190
32RGrand292.1	5/18/2005	0.02	4170
32RGrand292.1c	5/18/2005	0.07	4170
32RGrand258.0	6/21/2005	0.06	3290
32RGrand292.1	6/21/2005	0.07	3290
32RGrand292.1c	6/21/2005	**0.1**	3290
32RGrand323.4	6/21/2005	0.08	3290
32RGrand341.2	6/22/2005	**1.7**	3200
32RGrand292.1	7/26/2005	0.01	0.0001
32RGrand292.1c	7/26/2005	0.01	0.0001
32RGrand323.4	7/26/2005	<0.01	0.0001
32RGrand341.2	7/26/2005	**0.2**	0.0001
32RGrand258.0	8/23/2005	**0.8**	108
32RGrand323.4	8/23/2005	<0.01	108
32RGrand341.2	8/23/2005	0.01	108
32RGrand292.1	9/27/2005	<0.01	0.001
32RGrand323.4	9/27/2005	<0.01	0.001
32RGrand341.2	9/27/2005	<0.02	0.001
32RGrand258.0	10/25/2005	**1.5**	188
32RGrand323.4	10/25/2005	0.02	188
32RGrand341.2	10/25/2005	0.01	188

Red values indicate those above the water quality standard.
[1] USGS Gage 8358400-Rio Grande Floodway at San Marcial, NM

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APPENDIX D
E.coli Data

Table D.1- Rio Grande (non-Pueblo Alameda Bridge to Angostura Diversion)

Station	Date	Result (cfu/100mL)	Flow (cfs)[1]	Rainfall (inches)[2]
USGS 8329918	2/18/2004	480	408	0
USGS 8329918	4/26/2004	110	953	0
USGS 8329918	7/20/2004	50	528	0
USGS 8329918	11/9/2004	>5300	504	0.03
30RGrand473.7	3/23/2005	10.8	928	0
32RGrand464.2	3/23/2005	11	928	0
32RGrand458.0	3/23/2005	13.4	928	0
32RGrand445.4	3/23/2005	41.4	928	0
USGS 8329918	5/5/2005	<8	4070	0
30RGrand473.7	5/26/2005	27.5	5580	0
32RGrand464.2c	5/26/2005	32.7	5580	0
32RGrand464.2	5/26/2005	42.8	5580	0
32RGrand458.0	5/26/2005	42.6	5580	0
32RGrand445.4c	5/26/2005	40.4	5580	0
32RGrand445.4	5/26/2005	47.3	5580	0
30RGrand473.7	6/23/2005	13.4	4300	0
32RGrand464.2c	6/23/2005	23.1	4300	0
32RGrand464.2	6/23/2005	22.6	4300	0
32RGrand458.0	6/23/2005	35	4300	0
32RGrand445.4c	6/23/2005	81.3	4300	0
32RGrand445.4	6/23/2005	249.5	4300	0
30RGrand473.7	7/27/2005	98.5	463	0
32RGrand464.2	7/27/2005	488.4	463	0
32RGrand464.2c	7/27/2005	325.5	463	0
32RGrand458.0	7/27/2005	41.1	463	0
32RGrand445.4	7/27/2005	62.2	463	0
32RGrand445.4c	7/27/2005	41.7	463	0
USGS 8329918	8/24/2005	<100	474	0
30RGrand473.7	8/24/2005	52.1	474	0
32RGrand464.2c	8/24/2005	50.4	474	0
32RGrand458.0	8/24/2005	7.2	474	0
32RGrand445.4c	8/24/2005	77.6	474	0
32RGrand445.4	9/28/2005	149.7	541	0
32RGrand458.0	9/28/2005	90.9	541	0
32RGrand464.2	9/28/2005	95.9	541	0
30RGrand473.7	9/28/2005	90.9	541	0
32RGrand445.4	10/26/2005	231	299	0
32RGrand458.0	10/26/2005	133.4	299	0
32RGrand464.2	10/26/2005	153.9	299	0
30RGrand473.7	10/26/2005	63.1	299	0
USGS 8329918	12/12/2005	1000	518	0
USGS 8329918	4/25/2006	670	555	0
USGS 8329918	8/15/2006	4100	1980	0
USGS 8329918	12/5/2006	<1	825	0
USGS 8329918	5/4/2007	>180	2280	0

Red values indicate those above the State and Tribal water quality standard.
Blue values indicate those above the Tribal water quality standards.
[1] USGS gage 0829928
[2] Angostura NMSU weather site. Rainfall data for the previous day was used.

Table D.2- Rio Grande (Isleta Pueblo bnd to Alameda Bridge)

Station	Date	Result (cfu/100mL)	Flow (cfs)[1]	Rainfall (inches)[2]
USGS 8330000	12/8/2004	1000	859	0
32RGrand419.7	3/23/2005	43.5	873	0
USGS 8330000	4/8/2005	<47	1100	0
32RGrand419.7	5/26/2005	40.4	5610	0
32RGrand419.7	6/22/2005	1553.1	4230	0
USGS 8330000	7/7/2005	20	1290	0
32RGrand419.7	7/27/2005	245.3	392	0
USGS 8330000	8/12/2005	1000	486	0
32RGrand419.7	8/24/2005	290.9	363	0
32RGrand419.7	9/28/2005	275.5	393	0
32RGrand419.7	10/26/2005	290.9	281	0
USGS 8330000	2/22/2006	>2	570	0
USGS 8330000	5/17/2006	28	554	0
USGS 8330000	7/19/2006	>1	498	0
USGS 8330000	5/8/2007	120	2530	0
USGS 8330000	6/25/2007	730	674	0

Red values indicate those above the State and Tribal water quality standard.
Blue values indicate those above the Tribal water quality standards.
[1] USGS gage 08330000
[2] Albuquerque International Airport weather site. Rainfall data for the previous day was used

Table D.3- Rio Grande (Rio Puerco to Isleta Pueblo bnd)

Station	Date	Result (cfu/100mL)	Flow (cfs)[1]	Rainfall (inches)[2]
32RGrand385.5	3/23/2005	143.9	983	0
32RGrand361.7	3/23/2005	101.4	983	0
32RGrand394.8	3/24/2005	41	895	0
32RGrand394.8	5/25/2005	44.3	5500	0
32RGrand361.7	5/25/2005	59.1	5500	0
32RGrand385.5c	5/25/2005	64.5	5500	0
32RGrand385.5	5/25/2005	26.6	5500	0
32RGrand394.8c	5/26/2005	38.4	5650	0
32RGrand361.7	6/21/2005	52.1	3790	0
32RGrand385.5c	6/22/2005	118.7	3520	0.24
32RGrand385.5	6/22/2005	116.2	3520	0.24
32RGrand394.8	6/22/2005	1413.6	3520	0.24
32RGrand385.5c	7/26/2005	47.6	97	0
32RGrand394.8	7/26/2005	34.1	97	0
32RGrand394.8c	7/26/2005	25.6	97	0
32RGrand361.7	7/27/2005	9.7	87	0
32RGrand361.7	8/23/2005	115.3	133	0
32RGrand385.5c	8/24/2005	143.9	99	0.01
32RGrand394.8c	8/24/2005	71.7	99	0.01
32RGrand361.7	9/27/2005	101.7	42	0
32RGrand385.5	9/28/2005	261.3	41	0.02
32RGrand394.8	9/28/2005	133.4	41	0.02
32RGrand361.7	10/25/2005	285.1	263	0
32RGrand385.5	10/26/2005	461.1	210	0
32RGrand394.8	10/26/2005	613.1	210	0

Red values indicate those above the water quality standard.
[1] USGS gage 08358900
[2] Los Lunas NMSU weather site. Rainfall data for the previous day was used.

Table D.4- Rio Grande (San Marcial to Rio Pueco)

Station	Date	Result (cfu/100mL)	Flow (cfs)[1]	Rainfall (inches)[2]
USGS 8354900	11/14/2002	370	350	0
USGS 8358400	12/2/2002	200	278	0.01
USGS 8354900	3/25/2003	<6	306	0
USGS 8358400	4/24/2003	130	237	0
USGS 8354900	4/28/2003	620	210	0
USGS 8358400	6/4/2003	270	228	0
USGS 8354900	7/14/2003	53	23	0
USGS 8358400	7/16/2003	>60	19	0
USGS 8358400	12/17/2003	<17	342	0
USGS 8354900	12/19/2003	>4	309	0
USGS 8358400	4/15/2004	3200	2320	0
USGS 8354900	4/16/2004	>16000	1710	0
USGS 8358400	6/17/2004	300	47	0
USGS 8354900	6/18/2004	>5300	44	0
USGS 8354900	8/5/2004	1000	155	0
USGS 8358400	8/5/2004	130	155	0
USGS 8358400	12/2/2004	700	603	0
USGS 8354900	12/7/2004	1000	511	0.22
32RGrand258.0	3/24/2005	61.3	720	0
32RGrand292.1	3/24/2005	64.4	720	0
32RGrand323.4	3/24/2005	93.4	720	0
USGS 8354900	4/6/2005	76	445	0
USGS 8358400	4/21/2005	<16	2320	0.12
32RGrand292.1c	5/25/2005	214.3	4380	0
32RGrand292.1	5/25/2005	214.3	4380	0
32RGrand323.4	5/25/2005	816.4	4380	0
32RGrand341.2	5/25/2005	18.5	4380	0
32RGrand292.1	6/21/2005	70.3	3290	0
32RGrand292.1c	6/21/2005	48.8	3290	0
32RGrand323.4	6/21/2005	62	3290	0
32RGrand341.2	6/22/2005	63.1	3200	0
USGS 8354900	7/8/2005	83	698	0
USGS 8358400	7/14/2005	14	261	0
32RGrand292.1	7/26/2005	59.8	0.001	0
32RGrand292.1c	7/26/2005	55.6	0.001	0
32RGrand323.4	7/26/2005	16.9	0.001	0
32RGrand341.2	7/26/2005	83.9	0.001	0
32RGrand258.0	8/23/2005	218.7	108	0
32RGrand292.1c	8/23/2005	206.4	108	0
32RGrand323.4	8/23/2005	27.9	108	0
32RGrand341.2	8/23/2005	178.2	108	0
USGS 8354900	9/27/2005	77	0.001	0
32RGrand292.1	9/27/2005	201.4	0.001	0
32RGrand323.4	9/27/2005	191.8	0.001	0
32RGrand341.2	9/27/2005	461.1	0.001	0
USGS 8358400	10/12/2005	1700	168	0
32RGrand258.0	10/25/2005	920.8	188	0
32RGrand292.1	10/25/2005	172.7	188	0

Station	Date	Result (cfu/100mL)	Flow (cfs)[1]	Rainfall (inches)[2]
32RGrand323.4	10/25/2005	233.3	188	0
32RGrand341.2	10/25/2005	**517.2**	188	0
USGS 8358400	11/30/2005	**>4000**	437	0
USGS 8358400	2/13/2006	32	425	0
USGS 8354900	2/14/2006	220	412	0
USGS 8358400	3/14/2006	110	230	0
USGS 8354900	5/12/2006	<6	34	0
USGS 8358400	5/23/2006	>1	30	0
USGS 8354900	7/10/2006	**4000**	1330	0
USGS 8354900	8/29/2006	**5100**	1440	0
USGS 8358400	11/13/2006	**620**	1180	0
USGS 8358400	2/12/2007	**520**	658	0.03
USGS 8354900	4/26/2007	46	481	0
USGS 8358400	5/22/2007	340	2260	0
USGS 8354900	6/19/2007	150	343	0

Red values indicate those above the water quality standard.
[1] USGS gage 08358400
[2] South Bosque del Apache NMSU weather station. Rainfall data for the previous day was used.

Table E.5- MRG WWTP samples

WWTP Station	Date	Result (cfu/100mL)
Albuquerque	7/27/2005	38.4
Belen	7/26/2005	131.4
Bernalillo	7/27/2005	6.3
Bosque Farms	7/27/2005	25.9
Los Lunas at Rio Grande	7/26/2005	52.8
Los Lunas WWTP	7/26/2005	7.5
Rio Rancho #2 at Rio Grande	7/27/2005	127.4
Rio Rancho #2 WWTP	7/27/2005	2
Socorro	none	none
Albuquerque	8/24/2005	28.8
Belen	8/23/2005	140.1
Bernalillo	8/24/2005	2
Bosque Farms	8/24/2005	81.3
Los Lunas at Rio Grande	8/23/2005	23.5
Los Lunas WWTP	8/23/2005	167
Rio Rancho #2 at Rio Grande	8/24/2005	307.6
Rio Rancho #2 WWTP	8/24/2005	2
Socorro	8/23/2005	1
Albuquerque	9/28/2005	48
Belen	9/27/2005	40.2
Bernalillo	9/28/2005	193.5
Bosque Farms	none	none
Los Lunas at Rio Grande	9/27/2005	59.8
Los Lunas WWTP	9/27/2005	30.1
Rio Rancho #2 at Rio Grande	9/28/2005	28.8
Rio Rancho #2 WWTP	9/28/2005	1
Socorro	9/27/2005	45.7
Albuquerque	10/26/2005	24.1
Belen	10/25/2005	9.7
Bernalillo	10/26/2005	19.2
Bosque Farms	10/26/2005	**1986.3**
Los Lunas at Rio Grande	10/25/2005	52
Los Lunas WWTP	10/25/2005	10.8
Rio Rancho #2 at Rio Grande	10/26/2005	11
Rio Rancho #2 WWTP	10/26/2005	3.1
Socorro	10/25/2005	35.5
Albuquerque	11/30/2005	6.3
Belen	11/29/2005	15.8
Bernalillo	11/30/2005	365.4
Bosque Farms	11/30/2005	**>2419.6**
Los Lunas at Rio Grande	11/29/2005	166.4
Los Lunas WWTP	11/29/2005	28.8
Rio Rancho #2 at Rio Grande	11/30/2005	5.2
Rio Rancho #2 WWTP	11/30/2005	1
Socorro	11/29/2005	110.6

Red values indicate those above the State water quality standard.

APPENDIX E
RESPONSE TO COMMENTS

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SWQB hosted a public m eeting in Albuquerque, NM on Sept ember 29, 2009 to discuss the Public Comm ent Draft Middle R io Grande Wa tershed T MDL. The following changes were made to the Final Draft docum ent in response to public co mment received at the m eeting and afterwards:

1. Questions were raised during the public meeting regarding the references to the State water quality standards in Section 2.3. SWQB agreed to simplify Section 2.3 so that it only lists the water quality standards directly related to the TMDL, specifically dissolved aluminum and *E.coli*.

2. Questions were raised by a num ber of MS4 perm ittees during the public m eeting regarding the strict language in Section 6.4. C omment Sets A, D, F, and G also questions the use of the c hosen language. S WQB had discussions with EPA R6 following the public meeting and agreed to change the language from phrases such as "shall" to "should" and "should consider."

3. EPA R6 requested that flows be provided in Table 2.3 for USGS gages upstream of the study area.

4. Appendix F was added based on public comment.

Written comments received during the 45-day public comment period:

A. Bernalillo County Public Works
B. Andy Smith
C. Pueblo of Sandia
D. City of Albuquerque Aviation Department
E. Southern Sandoval County Arroyo Flood Control Authority
F. Albuquerque Metropolitan Arroyo Flood Control Authority
G. Middle Rio Grande Stormwater Quality Team

Written comments received after the 45-day public comment period:

H. Pueblo of Santa Ana

Comment Set A:

County of Bernalillo
State of New Mexico

BOARD OF COUNTY COMMISSIONERS
ALAN B. ARMIJO, CHAIR, DISTRICT 1
ART DE LA CRUZ, VICE CHAIR, DISTRICT 2
MAGGIE TOULOUSE OLIVER, MEMBER, DISTRICT 3
MICHAEL C. WIENER, MEMBER, DISTRICT 4
MICHAEL BRASHER, MEMBER, DISTRICT 5
THADDEUS LOCERO, COUNTY MANAGER

KAREN L. MONTOYA, ASSESSOR
MAGGIE TOULOUSE OLIVER, CLERK
HERBERT RUDD, PROBATE JUDGE
DARREN P. WHITE, SHERIFF
PATRICK J. PADILLA, TREASURER

Bernalillo County Public Works
2400 Broadway S.E.
Albuquerque, NM 87102
505-848-1500
Fax 505-848-1510

September 29, 2009

Ms. Heidi Henderson, TMDL Coordinator
New Mexico Environment Department
Surface Water Quality Bureau
1190 St. Francis Drive
Santa Fe, NM 87505

Re: Comments about public comment draft, TMDL for the Middle Rio Grande Watershed

Dear Ms. Henderson:

The Bernalillo County Public Works Division, Water Resources Program, has reviewed the September 10, 2009 Public Comment Draft of the Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed, and submits the following comments.

In general, Bernalillo County applauds the Environment Department for their use of the flow duration approach to evaluating pollutant loads. The approach effectively addresses the difficulty of determining target and actual pollutant loads over the broad range of streamflow regimes observed for surface water bodies in New Mexico.

Bernalillo County has particular concerns about the projection in Section 4.4.2 that the *E. coli* load for the Rio Grande (Isleta Pueblo bnd to Alameda Street bridge) assessment unit (AU) must be reduced by more than 80% to achieve the target load under most flow conditions. This level of reduction is nearly impossible, given that over 46% of fecal bacteria originate from wildlife beyond human control.

Further, we are concerned about the comparison of arithmetic means for measured *E. coli* loads against geometric means from *E. coli* water quality criteria in Section 4.4.2, possibly overestimating measured loads and needed reductions to achieve target loads.

Finally, we are concerned about the inclusion in Section 6.4 of proscriptive language that appears to impose regulatory requirements under this TMDL for stormwater discharge permittees in the watershed.

Please see our specific comments about these issues below.

The following are specific comments from Bernalillo County, arranged by section of the draft TMDL.

- **Executive Summary, Page 1, Paragraph 1.** For clarity we recommend appending the following formula to the end of the paragraph: "[TMDL = WLA + LA + MOS]".

SWQB Response: *Thank you for the comments. The addition has been made to the document.*

- **Executive Summary, TMDL summary sheets**
  - Page numbers for the summary sheets are out of order with the remainder of the document.
  - For each assessment unit, the scope/size of the sub-watershed shown on the summary sheet (>17,000 mi^2) exceeds the size of the entire watershed (3,204 mi^2 for USGS HUC 13020203) cited in *Description and Land Ownership* (Page 3, Section 2.1, Paragraph 2). Please clarify this apparent discrepancy.
  - For each assessment unit, the percent forest shown under the Land Use/Cover heading (>90%) exceeds the percent forest for the entire watershed (9%) cited in *Description and Land Ownership* (Page 3, Section 2.1, Paragraph 2). Please clarify this apparent discrepancy.

SWQB Response: *It is noted that the page numbers are incorrect and will be addressed in the final version of the TMDL document. The entire watershed described in the Executive Summary tables for each Assessment Unit (AU) is calculated as the watershed from the most downstream point of the AU to the Rio Grande headwaters. The values in Section 2.1 describe only the USGS HUC 13020203. It is for these reasons that the percent forest land cover differs as well. Clarifying language has been added to make clear were values apply to the entire upstream watershed versus the 8-digit HUC watershed.*

- **Section 2.0 Background**
  - The "2005 MRG Tributary study" is mentioned in the first paragraph on Page 3, but is not included in the References (Section 9.0). Is the "MRG Tributary study" different from the March to October 2005 watershed sampling performed by NMED? If so, is a copy of the "MRG Tributary study" available for review?

SWQB Response: *SWQB sampled both the mainstem of the Middle Rio Grande as well as tributaries to the Middle Rio Grande in 2005. The MRG tributary report is not yet available. However, the results of water quality assessments performed following the MRG tributary survey are available on the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List.*

- **Section 2.1 Description and Land Ownership**
  - In Paragraph 3 of Section 2.1 on Page 3, Natural Heritage New Mexico is cited, but the role of this agency in the preparation of the TMDL is not defined. What was their role?

SWQB Response: *A statement has been added to this section of the document to clarify the citation of Natural Heritage New Mexico.*

- **Section 2.2 History and Geology**
  - In Paragraph 2 of Section 2.2 on Page 4, it is stated that the Sandia Mountains "reach to over 11,000 feet," while the highest point in the Sandia Mountains is Sandia Peak at 10,378 feet.

SWQB Response: *The citation is from Roadside Geology of New Mexico (Chronic, 1987). Upon further research, a number of values were found that describe the highest point of the Sandia Mountains. To be conservative, the statement has been changed to "reach over 10,000 feet".*

- **Section 2.3 Water Quality Standards**
  - In the fourth paragraph on Page 10, it is stated that "The appropriate tribal WQS will be used in the TMDL calculations in this document." Please expand this statement to clarify that the appropriate state OR tribal WQS is used for TMDL calculations, depending on the affected assessment unit, and the rationale for using different standards for different assessment units.

SWQB Response: *Per oral public comment at the TMDL public meeting on September 29, 2009, SWQB agreed to remove discussions of Water Quality Standards (WQS) other than those directly related to the TMDL document, ie: dissolved aluminum and E.coli. These changes have been made to Section 2.3. Language has also been added to the end of Section 2.3 to clarify the use of Tribal WQS.*

- **Section 2.4.1 Survey Design**
  - In Paragraph 1 of Section 2.4.1 on Page 11, it is stated that "Surface water grab samples were analyzed for a variety of chemical/physical parameters." In Table 2.2 of Section 2.4.1 on Page 11, footnote (a) cites "Grab and composite samples collected throughout 2005." Please clarify or correct this apparent discrepancy.
  - Please provide a list of the chemical/physical parameters for which water samples were analyzed (perhaps as an appendix to the TMDL).

SWQB Response: *Both grab and composite samples were collected and analyzed during the 2005 water quality survey. The statement in Section 2.4.1 has been clarified. A list of the water chemistry parameters that were sampled for in 2005 is listed in Section 4.0 of Water Quality Monitoring of the Middle Rio Grande, 2000-2007 Annual Report (NMED/SWQB, 2008) available online at: http://www.nmenv.state.nm.us/swqb/Rio_Grande/Middle/2008Report.pdf*

- **Section 2.4.2 Hydrologic Conditions**
  - In Table 2.3 of Section 2.4.2 on Page 13, please indicate which of the listed USGS gages were used to determine streamflows in TMDL calculations.
  - In Figure 2.7 of Section 2.4.2 on Page 15, there is a nearly 10-year gap in streamflow data. We are concerned about the reliability of the streamflow data used for TMDL calculations in this assessment unit. Please add language addressing this concern.

SWQB Response: *Table 2.3 is included in order to present all active gages in the MRG area; Figures 2.4-2.7 represent the flow for the four USGS gages used in the load duration curves in the TMDL. SWQB has confirmed with USGS staff that there is no flow data available for USGS Gage 08329928 from October 1995 to June 2003 due to lack of funding for data collection at that site. According to An Approach for Using Load Duration Curves in the Development of TMDLs (USEPA, 2007),*

> *"The lack of instream flow data at most water quality monitoring locations would typically be identified as a significant data gap for application of watershed and water quality models. However, since the incremental watershed LDC approach makes use of drainage area ratio-based flow estimates, the lack of flow information at these locations is not limiting."*

There were also no E.coli sampling events used in this TMDL prior to 2004 and therefore there were flow data available at this gage for all of the E.coli samples.

- **Section 3.1 Target Loading Capacity** *(for aluminum)*
  - In Paragraph 2 of Section 3.1 on Page 16 it is stated that "The chronic criterion was exceeded 4 of 8 times on the Rio Grande (San Marcial at USGS gage to Rio Puerco) AU." In contrast, Table C.1 of Appendix C shows that the chronic criterion for dissolved aluminum was exceeded in 8 of 28 samples taken in the Rio Grande (San Marcial at USGS gage to Rio Puerco) AU. Please explain or correct this apparent discrepancy.

SWQB Response: *The impairments addressed in this TMDL document are included on the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List. The determination of these impairments was based on the application of the Procedures for Assessing Use Attainment for the State of New Mexico Integrated Clean Water Act §303(d)/§305(b) Water Quality Monitoring and Assessment Report (January 2008). Section 3.0 of the 2008 AP reads:*

> *"When data from multiple stations are used to assess a single AU, the data should be from stations and sampling events that are 1) spatially independent (generally more than 200 meters apart), and 2) temporally independent (generally collected at least seven days apart). If one or both of these conditions are not met, the data from the non-independent stations should be averaged before application of the assessment procedures."*

Thus, the samples that were not spatially or temporally independent were averaged. The Assessment Protocols were then applied to the averaged value. The statement in the TMDL regarding 4 of 8 exceedences reflects the fact that averaging of the non-independent samples occurred. Details of the assessments are available on the Assessment Summary Sheets, which are made available for public inspection as part of the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List public record. A statement of clarification has been added to Sections 3.1 and 4.1.

- **Section 3.2 Flow** *(for aluminum)*
  - In Figure 3.1 of Section 3.2 on Page 17, please identify the USGS gage by number in the figure. In addition, the term "moist conditions" is a misnomer for conditions in which streamflow exceeds the "mid-range flows" condition. Perhaps the terms "moist conditions" and "mid-range flows" can be reversed throughout the TMDL document for better reader understanding.
  - In the second paragraph on Page 17, it will be helpful to include a more detailed explanation of the computational method used to produce the Aluminum Load Duration Curve in Figure 3.2 on Page 18. Assuming that the Aluminum Loading Duration Curve (Figure 3.2) was produced with values from the Flow Duration Curve (Figure 3.1) and a water quality standard for aluminum from 20.6.4.900 NMAC, please indicate whether the acute or the chronic WQS for dissolved aluminum was used in the calculations.

SWQB Response: *The USGS Gage number was added to the title of Figure 3.1. SWQB staff attended a training with Bruce Cleland and EPA R6 in February 2007. The development of the flow and load duration curves in this TMDL was based on this training as well as a research article by Bruce Cleland and guidance from the EPA Office of Wetlands, Oceans, and Watersheds. The use of "moist" and "mid-range" in the TMDL is consistent with the literature research. Language was added to Section 3.2 regarding the use of the chronic dissolved aluminum WQS in the development of the load duration curve. References to the EPA document have been added to Section 3.2 as well as Section 9.0. The Cleland (2003) reference remains in Section 3.2. Both references provide detailed explanations of both flow and load duration curve development.*

- **Section 3.3 Calculations** *(for aluminum)*
  - In Equation 1 of Section 3.3 on Page 19, we recommend inserting the units "(MG/gal)" after the 10^{-6} factor, and revising the units of "flow" to "(MGD)".
  - In Equation 2 of Section 3.3 on Page 19, we recommend revising the units of "critical flow" to "(MGD)".
  - In Table 3.1 of Section 3.3 on Page 19, we recommend indicating that the cited chronic water quality criterion is for *dissolved* aluminum.
  - In Table 3.1 of Section 3.3 on Page 19, the superscripts and footnotes use different conventions.

SWQB Response: *The requested changes have been made to Section 3.3.*

- **Section 3.4.1 Waste Load Allocation** *(for aluminum)*
  - In Paragraph 1 of Section 3.4.1 on Page 19, we recommend inserting the word "dissolved" between "chronic" and "aluminum" in the fifth sentence.
  - In Paragraph 1 of Section 3.4.1 on Page 20, we recommend inserting the words "based on design flow and the chronic water quality standard for dissolved aluminum from 20.6.4.900 NMAC" after the word "assigned" in the last sentence.
  - In Paragraph 2 of Section 3.4.1 on Page 20, we recommend inserting the words "based on design flow and the chronic water quality standard for dissolved aluminum from 20.6.4.900 NMAC" after the word "assigned" in the last sentence.

SWQB Response: *The requested changes have been made to Section 3.4.1.*

- **Section 3.4.2 Load Allocation** *(for aluminum)*
  - The reference to "table 4.4" in the first sentence of Paragraph 1 in Section 3.4.2 on Page 21 is apparently a typographical error. Perhaps the reference should be to Table 3.2.
  - Equation 3 should be rearranged as follows to correspond with the computational method described in the preceding sentence: LA = TMDL – WLA – MOS.

SWQB Response: *The reference to Table 4.4 was corrected and a statement of clarification was added to Equation 3.*

- In Table 3.2 of Section 3.4.2 on Page 21, the preface "WLA:" should be added to each NPDES permit cited, so that the summation in the "Total Waste Load Allocation" row is clearly understood. In addition, we recommend moving the "Load Allocation" row to the bottom of Table 3.2 to better correspond with the computational method described in the first sentence of Section 3.4.2. Finally the word "Dissolved" should be inserted before "Aluminum" in the title of Table 3.2.

SWQB Response: *The "Load Allocation" row was moved and the word "dissolved" was inserted into the title of Table 3.2.*

- We recommend creating a new **Section 3.4.3** entitled **Load Reductions Computation**, beginning with the last sentence of the first paragraph on Page 22.
- In Table 3.3 of Section 3.4.2 (future Section 3.4.3) on Page 22, we recommend inserting the units abbreviation "(lbs/day)" after "Measured Loads" and "Target Loads" labels in the table. In addition, footnote (a) to Table 3.3 does not clearly describe which measured values (all values vs. values exceeding WQS) were used to compute the arithmetic mean of Measured Aluminum concentration. Please clarify.
- At the end of Section 3.4.2 (future Section 3.4.3), please add a statement (similar to the one included for *E. coli* in Section 4.4.2 on Page 45) regarding the application of calculated percent reduction values for aluminum.

SWQB Response: *In reviewing this section in response to this comment as well as the comments of others NMED recognizes that for this TMDL calculating a percent reduction is particularly challenging. This is largely for the reasons noted in the comments above – the samples collected and the impairment determinations are based on exceedences of the State's single sample criterion and the TMDL is written to the address the monthly geometric mean standard of Sandia and Isleta Pueblos. As such any simple comparison of these numbers is fraught with challenge and, in this case, will result in an over estimation of the actual reduction necessary.*

Furthermore, neither Section 303 of the Clean Water Act nor Title 40, Part 130.7 of the Code of Federal Regulations requires states to include discussions of percent reductions in TMDL documents. Although NMED believes that it is often useful to discuss the magnitude of water quality exceedences in the TMDL, the "percent reduction" value is can both be calculated in multiple ways and as a result can often misinterpreted. This is clearly the case in this situation. Table 3.3 and the associated discussion have been removed.

- **Section 3.5 Identification and Description of Pollutant Source(s)** *(for aluminum)*
  - In Table 3.4 of Section 3.5 on Page 23, the magnitude of aluminum discharges from nonpoint sources is shown to be 590-9150 lbs/day. In contrast, Table 3.2 in Section 3.4.2 on Page 21 shows calculated Load Allocations (from nonpoint sources) of 38.8 – 1171 lbs/day for aluminum. Please explain or correct this apparent discrepancy.

SWQB Response: *The values listed in Table 3.4 are the values for "measured load" presented in Table 3.3. The references to these values have been removed from Table 3.4.*

- **Section 3.6 Linkage of Water Quality and Pollutant Sources***(for aluminum)*
  - We recommend revising the last sentence of Paragraph 3 in Section 3.6 on Page 24 to read "The February 2005 sample exceeds the chronic WQS of 0.87 mg/l for dissolved aluminum."
  - In order for the reader to be able to corroborate the last sentence of Paragraph 4 in Section 3.6 on Page 24, Appendix C of the TMDL must be revised to include streamflows measured when samples for aluminum analysis were collected.

SWQB Response: *The last sentence in Paragraph 3 was edited based on your suggestion. Additionally, streamflow from USGS gage 08358400 has been added to Appendix C.*

- **Section 3.7 Margin of Safety** *(for aluminum)*
  - In the second paragraph under the heading *"Explicit Margin of Safety"* in Section 3.7 on Page 25, it is not clear if the alternative MOS of 5 percent was applied to the dry flow hydrologic zone (as stated in the first sentence) or to the low flow hydrologic zone (as stated in the last sentence). Please clarify.

SWQB Response: *The language in Section 3.7 was changed to reflect that the paragraph should discuss "dry flow" rather than "low flow."*

- **Section 3.9 Future Growth** *(for aluminum)*
  - In Paragraph 2 of Section 3.9 on Page 26 it is stated that "According to the calculations, the overwhelming source of aluminum loading is from nonpoint sources." In fact, it is not intuitively obvious which calculations support this statement. Please include a reference to Table 3.2 to assist the reader in evaluating the comparative load calculations.
  - We recommend adding the following sentences to the end of Paragraph 2 of Section 3.9 on Page 26: "The existing Middle Rio Grande-Albuquerque Reach Watershed Restoration Action Strategy (Albuquerque Reach Watershed Group, 2008) defines a framework for design, implementation and maintenance of BMPs in the northern portion of the watershed addressed by this TMDL. See Section 6.0 for details."

SWQB Response: *A reference to Table 3.2 has been added to Section 3.9 along with the suggested language regarding the MRG-Albuquerque Reach WRAS.*

- **Section 4.0 Bacteria**
  - Paragraph 4 of Section 4.0 on Page 27 seems like a generic statement that would be better placed in the Introduction to the TMDL.
  - In Table 4.1 of Section 4.0 on Page 27, three of the four exceedence frequencies shown for *E. coli* do not correspond to the monitoring data provided in Appendix D. Table D.1 of Appendix D for Rio Grande (non-Pueblo Alameda to Angostura Diversion) shows 6 exceedences over 45 samples, while Table 4.1 shows 6 exceedences over 17 samples for the same AU. Table D.3 of Appendix D for Rio Grande (Rio Puerco to Isleta Pueblo bnd) shows 3 exceedences over 25 samples, while Table 4.1 shows 2 exceedences over 7 samples for the same AU. Table D.4 of Appendix D for Rio Grande (San Marcial at USGS gage to Rio Puerco) show 17 exceedences over 63 samples, while Table 4.1 shows 14 exceedences over 35 samples for the same AU. Please explain or correct these apparent discrepancies.

SWQB Response: *The statement referred to in the first comment has been moved into the first paragraph of Section 4.0. The impairments addressed in this TMDL document are included on the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List. The determination of these impairments was based on the application of the Procedures for Assessing Use Attainment for the State of New Mexico Integrated Clean Water Act §303(d)/§305(b) Water Quality Monitoring and Assessment Report (January 2008). Section 3.0 of the 2008 AP reads:*

> *"When data from multiple stations are used to assess a single AU, the data should be from stations and sampling events that are 1) spatially independent (generally more than 200 meters apart), and 2) temporally independent (generally collected at least seven days apart). If one or both of these conditions are not met, the data from the non-independent stations should be averaged before application of the assessment procedures."*

Thus, the samples that were not spatially or temporally independent were averaged. The Assessment Protocols were then applied to the averaged value. The statement in the TMDL regarding exceedences reflects the fact that averaging of the non-independent samples occurred.

Details of the assessments are available on the Assessment Summary Sheets, which are made available for public inspection as part of the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List public record. A statement of clarification has been added to Sections 3.1 and 4.1.

- **Section 4.1 Target Loading Capacity** *(for bacteria)*
  - In Paragraph 2 of Section 4.1 on Page 28, we recommend adding language explaining the Clean Water Act requirement for protecting downstream water quality standards that is the basis for the decision to use Pueblo of Sandia or Pueblo of Isleta WQS in certain AUs.

SWQB Response: *The regulations concerning the protection of downstream water quality criteria and designated uses is found in 40 CFR §131.10(b). It reads:*

> *(b) In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.*

Additionally, 40 CFR §122.4(d) prohibits the issuance of NPDES permits that do no comply with the affected States' water quality standards. It reads:

> *No permit may be issued:…(d)When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States.*

The State of New Mexico, the Pueblo of Sandia, and the Pueblo of Isleta have water quality standards for E.coli and the Tribal standards are lower than the State of New Mexico water quality standards. The regulations in 40 CFR §131.10(b) require the development of the TMDL using the tribal standards in order to be protective of the downstream standards. The regulations in 40 CFR §122.4(d) require allocations and effluent limits to be developed using the tribal standards in order to be protective of the downstream waters. A statement addressing this issue has been added to Section 2.3.

- **Section 4.2 Flow** *(for bacteria)*
  - For Figures 4.5 - 4.7 in Section 4.2 on Pages 31-33, a more detailed explanation of the methodology used to produce the criterion curves would be helpful. (The last paragraph on Page 33 provides a good starting point.)

SWQB Response: *Just as in Section 3.2, references to the EPA document have been added to Section 4.2 as well as Section 9.0. The Cleland (2003) reference remains in Section 4.2. Both references provide detailed explanations of both flow and load duration curve development.*

- **Section 4.3 Calculations** *(for bacteria)*
  - We recommend inserting the words "geometric mean" before the words "*E. coli*" in the second sentence of Paragraph 1 of Section 4.3 on Page 33. Please replace the word "and" with the word "through" between the words "Tables 4.2" and "4.5" in the same sentence.
  - We recommend revising Equation 1 of Section 4.3 on Page 33 as follows: "C as cfu/100mL * 1,000 mL/L * 1 L/0.264 gallons * 10^6 gallons/MG * Q as MG/day = cfu/day"
  - For internal consistency, Equation 1 of Section 4.3 on Page 33 should be renumbered throughout the TMDL document as Equation 4.
  - In Paragraph 2 of Section 4.3 on Page 33, we recommend inserting the phrase "and the numerical criterion for *E. coli*" at the end of the second sentence.
  - In Tables 4.2 – 4.5 of Section 4.3 on Pages 34-35, we recommend adding footnotes indicating the specific WQS from which the *E. coli* geometric mean criterion for each table was drawn.
  - In Table 4.3 of Section 4.3 on Page 34, the statement made in footnote (b) cannot be corroborated from the monitoring results provided in Table D.3 of Appendix D. Measured flows should be added to Table D.3 of Appendix D to permit corroboration by the reader.

SWQB Response: *The requested changes have been made to Section 4.3.*

- **Section 4.4.1 Waste Load Allocation** *(for bacteria)*
  - In Table 4.6 of Section 4.4.1 on Page 36, footnotes (1) and (2) have no corresponding superscripts in the table.
  - In Table 4.7 of Section 4.4.1 on Page 37, NM DOT Dist 3 is listed as a Phase II Permittee, although NM DOT Dist 3 is one of four agencies jointly issued a Phase I Stormwater Discharge Permit by EPA Region 6. We recommend removing NM DOT Dist 3 from Table 4.7. In addition, Kirtland AFB is misspelled in Table 4.7.
  - In the third sentence of the last paragraph on Page 38 of Section 4.4.1, we recommend removing the phrase "In addition, the current" from the beginning of the sentence.
  - In Table 4.8 of Section 4.4.1 on Page 40, it appears that Waste Load Allocations have been omitted for Rio Grande (Rio Puerco to Isleta Pueblo bnd) and Rio Grande (San Marcial at USGS gage to Rio Puerco). Further, the (a), (b) and (c) superscripts do not match any footnotes in Table 4.8. Finally, the WLA results for permit NM0027863 should be moved down two lines to match the row header. (It should be noted that Page 41 is missing, suggesting that part of Table 4.8 has been omitted from the document.)
  - In Table 4.8 of Section 4.4.1 on Page 40, we question the classification of discharges under Phase I and Phase II stormwater permits as "point sources" to which waste load allocations can be assigned. Please clarify the regulatory justification for this approach.

SWQB Response: *The suggested grammatical changes have been made to Section 4.4.1. Unfortunately, a page was omitted in the Public Comment Draft of the TMDL document and a portion of Table 4.8 was indeed missing. The comments regarding Table 4.8 are clarified when the entire table is included.*

As stated in Section 4.4.1, the Phase 1 permit covers all areas within the incorporated limits of the City of Albuquerque and the permittees include the City of Albuquerque, UNM, AMAFCA, and NM Department of Transportation District 3. Per EPA, NM DoT District 3 is also a Phase 2

permittee and would also be responsible for those areas outside the incorporated limits of the City of Albuquerque under the Phase 2 permit.

In November 2002, the EPA Office of Wetlands, Oceans, and Watersheds and the Office of Wastewater Management issued a memo to all the Regional Water Division Directors (available online: http://www.epa.gov/npdes/pubs/final-wwtmdl.pdf) that specifically addressed the issue of the assignment of WLA to storm water discharges. The memo states that NPDES-regulated storm water discharges must be addressed by the wasteload allocation component of a TMDL (40 CFR §130.2(h)). The memo also states that storm water discharges that are regulated under Phase I and Phase II of the NPDES storm water program are point sources that must be included in the WLA portion of the TMDL (40 CFR §130.2(h)).

- **Section 4.4.2 Load Allocation** *(for bacteria)*
  - We recommend that Equation 2 of Section 4.4.2 on Page 42 be reformatted as follows, to better correlate with the explanatory text preceding it: LA = TMDL – WLA – WOS. In addition, for internal consistency, Equation 2 should be renumbered as Equation 5 throughout the document.
  - In Table 4.9 of Section 4.4.2 on Page 42, the NPDES permit cited in footnote (a) is not shown in Table 4.8 of Section 4.4.1 on Page 40. Please correct or clarify this apparent discrepancy.
  - In Table 4.10 of Section 4.4.2 on Page 42, we recommend adding the preface "WLA:" before each NPDES permit number so that the Total Waste Load Allocation summation is easily understood. Also, none of the NPDES permits cited in Table 4.10 are shown in Table 4.8 of Section 4.4.1 on page 40. Please correct or clarify this apparent discrepancy.
  - In Table 4.11 of Section 4.4.2 on Page 43, we recommend adding the preface "WLA:" before each NPDES permit number so that the Total Waste Load Allocation summation is easily understood. In addition, it is not clear how the WLA values for NPDES permits NMS000101 and NMR040000 were determined. WLAs for these permits are shown as "Variable" in Table 4.8 of Section 4.4.1 on Page 40. Please clarify.
  - In Table 4.12 of Section 4.4.2 on Page 43, we recommend adding the preface "WLA:" before each NPDES permit number so that the Total Waste Load Allocation summation is easily understood. In addition, it is not clear how the WLA values for NPDES permits NMS000101 and NMR040000 were determined. WLAs for these permits are shown as "Variable" in Table 4.8 of Section 4.4.1 on Page 40. Please clarify.
  - In Tables 4.9 – 4.12 of Section 4.4.2, we recommend moving the Load Allocation row to the bottom of each table to better correlate with the explanation of LA derivation at the beginning of the Section.

SWQB Response: *The suggested grammatical changes have been made to Section 4.4.2. The footnote below Table 4.9 and the permits in Table 4.10 are referenced in Table 4.8, which as noted previously was unfortunately missing from the Public Comment Draft of the TMDL document. The WLA for the NMR040000 and NMS000101 permits is listed as "variable" for the sake of space in Table 4.8. The details of the WLA for these permits are detailed in Tables 4.11 and 4.12. A footnote has been added to Table 4.8 for clarification. The location of the LA rows in Tables 4.10-4.12 has been moved.*

  - Beginning with the last paragraph of Section 4.4.2 on Page 43, we recommend starting a new **Section 4.4.3** entitled **Load Calculations**. In this last paragraph, it is not clear which specific measured E. coli concentrations were used in Equation 1 (future Equation 4) to determine actual loading. Please add an explanatory statement similar to the one included for aluminum in the first paragraph on Page 22 of Section 3.4.2 (future Section 3.4.3).
  - In Tables 4.13 – 4.16 of Section 4.4.2 (future Section 4.4.3) on Pages 44-45, we recommend citing the applicable Appendix D table number in the appropriate footnote for each table. In addition, each table in Appendix D should be expanded to include measured flows, to allow reader corroboration of mean *E. coli* concentration for each flow condition shown in Tables 4.13 – 4.16 with raw data in Appendix D. Finally, we recommend adding the units abbreviation "(cfu/day)" after "Measured Loads" and "Target Loads" in each table.
  - In Tables 4.13 – 4.16 of Section 4.4.2 (future Section 4.4.3) on Pages 44-45, we are concerned that **arithmetic** means for measured *E. coli* concentrations are compared against **geometric** means for *E. coli* water quality criteria when determining load reduction percentages. Because arithmetic means are generally higher than geometric means for *E. coli*, we are concerned that using arithmetic means for measured *E. coli* concentrations may overestimate measured loads, resulting in higher computed percent reductions needed to achieve target loads. Please provide justification for using arithmetic rather than geometric means for measured *E. coli* concentrations in these computations.
  - Bernalillo County has particular concerns about the projection in Table 4.15 of Section 4.4.2 on Page 45 that the *E. coli* load for the Rio Grande (Isleta Pueblo bnd to Alameda Street bridge) AU must be reduced by more than 80% to achieve the target load under most flow conditions. This level of reduction is nearly impossible, given the finding from the October 2003 *Middle Rio Grande Microbial Source Tracking Report* that 46.4% of fecal bacteria present in the Rio Grande originate from wildlife beyond human control. We request that NMED add a statement acknowledging this reality to the last paragraph in Section 4.4.2 on Page 45, similar to the statement included for aluminum in Section 3.3 on Page 19.

SWQB Response: *In reviewing this section in response to this comment as well as the comments of others NMED recognizes that for this TMDL calculating a percent reduction is particularly challenging. This is largely for the reasons noted in the comments above – the samples collected and the impairment determinations are based on exceedences of the State's single sample criterion and the TMDL is written to the address the monthly geometric mean standard of Sandia and Isleta Pueblos. As such any simple comparison of these numbers is fraught with challenge and, in this case, will result in an over estimation of the actual reduction necessary.*

Furthermore, neither Section 303 of the Clean Water Act nor Title 40, Part 130.7 of the Code of Federal Regulations requires states to include discussions of percent reductions in TMDL documents. Although NMED believes that it is often useful to discuss the magnitude of water quality exceedences in the TMDL, the "percent reduction" value is can both be calculated in multiple ways and as a result can often misinterpreted. This is clearly the case in this situation.

For these reasons Tables 4.13-4.16 and the associated discussion have been removed. Statements in Section 3.3 have been duplicated in Section 4.3.

- **Section 4.5 Identification and Description of Pollutant Sources** *(for bacteria)*
  - For Point pollutant sources in Table 4.17 of Section 4.5 on Page 46, the computation methodology for the magnitude (cfu/day) for each AU is not clearly defined. Please clarify how these values were determined.
  - In Table 4.17 of Section 4.5 on Page 46, footnote (a) discusses point source and nonpoint source percentage calculations, although the table itself shows no percentages for point and nonpoint sources. Please clarify.

SWQB Response: *The magnitude values in Table 4.17 (now Table 4.13) were derived from the measured load values displayed in Tables 4.12-4.16. These values have been removed from Table 4.17 (now Table 4.13). The Point Source values are derived from the NPDES permits. Clarification has been added to footnote (a) and footnote (c) has been removed.*

- **Section 4.6 Linkage Between Water Quality and Pollutant Sources** *(for bacteria)*
  - We recommend adding the following statement at the end of the first paragraph in the subsection entitled "*E. coli Data*" in Section 4.6 on Page 47: "Higher r-values indicate stronger correlations between the variables compared."
  - In the second sentence of the second paragraph in the subsection entitled "*E. coli Data*" in Section 4.6 on Page 47, we recommend adding the words "Table D.4 of" after the words "Data in". In the same sentence, the statement that "elevated E. coli levels occur during both rainfall and non-rainfall events" cannot be corroborated by the reader from information presented in Table D.4 of Appendix D. Appendix D should be expanded to include measured rainfall associated with each sampling event.
  - In the third sentence of the second paragraph in the subsection entitled "*E. coli Data*" in Section 4.6 on Page 47, the described number of samples collected (43) in the Rio Grande (San Marcial gage to Rio Puerco) does not correspond to the number of samples shown in Table D.4 of Appendix D (63) for the same AU. Please clarify or correct this apparent discrepancy.
  - For the first through third paragraphs on Page 48 in Section 4.6, we recommend providing citations to the applicable Appendix D table in each paragraph, showing the actual correlation computations, and clearly identifying which samples were used to determine the correlation between rainfall and *E. coli* concentration for each AU.
  - In the third paragraph on Page 48 in Section 4.6, a correlation coefficient of r = 0.77 is described although the paragraph states that, in the Rio Grande (non-pueblo Alameda to Angostura Diversion) AU, the "highest exceedence … occurred on **the one day** when rainfall was recorded …". We are concerned about the determination of a correlation between rainfall and *E. coli* concentration for this AU based on a single observation. Please explain.

SWQB Response: *The suggested grammatical changes have been made to Section 4.6. The notation in Section 4.6 about 43 E.coli samples has been corrected to read 63. Rainfall data has been added to the tables in Appendix D.*

The Pearson correlation coefficient was calculated using all available data as provided in Appendix D. The observation made regarding the exceedences in the Rio Grande (non-pueblo Alameda to Angostura Diversion) assessment unit merely intends to point out that the highest exceedence (5300 cfu/100 mL) occurred on the only sampling event where rainfall occurred the previous day.

- **Section 4.9 Future Growth** *(for bacteria)*
  - We recommend adding the following sentences at the end of the final paragraph on Section 4.9 on Page 50: "The existing Middle Rio Grande-Albuquerque Reach Watershed Restoration Strategy (Albuquerque Reach Watershed Group, 2008) defines a framework for design, installation and maintenance of BMPs in the northern portions of this watershed. See Section 6.0 for details."

SWQB Response: *The suggested grammatical changes have been made to Section 4.9.*

- **Section 6.2 Clean Water Act §319(h) Funding Opportunities**
  - We recommend adding the word "(impaired)" after the words "category 4 or 5" in Paragraph 1 of Section 6.2 on Page 54.

SWQB Response: *The suggested grammatical changes have been made to Section 6.2.*

- **Subsection 6.4(B) Specific SWMP/SWPP Requirements**
  - In Paragraph 4 of Subsection 6.4(B) on Page 56, it is stated that "Compliance with the following provisions will constitute compliance with the requirements of this TMDL." According to the NMED website (http://www.nmenv.state.nm.us/swqb/TMDL/),"TMDLs are not regulatory documents, but they can be used to issue or modify permits for point sources." Because TMDLs are non-regulatory, it concerns us that there is a reference to "the requirements of this TMDL" in the document. Please clarify.
  - In Item 1 of Subsection 6.4(B) on Page 56, it is stated that "Permittees **shall** submit an approvable Bacteria Reduction Plan to the EPA within 12 months of notification [that the TMDL has been approved by EPA]." In Item 2 of Subsection 6.4(b) on Page 57, it is stated that "Within 18 months of notification [that the TMDL has been approved by EPA], the permittee **shall** prepare and submit to the EPA either a TMDL monitoring plan or a commitment to participate in a coordinated regional monitoring plan." Including such mandatory language leaves the impression that the TMDL itself creates regulatory requirements for NPDES permitees in the watershed, which conflicts with the non-regulatory nature of TMDLs as described by NMED. Please correct or clarify this apparent discrepancy.

SWQB Response: *The abbreviation "WLA" has been added to the statement in Paragraph 4 of Subsection 6.4(B) in order to clarify that "requirements" referred to are in reference specifically to the WLAs assigned in the TMDL. The term "shall" in Items 1 and 2 of Subsection 6.4(B) has been replaced with the terms "should" and "should consider." As noted in the paragraph immediately preceding Subsection 6.4, the language in Subsection 6.4 was submitted for inclusion by EPA R6 and the ultimate decision about TMDL implementation will be decided during the NPDES permit process. EPA does not have the authority to approve Implementation Plans in TMDLs and states that fact in every TMDL approval letter we receive from EPA R6. For example, the approval letter for the Jemez River TMDLs (September 2009) reads:*

> *"Included in this TMDL submittal was a TMDL Implementation Plan. Presently, EPA has no duty to approve or disapprove implementation plans under Section 303(d) of the Clean Water Act (CWA). Therefore, EPA is taking no action to approve or disapprove the TMDL Implementation Plan submitted by NMED."*

The Implementation Section is merely a suggested guide for future permit development or other relevant watershed activities.

- **Appendix A: Conversion Factor Derivation**
  - We recommend revising the calculations shown in Appendix A to read as follows:

    Flow (MG/day) x Concentration (mg/L) x CF (L – lb/MG – mg) = Load (lb/day)

    $CF = 10^6$ gal/MG x 3.785 L/gal x 1 lb/454,000 mg = 8.34 L – lb/MG – mg

SWQB Response: *The suggested changes have been made to Appendix A.*

- **Appendix C: Aluminum Data**
  - Table C.1 of Appendix C should be expanded to include a streamflow measurement for each sampling event, to allow reader corroboration of statements made in the TMDL.

- **Appendix D: E. coli Data**
  - Tables D.1, D.2, D.3 and D.4 should be expanded to include a streamflow measurement and a rainfall measurement for each sampling event, to allow reader corroboration of statements made in the TMDL.
  - Table D.4 should be reformatted to fit on a single page or relabeled to clarify that it is continued on a second page.

SWQB Response: *Flow data have been added to Appendix C and Appendix D now includes both flow and rainfall data.*

Thank you for this opportunity to review and comment on the "Public Comment Draft Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed." Please contact me at (505) 848-1507 with questions or comments.

Best regards,

Mary Mumane
Program Manager
Water Resources Program
Public Works Division

CC: Tom Zdunek, Deputy County Manager for Public Works
Steve Miller, Director, Infrastructure Planning and Geo-Resources Department

Comment Set B:

From: Andy Smith [cofam5@yahoo.com]
Sent: Tuesday, October 20, 2009 3:53 PM
To: Henderson, Heidi, NMENV
Subject: TMDL Comments

COMMENTS ON THE TMDL DRAFT, SUBMITTED 20 OCTOBER 2009, IN RESPONSE TO THE NMED REQUEST

The quality and depth of the draft TMDL are appreciated and it is good to see the attention NMED is paying to our drinking water quality and to see excellent young people getting involved in the crusade.

The TMDL purpose was well stated in the introductory letters and it includes identifying possible pollutants and sources and finding ways to limit the extents of any releases. However, the limited scope of this draft is of great concern, because the Middle Rio Grande river is now being used as a drinking water (DW) source for about a half-million people. Of greatest concern is the fact that most of the 70 or so potential drinking water pollutants which are listed by the EPA are not addressed. This may be because the river is not yet classified by the State as such a major DW source and because the existing Source Water Assessment document does not include this use.

Micro-organisms

Of special concern is the large number of micro-organisms that are recognized by the EPA and are not covered. Most are much smaller than the E-coli, which is covered. In addition, the Rio Rancho and other city waste water treatment plant discharge pipes are just upstream of the intake to our drinking water plant and those discharges include a wide variety of industrial, agricultural, medical and other possible chemical, biological and other pollutants. All of these possible pollutants should be addressed to properly characterize the source water and because the drinking water treatment plant seems to have limited filtration capabilities (in the nano-meter to pico-meter range) because it only uses particle flocculation and charcoal filtration.

For disinfection, it uses ozone and chlorine and some of the potential emerging biological contaminants may be practically indestructable (highly resistant to heat, chemicals, etc.). The prions, that cause brain disintegration, are a good example of such pollutants and they are now being studied as possible water pollutants, because their infections have been found among some of the game animals. Conversations with Stanley Prusiner, who received the Nobel Prize for his contributions to the prion discovery, made this disinfection resistance point very clear and all of the subsequent disinfection tests have proven this disturbing fact to be true. The prion is a deformed protein which the body can reproduce. It is chemically identical to one of our natural chemicals but it is configured differently and the difference is deadly.

Emerging Pollutants

In addition to the prion, there are a number of emerging pollutants that should be addressed, by us, even though they are not yet on the main EPA

list, because we and the public are becoming increasingly aware of their danger. An ongoing new news feature, in the New York Times, is evidence of this, as it addresses some of the hazardous materials that are now present in our treated drinking water. A good example of that group of newly recognized contaminants is the pharmaceuticals. The NM Amigos Bravos group and many others have expressed concerns about these. Also, we have a few unique contaminant candidates, in this New Mexico area, which should be considered, by all of us, because we are downstream of the large national nuclear research and production labs. Plutonium is on this list and one of our community volunteer study groups (AVAT) has suggested that the protection limits should be lower that they presently are, based on the outstanding work that has been done by Arjun Makhijani.

The NMED is at the center of the activities of concern to many of us, as they are related to our drinking water quality, and we would appreciate a priority effort aimed at the updating of the MRG Source Water Assessment, the expansion of this and other TMDL documents to include these potential hazards and the correction of the NM Surface Water Quality Standards (NMAC 20.6.4), to reflect the present and extremely important new use of this water, for drinking. Perhaps our greatest concern, with these documents is the lack of proper attention to the possible biological contaminants, as discussed, and the detailed and frequent sampling and testing that they require.

Albuquerque has enjoyed some of the purest drinking water in the World, for most of its history, and this water quality may, in some way, have contributed to the fact that we have among the lowest rates of heart disease, cancer and stroke in the country. Test data has shown us to have only small fractions of many of the allowable concentrations of the EPA pollutants, in the past - and many were never found in our deep-well water. Our new addition of river water to the DW mix has changed all of that and it is important for us to upgrade our standards, testing , treatment, etc. to properly meet this new challenge and we hope that the NMED and the DoH will do all they can to help us.

We recognize that the important effort expansions, in this area, may require additional NMED funding and we will be happy to do all we can to encourage our legislators to support such targeted increases. We will also be happy to urge EPA support, so that the needed tests, data, standards, etc. can be provided. We would like to see a complete EPA baseline chemical, biological and radiological contaminant profile of the river water, as soon as possible.

Andy Smith
Public Health Advocate

SWQB Response: *Thank you for the comments and your continued interest in the water quality of the Middle Rio Grande. SWQB recognizes your concern for the drinking water supply of the Albuquerque area.*

The impairments addressed in this TMDL are included on the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List. Water quality data collected during SWQB surveys is compared to the existing Standards for Interstate and Intrastate Surface Waters (NMAC, 2007). Determination of impairment of a waterbody is based on the application of the Procedures for Assessing Use Attainment for the State of New Mexico Integrated Clean Water Act §303(d)/§305(b) Water Quality Monitoring and Assessment Report (January 2008). As you noted, there are currently no existing surface water quality standards for some chemicals. SWQB cannot assess impairment of a waterbody for a certain chemical if there is no water quality standard to which it can be compared.

The NMED Department of Energy-Oversight Bureau is currently collecting radionuclide samples in the Rio Grande. The data available for the development of the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List indicated no impairment for radionuclide parameters.

NMED has proposed to add the public water supply use to the Albuquerque reach of the Rio Grande and radionuclide criteria for an upstream reach of the Rio Grande in the current triennial review rulemaking. The Department's proposal would not add criteria for other pollutants at this time.

Bacterial criteria are established under the Clean Water Act for recreational contact, but not for drinking water. As for other emerging contaminants, such as pharmaceuticals and personal care products (PPCPs), EPA has not yet recommended water quality criteria at the national level, though monitoring and research are ongoing. EPA discusses PPCPs on its website at http://www.epa.gov/ppcp/faq.html. The risks posed by low levels of these contaminants in water to aquatic life and human health remain uncertain.

Most of SWQB's surface water quality efforts, such as monitoring, certifying NPDES permits, establishing TMDLs, and implementing restoration efforts, are triggered by the water quality standards. Developing water quality criteria is a scientifically rigorous process that culminates in a formal rulemaking. Any person may petition to amend the water quality standards with documentation to support new or revised criteria.

Comment Set C:

Joe M. Lujan
Governor

E. Scott Paisano
Lt. Governor

PUEBLO of SANDIA
481 Sandia Loop
Bernalillo, New Mexico 87004

(505) 867-3317
Fax (505) 867-9235

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October 20, 2009

RECEIVED
OCT 26 2009
SURFACE WATER QUALITY BUREAU

Heidi Henderson, TMDL Coordinator
NEW MEXICO ENVIRONMENT DEPARTMENT
Surface Water Quality Bureau
P.O. Box 5469
Santa Fe, NM 87502

RE: Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed

Dear Ms. Henderson:

On behalf of the Pueblo of Sandia, please extend our appreciation to the New Mexico Environment Department for acknowledging our tribal waters in the development of the Middle Rio Grande Watershed Total Maximum Daily Load (TMDL).

Our environment department has reviewed the TMDL and has the following comments and/or insertions:

1. The Executive Summary states that an "A TMDL documents the amount of a pollutant a waterbody can assimilate without violating a state's water quality standard". The Pueblo of Sandia would like to have the following inserted "or a tribe's water quality standard".

2. The Executive Summary states that a "pre-survey public meeting in Albuquerque" was held. The Pueblo of Sandia would like to have the date of this meeting inserted into the text. This would benefit anyone who would like to reference this public meeting.

3. The 1.0 Introduction states that an "A TMDL documents the amount of a pollutant a waterbody can assimilate without violating a state's water quality standard". The Pueblo of Sandia again, would like to have the following inserted "or a tribe's water quality standard".

4. The Pueblo of Sandia would like to request a copy of the 2005 survey data for the Rio Grande (non-Pueblo Alameda Street Bridge to Angostura Diversion) that was collected for dissolved aluminum even though it was determined not to be an impairment for this stretch.

Once again, thank you for the continued consultation with our environment department and assistance on this project. If you have any questions or concerns, please contact Frank Chaves, environment director, or Scott Bulgrin, water quality manager of my staff at (505) 867-4533.

Sincerely,

Joe M. Lujan
Governor

SJB/

cc: Curry Jones, USEPA Region 6TMDL Team Leader
Linda Adams, USEPA Region 6NM TMDL Coordinato,
Marcy Leavitt, NMED Water & Wastewater Division Director
Glenn Saums, NMED Acting Surface Water Bureau Chief
Frank Chaves, Pueblo of Sandia Environment Department
Scott Bulgrin, Pueblo of Sandia Environment Department
File

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SWQB Response: *Thank you for the comments and your continued support of SWQB sampling efforts in the Middle Rio Grande. The requested changes have been made to the Executive Summary and Section 1.0. Per your request, the dissolved aluminum data for the Rio Grande (non-Pueblo Alameda Street Bridge to Angostura Diversion) was submitted to Mr. Joe Lujan, Mr. Scott Bulgrin, and Mr. Milton Bluehouse on October 29, 2009.*

Comment Set D:

CITY OF ALBUQUERQUE

October 27, 2009

Martin J. Chávez
Mayor

Nicholas S. Bakas
Director of Aviation

Heidi Henderson
New Mexico Environment Department
Surface Water Quality Bureau
P.O. Box 5469
Santa Fe, NM. 87502

Re: Comments on the Draft Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed, September 16, 2009

Dear Ms. Henderson,

The City of Albuquerque Aviation Department is pleased to have an opportunity to comment on the Public Comment Draft Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed (September 16, 2009).

- Table 2-2: The TMDL should include a map showing the individual segments and the locations of the 2005 surface water sampling stations within those segments. The maps of the entire middle Rio Grande good for an overview, but not useful on a segment-specific basis to see where sampling stations were located.
- Page 37-38: The application of the "jurisdictional approach" should be more comprehensively described. While it is clear that the area of the watershed is being divided by segment, it is not clear how that is applied in terms of discharging storm water. Is the percentage of the jurisdiction used to determine a volume of discharge or responsible for a reduction of *e coli*?
- Page 56: The TMDL states "*After EPA approves the final TMDL, existing MS4 permittees will be notified of the TMDL provisions and schedule. Industrial stormwater permittees are not expected to be a significant source of bacteria but if any are identified, similar actions will be required.*" The industrial storm water permittees that are located within the MS4 should not be individually responsible for developing a Bacterial Reduction Plan, developing or participating in a bacterial monitoring plan, and annual reporting. If necessary, the MS4 permittee should have the responsibility of working with industrial storm water permittees for these requirements. To require that individual industrial storm water permittees complete the same requirements as the MS4 could result in expensive duplicative efforts that do not provide appreciable benefit to reducing the impairment.

If you have any questions about these comments, please contact me at 244-7836 (office) or email me at calbrecht@cabq.gov.

Sincerely,

Christopher P. Albrecht, Environmental Manager
City of Albuquerque Aviation Department
Planning and Development

P.O. Box 9948
Albuquerque
New Mexico
87119-1048
www.cabq.gov

ABQ SUNPORT

SWQB Response: *Thank you for the comments.*

Comment 1:

Figures 2.1-2.3 display each Assessment Unit as well as the enumerated sampling locations as detailed in Table 2.2. SWQB can provide detailed to information to interested parties regarding specific site locations. Additionally, the NMED –New Mexico Atlas website (http://www.nmenv.state.nm.us/NMAtlas/index.html) is a useful tool for mapping sites of environmental interest, including SWQB sampling locations state-wide.

Comment 2:

Details of the jurisdictional area approach were removed from the main document for simplicity and readability of the document. SWQB developed the MS4 portion of the WLA based on discussions with EPA R6, recommendations from the TMDLs to Stormwater Permits Handbook (USEPA, 2008), and previously developed SWQB MS4 TMDLs. Section 4.4.1 of the TMDLs to Stormwater Handbook discusses the approach used in the Draft Middle Rio Grande TMDL, i.e. aggregated WLA for all stormwater sources. Section 4.3.2.2 discussed the Load Duration Approach and states:

> *"TMDLs developed using the load duration approach most often identify the portion of the loading capacity for the stormwater WLA(s) on the basis of jurisdictional area… Because a load duration curve establishes a flow-variable loading capacity, the framework allows for source-specific allocations to be adjusted by flow zone. To target loading controls and put the load duration results in a more digestible format, the load duration curve is usually divided into different flow zones representing different conditions (e.g., low flow, high flow)."*

For the Draft MRG TMDL, separate WLA were assigned to both the Phase I and Phase II permittees. These allocations were further divided between the two affected Assessment Units; Rio Grande (Isleta Pueblo boundary to Alameda Street Bridge) and Rio Grande (non-Pueblo Alameda to Angostura Diversion). First, the contributing watershed was determined to begin at Cochiti Reservoir as displayed in Figure 4.9. Second, the watershed area from the Isleta Pueblo boundary to Cochiti Reservoir was determined along with the watershed area from Alameda Street Bridge to Cochiti Reservoir. The jurisdictional area of the Phase I permit encompasses the incorporated areas of the City of Albuquerque, however this incorporated area falls within both affected Assessment Units. As a result, the incorporated area of the City of Albuquerque was divided at the Alameda Street Bridge in order to account for the Assessment Unit break at the bridge. The percentage of the incorporated area of the City of Albuquerque that fell into each AU was then determined to be a percentage of the whole watershed. The Phase I WLA percentages are discussed in Section 4.4.1 of the Draft TMDL. A similar approach was taken for the Phase II permittees. The percentage of urbanized areas (as described in the Phase II permit) were similarly determined as a percentage of the whole watershed. The Phase II WLA percentages are also discussed in Section 4.4.1.

Appendix F was also added to the Final TMDL for further explanation of this approach.

Comment 3:

The Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) became effective on September 29, 2008. This permit authorizes operators of stormwater discharges associated with industrial activity located in an area where EPA is the permitting authority to discharge to waters of the United States.

> *Section 2.2.1 of the MSGP reads:*
> *"If at any time you become aware, or EPA determines, that your discharge causes or contributes to an exceedance of applicable water quality standards, you must take corrective action as required in Part 3.1, document the corrective actions as required in Parts 3.4 and 5.4, and report the corrective actions to EPA as required in Part 7.2."*
>
> *Section 2.2.2.1 of the MSGP reads:*
> *"Existing Discharge to an Impaired Water with an EPA Approved or Established TMDL. If you discharge to an impaired water with an EPA approved or established TMDL, EPA will inform you if any additional limits or controls are necessary for your discharge to be consistent with the assumptions of any available wasteload allocation in the TMDL, or if coverage under an individual permit is necessary in accordance with Part 1.6.1."*

As noted in the paragraph immediately preceding Section 6.4 in the Public Comment Draft TMDL, the language in Section 6.4 was provided to SWQB by EPA R6. This language was provided so that the permittees have an opportunity to be aware of potential future permit requirements. As stated in the Public Comment Draft TMDL:

> *"It is the responsibility of EPA Permit Writers to develop a permit that complies with the allocations provided in the TMDL. The exact manner in which this in implemented (specific BMPs, numeric effluent limits etc.) to achieve this goal is up to the discretion of the EPA permit writer and need not follow this implementation guidance."*

Comment Set E:

Southern Sandoval County Arroyo Flood Control Authority

BOARD OF DIRECTORS
John Chaves
Mark Conkling
Steven M. House
Donald A. Rudy
Wm. C. "Dub" Yarbrough

David Stoliker, P.E.
Executive Director

October 27, 2009

NOV 02 2009

Heidi Henderson
New Mexico Environment Department SWQB
P.O. Box 5469
Santa Fe, New Mexico 87502

Subject: SSCAFCA Review of Public Comment Draft - TMDL of the Middle Rio Grande Watershed

Dear Ms. Henderson:

I am in receipt of the proposed TMDL for the middle Rio Grande and appreciate the ability to comment. Thank you.

In reviewing this information, SSCAFCA is struck by the potential impacts that may result and the uncertainty that we have in the information provided. We have explored other information that appears to contradict or negate some of the information that is contained in the document. One example of our uncertainty is the variability of the results as seen in Table D.1. Specifically, the testing data for 7/27/05 in the upper reach of the Rio Grande between the Alameda Bridge and Angostura Diversion shows that the variation in the reported information is from 488.4 to 41.1 cfu/100 ml. Said another way, the variation is from non-compliance to compliance. Two samples appear to be analyzed at Hwy 550 with two different results; one out of compliance with a result of 488.4 cfu's/100 ml and one in compliance with a result of 325.5 cfu's/100 ml. Two other samples taken at the Alameda Bridge on the same day have similar regulatory outcomes of compliance with results of 41.7 cfu's/ml and 62.2 cfu's/ml respectively. Given the potential impact of this rule, this variation is unacceptable. Rather than proceed down a path of uncertainty, I would ask that you withdraw this proposed TMDL and allow further scientific investigation to flush out technical uncertainties and irregularities. This further investigation should include addressing additional technical comments provided by the Storm Water Quality Team of which SSCAFCA is a signatory. It has been my experience that cooperative partnerships work when addressing tough issues. SSCAFCA is willing to form a cooperative partnership to address this issue of bacteria in the Rio Grande.

SSCAFCA is committed to doing our part in protecting the environment. We have established regulatory requirements for all development to treat the "first flush" of storm water run-off. We are designing and constructing storm water quality facilities in every

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facility that we have. We are extremely proud of our wetlands water quality facility in Haynes Park and our recently completed water quality facilities located in the Venada Arroyo (at the Rio Grande in the Rio Rancho Bosque), in the Black Arroyo (located in AMAFCA's Black Dam) and in the Montoyas Arroyo (located in the Sportsplex Dam).

If you have any questions or comments, please call me.

Sincerely,

David Stoliker, PE
Executive Engineer

SWQB Response: *Thank you for the comments.*

That E.coli data available in Appendix D shows results ranging from 41.1 cfu/100 mL to 488.4 cfu/100 mL. These samples were collected throughout the Rio Grande (non-Pueblo Alameda Street Bridge to Angostura Diversion) by SWQB staff operating under the NMED/SWQB Standard Operating Procedures for Data Collection. There were two discrete samples each taken at the Highway 550 bridge (32RGrand464.2) and Alameda Bridge (32RGrand445.4) sites on July 27, 2005. The samples denoted with a "c" following the STORET ID indicate a composite sample that was collected using the method described in Section 7.6 of the 2007 NMED/SWQB Standard Operating Procedures for Data Collection and the samples without a "c" indicate a grab sample.

SWQB recognizes that the data is variable due to the dynamic nature of the Rio Grande and is also typical of E coli impairments throughout the state. The data collected in this Assessment Unit was applied to the Procedures for Assessing Use Attainment for the State of New Mexico Integrated Clean Water Act §303(d)/§305(b) Water Quality Monitoring and Assessment Report (January 2008) and based on the application of this protocol, the Assessment Unit was determined to be impaired for E.coli and is included on the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List. This AU had been continuously listed for fecal coliform at least prior to the 1998-2000 CWA §303(d)/§305(b) Integrated List. SWQB developed a fecal coliform TMDL for this AU in 2002.

As discussed in Sections 3.3 and 4.3, the TMDL is calculated by multiplying the applicable water quality standard, the flow, and a conversion factor. Water quality data is not used in the calculation of the TMDL. Water quality data is used in the determination of impairment during the development of the CWA §303(d)/§305(b) Integrated List. 40 CFR 130.7 requires states to develop TMDLs for impaired, or water quality-limited, segments. SSCAFCA comments relate to the development of Watershed Based Plans that could include tools such as source identification to implement this TMDL.

SWQB is in receipt of the comments submitted by the Mid Rio Grande Storm Water Quality Team and has responded to those comments in Comment Set G. SWQB appreciates SSCAFCA's continued efforts to improve water quality through numerous structural and wetland projects in the Middle Rio Grande watershed.

Comment Set F:

Ronald D. Brown, Chairman
Jane Saens, Vice Chair
Davey Hernandez, Secretary Treasurer
Tim Eichenberg, Asst. Secretary Treasurer
Daniel F. Lyon, Director

John P. Kelly, P.E.
Executive Engineer

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OCT 3 0 2009

October 27, 2009

Heidi Henderson
Surface Water Quality Bureau, NM Environment Department
P.O. Box 5469
Santa Fe, NM, 87502

Subject: Comments on Draft TMDL for the Middle Rio Grande Watershed

Dear Ms. Henderson:

This letter contains comments on the Draft Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed that are being submitted by the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) as requested in your Notice of a 45-Day Public Comment Period and Community Meeting. Briefly, AMAFCA objects to the proposed TMDL for E coli in the Middle Rio Grande for the following reasons:

1. There is a large natural source of E coli bacteria in the river as documented by New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) monitoring data.

2. No data or information has been presented to show that a high natural concentration of E coli bacteria has impacted the river or human health in any way.

3. An alternative calculation of E coli concentrations in the proposed TMDL suggests that the NMED has overstated the degree of non-compliance with the stream standard, supports the position that the coliform loads are due to natural phenomenon and leads to questions regarding load calculations in the document.

Our concerns are discussed below. Because the North Diversion Channel (NDC) joins the river upstream from the Alameda Bridge, our comments are principally focused on the reach of the river from the Alameda Bridge to the Angostura dam.

Point 1 – Large Natural Sources of Coliform Are Present.
Our most strident objection to the TMDL deals with the lack of recognition of natural sources of E coli bacteria in the river. Figure 4.8 in the TMDL appears to show that the highest exceedance of the stream standard for E coli above the Alameda Bridge occurs during low flow conditions. The document attributes high concentrations of E coli under low flow conditions to point sources (page 21).

Above the Alameda Bridge, there are only three small permitted discharges: one for the town of Bernalillo and two for Rio Rancho. The permit conditions for point sources in the middle Rio Grande for flow and coliform criteria are summarized in Table 1. Your monitoring data showed that these discharges are in compliance with their permit criteria. During the "Dry Conditions" (Q < 647 cfs) and "Low Flow Conditions" (Q < 359 cfs) the principal source of coliforms must therefore be attributed to natural sources. We examined the monitoring data from the TMDL report (Appendix D) and noted numerous instances of high E coli concentrations at sampling locations above the NDC on days with little or no flow in this channel (Q ≤ 2 cfs) and presumably little or no rainfall in the watershed.

Table 1. NPDES permit values for flow and coliform bacteria for discharges to the Middle Rio Grande.

Wastewater Treatment Plant	Qmax (Mgal/d & cfs))	Parameter	30 d Average	Daily Maximum
Albuquerque	76 (118)	E. coli	100	200
Belen	1.2 (1.86)	E. coli	126	410
Bernalillo	0.8 (1.24)	E. coli	100	200
Los Lunas	0.9 (1.39)	E. coli	126	410
Rio Rancho Plt 2	5.5 (8.51)	E. coli	100	200
Rio Rancho Plt. 3	.85 (1.32)	E. coli	100	200
Bosque Farms	.5 (.77)	E. coli	126	410
Socorro	-	E. coli	126	410

The NMED coliform data supports the conclusion that natural sources are the principal cause of high concentrations of E coli in the river under low flow conditions. There is a large and growing body of literature on natural sources of E coli that include mammalian and avian populations, sediments, and even regrowth of coliform organisms in sediments and soils in warm climates. Based on our observation of large permanent populations of water fowl (especially geese and ducks) and aquatic mammals (beaver and muskrat), we believe that these organisms are the most likely sources of E coli in this reach of the river, and therefore, high concentrations should be considered to be natural.

This statement is included as a general statement related to load duration curves. Figure 4.8 shows exceedences of both the single sample and geometric mean criterion across most flow regimes. The TMDL does not negate the non-point source contribution of E.coli bacteria nor does it attempt to explain each E.coli exceedence noted in the water quality monitoring data. The fact that these data seem to contradict a general rule of load duration curve interpretation is an issue to be addressed during permit implementation.

SWQB recognizes that there are natural sources of E.coli bacteria in the Middle Rio Grande watershed (Parsons, 2005). However, the fact that NPDES and MS4 permitees discharge to the Rio Grande (non-Pueblo Alameda Street Bridge to Angostura Diversion) AU, requires SWQB to assign a WLA to those permittees, regardless of whether they are contributing to the impairment of the waterbody or not.

40 CFR § 130.2(i) defines a TMDL as follows:

> *"Total maximum daily load (TMDL). The sum of the individual WLAs for point sources and LAs for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure…"*

40 CFR § 130.2(h) defines a WLA as follows:

> *"Wasteload allocation (WLA). The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation."*

The limited monitoring results in Appendix E.5 for the facilities in the Rio Grande (non-Pueblo Alameda Street Bridge to Angostura Diversion) may not indicate a permit violation, however, it should be noted that a number of samples exceed the Pueblo of Sandia single sample E.coli criterion.

Point 2 – Impact of High Coliform Concentrations.
The NMED data shows that coliform bacteria are consistently present in the Middle Rio Grande above the Alameda Bridge. The geometric mean concentration for the data reported in the proposed TMDL was 72 cfu/100 mL for E coli. AMAFCA is not aware of any data or studies that have shown impairment of the river or human health problems as a result of these high concentrations. While AMAFCA recognizes that E coli is a very useful indicator of the possible presence of pathogenic bacteria in drinking water, we believe it is a very poor indicator of potential threats to the environment or human health in the Middle Rio Grande where it is clear

that natural sources of E coli and related bacteria are present. Before a costly TMDL is issued, AMAFCA insists that the NMED justify its implementation by demonstrating this impairment or threat.

SWQB Response: *Thank you for your comments.*

Section 3.2 of the Draft MRG TMDL states:

> *"The pattern of impairment can be examined to see if it occurs across all flow conditions, corresponds strictly to high flow events, or conversely, only to low flows. Impairments observed in the low flow zone typically indicate the influence of point sources, while those further left generally reflect probable nonpoint source contributions."*

SWQB Response: *States are required to develop TMDLs for segments that do not meet applicable water quality standards.*

40 CFR § 130.7(c)(1) reads:

> *"Each State shall establish TMDLs for the water quality limited segments identified in paragraph (b)(1) of this section, and in accordance with the priority ranking. For pollutants other than heat, TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. Determinations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters."*

40 CFR § 130.7(c)(1)(ii) reads:

> *"TMDLs shall be established for all pollutants preventing or expected to prevent attainment of water quality standards as identified pursuant to paragraph (b)(1) of this section…"*

NMED proposed water quality standards for Escherichia coli (E.coli) during the 2005 Triennial Review. E.coli water quality standards were approved by the WQCC and EPA and have been effective since August 2007. The rationale for the establishment of these E.coli standards is based on the Final EPA Rule- Water Quality Standards for Coastal and Great Lakes Recreation Waters (40 CFR § 131). 40 CFR § 131 states that the recommended values apply to enterococci regardless of origin unless a sanitary survey shows that sources of the indicator bacteria are non-human and an epidemiological study shows that the indicator densities are not indicative of a human health risk.

The Executive Summary of Implementation Guidance for Ambient Water Quality Criteria for Bacteria (EPA, 2004) states:

> *"Although there have been few studies investigating the impact of fecal contamination from animal source, it is inappropriate to conclude that these sources present no risk to human health from waterborne pathogens, particularly when the animals in question are likely to have had frequent contact with humans and may harbor and shed human pathogens."*

Additionally, Section 3.2 discusses recent evidence that warm-blooded animals other than humans may be responsible for transmitting pathogens capable of causing illness in humans.

Point 3 – Alternative Analysis of E coli Concentrations.

The waste loads presented in the TMDL for the river above the Alameda Bridge are calculated using flows measured at the Alameda Bridge. However, during the SWQB study E coli concentrations were measured at several locations upstream from this point. Under low flow conditions there are no significant tributaries above this point (the aggregate maximum flows from the Rio Rancho and Bernalillo wastewater treatment plants represent less than 3% of the minimum flow in the river during any of the sampling events for the study), hence, this assumption is reasonable and introduces little error. Therefore, AMAFCA believes that the same reasoning can be applied to the E coli data, so that instead of calculating loads based on individual coliform concentrations, the mean geometric concentration should be used in the load calculations. This is justified because there are no point sources between the uppermost sampling point (the Angostura dam) and the Alameda bridge under low flow conditions except the three wastewater plants which contribute a negligible load (less than 3 %). We also argue that geometric means of E coli concentrations are justified when Rio Grande flows are high but NDC flows are negligible (≤ 2 cfs), as again, the sole sources of coliform bacteria are natural sources and the three permitted point source discharges.

The events in which multiple E coli samples were collected are presented in Table 2 (page 5) along with the daily mean flows of the Rio Grande at the Alameda bridge and in the NDC. This data shows that the geometric mean E coli concentrations for each of the multiple sampling events was less than the NM state stream standard of 126 cfu/100 mL except the samples collected on 10/28/5 which slightly exceeded the standard at 131 cfu/100 mL.

Examination of this data shows no apparent relationship between E coli concentrations in the river and sample location. On some days (i.e. 7/27/5), the highest E coli concentrations are near the upper end of the reach while on others (i.e. 10/26/5) they are at the lowest end of the reach. This observation is consistent with AMAFCA's interpretation that the sources of coliform bacteria in this reach of the river are primarily natural.

Finally, an even closer examination of the data suggests a possible error in NMED's analysis. Reference to Figure 4.8 in the draft TMDL document shows a sequence of samples collected under very low flow conditions, Q < 359 cfs. However, according to USGS data, the lowest daily average flows measured at the Alameda Bridge during any of the sampling events was 383 cfs on 10/26/5. Use of erroneously low flow values will result in correspondingly low loads. The NMED should explain the source of flow data used in their load calculations.

AMAFCA is deeply committed to protection of the environment and human health. In the past 10 years we have spent more than $20,000,000 to achieve this goal on projects that have resulted in cleaner urban runoff, development of environmental sanctuaries for wildlife and plants, and providing open space for public use and recreation. We support the objective of the TMDL

process which states that "Management of the load to improve stream water quality should be a goal to be attained." However, the proposed TMDL and supporting data does not:

1. Demonstrate that there is any environmental impairment of the middle reach of the Rio Grande by enteric coliform bacteria.

2. Document that elevated concentrations of this parameter is caused by anthropogenic activities.

Furthermore, because the high concentrations of E coli appear to be caused by natural sources, we do not believe there are any control strategies that can be undertaken to reduce their concentrations. Therefore, we strongly object to implementation of this TMDL.

AMAFCA looks forward to working with the NMED on all of its projects to protect the water quality of the Middle Rio Grande. Please contact us if you would like to discuss this or other topics.

Sincerely,
AMAFCA

Jerry M. Lovato, P.E.
Drainage Engineer

Cc: Roland Penttila, City of Albuquerque
Kathy Trujillo, New Mexico Department of Transportation
Vern Hershberger, University of New Mexico
AMAFCA File 028 060000

Table 2. Summary of E coli and flow data for days in which multiple samples were collected on the Rio Grande upstream from the Alameda Bridge.

Location	Date	E coli (cfu/100mL) Data	G. Mean	Q (cfs) Alameda	NDC	Load (cfu/d)
Rio Grande Below Angostura Diversion Works - 30RGrand473.7	5/23/2005	10.1		960	2	
Rio Grande abv Hwy 554 Bridge - 30RGrand464.2	5/23/2005	10		960	2	
Rio Grande above Rio Rancho WWTF #3 - 32RGrand458.0	5/23/2005	13.1		960	2	
Rio Grande above Alameda Bridge - c - 30RGrand445.4	5/23/2005	41.4	16.0	960	2	5.84E+11
Rio Grande Below Angostura Diversion Works - 30RGrand473.7	5/26/2005	27.3		6730	2.6	
Rio Grande abv Hwy 554 Bridge - c - 30RGrand464.2c	5/26/2005	22.1		6730	2.6	
Rio Grande abv Hwy 554 Bridge - 30RGrand464.2	5/26/2005	42.3		6730	2.6	
Rio Grande above Rio Rancho WWTF #3 - 32RGrand458.0	5/26/2005	42.6		6730	2.6	
Rio Grande above Alameda Bridge - c - 30RGrand448.4c	5/26/2005	60.1		6730	2.6	
Rio Grande above Alameda Bridge - 30RGrand448.4	5/26/2005	47.3	38.3	6730	2.6	6.36E+12
Rio Grande Below Angostura Diversion Works - 30RGrand473.7	6/23/2005	13.2		4430	1.4	
Rio Grande abv Hwy 554 Bridge - c - 30RGrand464.2c	6/23/2005	23.1		4430	1.4	
Rio Grande abv Hwy 554 Bridge - 30RGrand464.2	6/23/2005	22.6		4430	1.4	
Rio Grande above Rio Rancho WWTF #3 - 32RGrand458.0	6/23/2005	38		4430	1.4	
Rio Grande above Alameda Bridge - c - 30RGrand445.4c	6/23/2005	81.3		4430	1.4	
Rio Grande above Alameda Bridge - 30RGrand445.4	6/23/2005	249.1	41.2	4430	1.4	6.90E+12
Rio Grande Below Angostura Diversion Works - 30RGrand473.7	7/27/2005	98.0		48	0.38	
Rio Grande abv Hwy 554 Bridge - 30RGrand464.2	7/27/2005	488.4		48	0.38	
Rio Grande abv Hwy 554 Bridge - c - 30RGrand464.2c	7/27/2005	326.5		48	0.38	
Rio Grande above Rio Rancho WWTF #3 - 32RGrand458.0	7/27/2005	41.1		48	0.38	
Rio Grande above Alameda Bridge - 30RGrand448.4	7/27/2005	62.2		48	0.38	
Rio Grande above Alameda Bridge - c - 30RGrand445.4c	7/27/2005	41.1	105.9	48	0.38	1.98E+12
USGS 08329918 Rio Grande at Alameda Bridge	8/24/2005	106		470	2	
Rio Grande Below Angostura Diversion Works - 30RGrand473.7	8/24/2005	52.1		470	2	
Rio Grande abv Hwy 554 Bridge - c - 30RGrand464.2c	8/24/2005	56.2		470	2	
Rio Grande above Rio Rancho WWTF #3 - 32RGrand458.0	8/24/2005	7.2		470	2	
Rio Grande above Alameda Bridge - c - 30RGrand445.4c	8/24/2005	77.6	43.6	470	2	7.98E+11
Rio Grande above Alameda Bridge - 30RGrand448.4	8/28/2005	149.1		550	92	
Rio Grande above Rio Rancho WWTF #3 - 32RGrand458.0	8/28/2005	56.1		550	92	
Rio Grande abv Hwy 554 Bridge - 30RGrand464.2	8/28/2005	95.9		550	92	
Rio Grande Below Angostura Diversion Works - 30RGrand473.7	8/28/2005	96.9	104.4	550	92	2.19E+12
Rio Grande above Alameda Bridge - 30RGrand448.4	10/26/2005	200		383	1.2	
Rio Grande above Rio Rancho WWTF #3 - 32RGrand458.0	10/26/2005	1314		383	1.2	
Rio Grande abv Hwy 554 Bridge - 30RGrand464.2	10/26/2005	153.6		383	1.2	
Rio Grande Below Angostura Diversion Works - 30RGrand473.7	10/26/2005	63.1	131.5	383	1.2	1.91E+12

SWQB Response: *Section 3.0 of the Procedures for Assessing Use Attainment for the State of New Mexico Integrated Clean Water Act §303(d)/§305(b) Water Quality Monitoring and Assessment Report (January 2008) discusses the use of spatially and temporally independent samples; samples that are not spatially or temporally independent are averaged. Details of the assessments are available on the Assessment Summary Sheets, which are made available for public inspection as part of the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List public record. SWQB generally does not have enough independent samples to calculate a monthly geometric mean for assessment purposes. Section 3.3 and Table 3.7 of the Assessment Protocol addresses the procedure for assessing primary and secondary contact uses. Additionally, 20.6.4.14 NMAC reads:*

> *B. Bacteriological Surveys: The monthly geometric mean shall be used in assessing attainment of criteria when a minimum of five samples is collected in a 30-day period.*

Therefore, at this time, SWQB can only apply the single sample E.coli criterion to the available E.coli data for assessment purposes. .

As displayed in Figure 2.7 and Figure 4.4, USGS gage 08329928 was used for the development of the flow and load duration curves. The flow at the Rio Grande near Alameda (08329928) USGS gage was 299 cfs on 10/26/2005. Figure E.1 displays the data downloaded from the USGS website for this gage and date. AMAFCA correctly notes the discharge from USGS gage 08329918 (Rio Grande at Alameda Bridge) was 383 cfs on 10/26/2005. The title of Figure 4.4 has been edited to clarify which USGS gage data was used.

SWQB appreciates the continued work by AMAFCA toward improved water quality in the Middle Rio Grande watershed. However, regardless of whether the sources are anthropogenic or natural, SWQB is obligated to develop a TMDL for impaired waterbodies per federal regulations.

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# ---------------------------------- WARNING ----------------------------------------
# The data you have obtained from this automated U.S. Geological Survey database
# have not received Director's approval and as such are provisional and subject to
# revision.  The data are released on the condition that neither the USGS nor the
# United States Government may be held liable for any damages resulting from its use.
# Additional info: http://waterdata.usgs.gov/nwis/help/?provisional
#
# File-format description:  http://waterdata.usgs.gov/nwis/?tab_delimited_format_info
# Automated-retrieval info: http://waterdata.usgs.gov/nwis/?automated_retrieval_info
#
# Contact:   gs-w_support_nwisweb@usgs.gov
# retrieved: 2009-03-16 15:36:04 EDT
#
# Data for the following site(s) are contained in this file
#    USGS 08329928 RIO GRANDE NR ALAMEDA, NM
# ----------------------------------------------------------------------------------
#
# Data provided for site 08329928
#     DD parameter statistic   Description
#     02   00060     00003     Discharge, cubic feet per second (Mean)
#
# Data-value qualification codes included in this output:
#     A  Approved for publication -- Processing and review completed.
#     P  Provisional data subject to revision.
#     e  Value has been estimated.
#
agency_cd       site_no datetime        02_00060_00003  02_00060_00003_cd
5s      15s     16d     14n      10s
USGS    08329928        10/24/2005      365     A
USGS    08329928        10/25/2005      313     A
USGS    08329928        10/26/2005      299     A
USGS    08329928        10/27/2005      292     A
USGS    08329928        10/28/2005      296     A
USGS    08329928        10/29/2005      380     A
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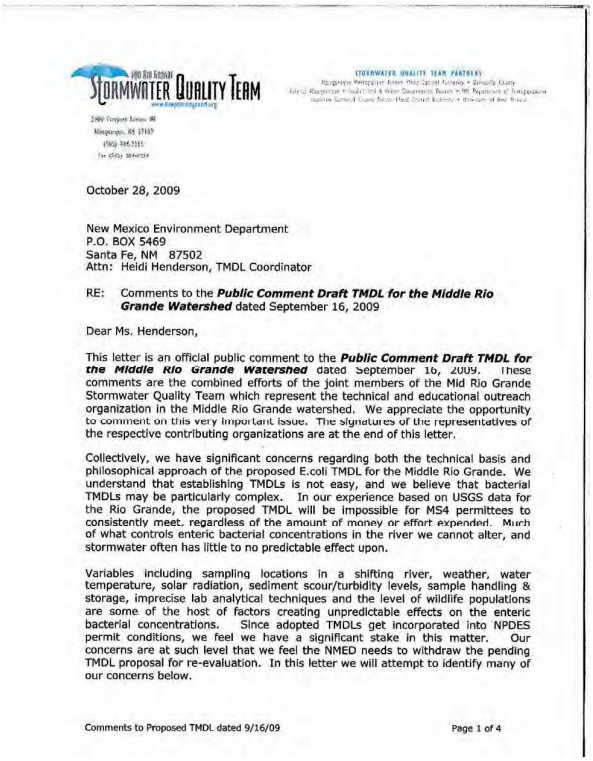
Figure E.1 Selected USGS discharge data for USGS gage 08329928

Comment Set G:



Mid Rio Grande STORMWATER QUALITY TEAM

STORMWATER QUALITY TEAM PARTNERS

October 28, 2009

New Mexico Environment Department
P.O. BOX 5469
Santa Fe, NM 87502
Attn: Heidi Henderson, TMDL Coordinator

RE: Comments to the ***Public Comment Draft TMDL for the Middle Rio Grande Watershed*** dated September 16, 2009

Dear Ms. Henderson,

This letter is an official public comment to the ***Public Comment Draft TMDL for the Middle Rio Grande Watershed*** dated September 16, 2009. These comments are the combined efforts of the joint members of the Mid Rio Grande Stormwater Quality Team which represent the technical and educational outreach organization in the Middle Rio Grande watershed. We appreciate the opportunity to comment on this very important issue. The signatures of the representatives of the respective contributing organizations are at the end of this letter.

Collectively, we have significant concerns regarding both the technical basis and philosophical approach of the proposed E.coli TMDL for the Middle Rio Grande. We understand that establishing TMDLs is not easy, and we believe that bacterial TMDLs may be particularly complex. In our experience based on USGS data for the Rio Grande, the proposed TMDL will be impossible for MS4 permittees to consistently meet, regardless of the amount of money or effort expended. Much of what controls enteric bacterial concentrations in the river we cannot alter, and stormwater often has little to no predictable effect upon.

Variables including sampling locations in a shifting river, weather, water temperature, solar radiation, sediment scour/turbidity levels, sample handling & storage, imprecise lab analytical techniques and the level of wildlife populations are some of the host of factors creating unpredictable effects on the enteric bacterial concentrations. Since adopted TMDLs get incorporated into NPDES permit conditions, we feel we have a significant stake in this matter. Our concerns are at such level that we feel the NMED needs to withdraw the pending TMDL proposal for re-evaluation. In this letter we will attempt to identify many of our concerns below.

Comments to Proposed TMDL dated 9/16/09 Page 1 of 4

General Comments

We have graphically compared bacterial densities of E.coli and fecal coliform from 180 storm samples, 9 samples at Rio Grande at Central Bridge, 9 samples at Rio Grande at Alameda Bridge, 15 samples at Rio Grande at San Felipe, and 96 samples at the Rio Grande at Otowi Bridge. None of these comparisons show more than a very loose correlation between the two indicator bacteria. This is disturbing considering that E. coli densities should theoretically be less than fecal coliform densities from the same sample. We believe that this means the test methods currently being employed are inaccurate enough to be unusable in this investigation. See Attachment 1: "Comparisons of E.coli to Fecal Coliform Analyzed from the Same Sample"

Tests taken by USGS at the Otowi bridge since 1997 show that river water is already over the TMDL standard before the water gets to the Middle Rio Grande MS4 outfalls. The impairment of the river occurs before any effect of stormwater from the Urban Area. See Attachment 2: "Otowi E.coli Exceedences".

SWQB Response: *Thank you for your comments. First, SWQB feels many of the general concerns expressed by the MRG Stormwater Quality Team are outside of the scope of the TMDL development process. Many of the concerns should be addressed during the NPDES permit process and permit implementation.*

SWQB E.coli samples were collected by SWQB staff operating under the NMED/SWQB Standard Operating Procedures for Data Collection and analyzed per IDEXX Laboratories, Inc and Colilert®-18 procedures as described in Standard Methods for the Examination of Water and Wastewater, protocol 8310 B. The USGS E.coli data were collected by USGS staff operating under the National Field Manual for the Collection of Water-Quality Data (Chapter A.7). The data from both agencies is publically available and collected with EPA-approved methods and is therefore eligible to be included in water quality assessments.

The E.coli data available from the Rio Grande at Otowi Bridge, NM USGS gage (8313000) show results that range from 1800 cfu/100 mL to less than 1 cfu/100 mL from May 1997 to November 2009. The sources of the bacteria contributions to this watershed have not been quantified, however, the source of impairment in a waterbody is irrelevant when it comes to the requirement for the development of a TMDL (40 CFR § 130.7).

In a comparison of E.coli versus storm flows in the North Diversion Channel, there seems to be no relation between storm discharges and bacteria densities. There seems to be evidence that stormwater runoff from impervious surfaces (parking lot runoff), municipal, urbanized high-density areas, municipal point source discharges, onsite treatment systems (septic systems and similar decentralized systems) and waste from pets is not a significant cause of the bacterial impairment in the Middle Rio Grande. See Attachment 3: "Bacterial Densities at Alameda versus flows in the North Diversion Channel"

Most days of higher flows in the Rio Grande at Alameda do not correlate with storm flows. Dam discharges from Cochiti as well as other influences such as Jemez River have a greater influence on river flows than stormwater. Therefore, it would be incorrect to correlate bacteria counts to high flows and then make the conclusion that this is related to stormwater contributions. See Attachment 4 (a modification of NMED's Table D.1 by AMAFCA): "Summary of E.coli and Flow Data" and "Rio Grande Flows at Alameda versus North Diversion Channel inflows"

SWQB Response: *SWQB does not assert to what extent storm flows contribute to the flow volume or E.coli concentations of the Rio Grande. The list of sources listed in the MRG Stormwater Quality Team comments reflect a list of probable sources noted by field staff during water quality surveys and merely serves to present a list of sources that could be contributing to the impairment of the waterbody. The Probable Source list is included on the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List and has not been quantified. The compiled data in Attachment 3 and 4 could be useful during the NPDES permit process.*

Are the samples being taken at the same place in the river each time? For instance, samples taken in the shallows might produce markedly different bacterial results than samples taken the middle of the river. This could explain the differences between the SWQB samples and the USGS samples. We request that the sampling methodology be standardized to properly represent the river should the NMED go forward with a modified TMDL.

SWQB Response: *SWQB samples denoted with a "c" following the STORET ID indicate a composite sample that was collected using the method described in Section 7.6 of the 2007 NMED/SWQB Standard Operating Procedures for Data Collection while those without a "c" are grab samples. The location of grab sample collection generally did not vary between sampling events. The USGS data collections were collected by USGS staff operating under the National Field Manual for the Collection of Water-Quality Data (Chapter A.4). The site selection and data collection by both agencies conforms with EPA approved methods and is therefore sufficient in order that the data can be used for the water quality assessments.*

Figure 3.1 **Flow Duration Curve;** *USGS Rio Grande Floodway at San Marcial, New Mexico 1974-2009* (Page 17) – For categories of the flow duration analysis, the two classifications of moist conditions and dry conditions should be changed. A flow duration curve does not relate to dry and wet (or moist) years. The correct terminology is high or low flows.

SWQB Response: *SWQB staff attended a training with Bruce Cleland and EPA R6 in February 2007. The development of the flow and load duration curves in this TMDL was based on this training as well as a research article by Bruce Cleland and guidance from the EPA Office of Wetlands, Oceans, and Watersheds. The use of "moist" and "dry" in the TMDL is consistent with the literature research. References to the EPA document have been added to Section 3.2, 4.2 and Section 9.0. The Cleland (2003) reference remains in Sections 3.2 and 4.2. Both references provide detailed explanations of both flow and load duration curve development.*

Section 4.4.2 **Load Allocation** (pages 44 and 45) – It should be noted that using an arithmetic mean for E.coli densities may overstate loading. The geometric mean is more appropriate as it is the basis for the criterion for the river. NMED should consider using the geometric mean of measured loads to compare against stream criteria when calculating load reduction targets.

SWQB Response: *Section 3.0 of the Procedures for Assessing Use Attainment for the State of New Mexico Integrated Clean Water Act §303(d)/§305(b) Water Quality Monitoring and Assessment Report (January 2008) discusses the use of spatially and temporally independent samples; samples that are not spatially or temporally independent are averaged. Details of the assessments are available on the Assessment Summary Sheets, which are made available for public inspection as part of the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List public record. SWQB generally does not have enough independent samples to calculate a geometric mean for assessment purposes. Section 3.3 and Table 3.7 of the Assessment Protocol addresses the procedure for assessing primary and secondary contact uses. Additionally, 20.6.4.14 NMAC reads:*

> *B. Bacteriological Surveys: The monthly geometric mean shall be used in assessing attainment of criteria when a minimum of five samples is collected in a 30-day period.*

Therefore, at this time, SWQB can only apply the single sample E.coli criterion to the available E.coli data for assessment purposes.

As far as the calculation of measured loads in the TMDL, in reviewing this section in response to this comment as well as the comments of others, NMED recognizes that for this TMDL calculating a percent reduction is particularly challenging. This is largely because the samples collected and the impairment determinations are based on exceedences of the State's single sample criterion and the TMDL is written to the address the monthly geometric mean standard of Sandia and Isleta Pueblos. As such any simple comparison of these numbers is fraught with challenge and, in this case, will result in an over estimation of the actual reduction necessary.

Furthermore, neither Section 303 of the Clean Water Act nor Title 40, Part 130.7 of the Code of Federal Regulations requires states to include discussions of percent reductions in TMDL documents. Although NMED believes that it is often useful to discuss the magnitude of water quality exceedences in the TMDL, the "percent reduction" value is can both be calculated in multiple ways and as a result can often misinterpreted. This is clearly the case in this situation.

For these reasons Tables 4.13-4.16 and the associated discussion have been removed. Statements in Section 3.3 have been duplicated in Section 4.3.

Section 4.6 **Linkage between Water Quality and Pollutant Sources** (Page 47 and 48) - We believe that it is statistically incorrect to apply the Pearson Coefficient to data that is not normally distributed (i.e. there is no correlation between rainfall and bacterial densities). We would like the NMED to provide the Kurtosis of the data to support the assumption of "normality" of the data.

Section 4.6 **Linkage Between Water Quality and Pollutant Sources** *Discussion* (Page 48) - Regarding the Bacterial Source Tracking Study, it should be noted that the consultant that created the study used wastewater inflows to the treatment plant as the model for their "human" contribution. As these inflows include many other sources than solely human sewage, only a portion of that 16% human can be reduced by best management practices.

SWQB Response: *SWQB TMDL documents commonly discuss the Pearson Coefficient as it relates to data in the TMDL. The Kurtosis of the data has also been calculated and the results for each of the four Assessment Units are positive, indicating a relatively peaked distribution.*

Thank you for the clarification regarding the Middle Rio Grande Microbial Source Tracking Study (Parsons, 2005). The TMDL document does not indicate the magnitude of E.coli loadings that may be addressed through Best Management Practices. However, this information may be useful during the NPDES permit process.

Section 4.7 **Margin of Safety (MOS)** (Page 49) - E.coli bacteria is not a "conservative" pollutant that does not degrade readily in the environment. Day-after reductions in densities in stormwater in a Texas study showed bacterial reductions in the original 15,000 colonies per 100 milliliters of 27%, 80%, and 96% in successive days after the storm. Lower water temperatures have lower bacterial densities but daily reductions are also less dramatic. Although bacterial densities can be used to compute loading, at worst, the loading is only temporary. This also makes bacteria different in terms of loading. In the normal mixing with the receiving water, the lower densities of the falling storm flows, and the naturally occurring die-off for several days after the storm rainfall, all tend to naturally reduce the impact to the receiving water in a short period of time. (See "Bacteria Die-Off Study" by Houston-Galveston Area Council dated August 31, 2005 and "Persistence of enteric bacteria in alluvial streams" by R.C. Jamieson et al published in the Journal of Environmental and Engineering Science dated May 14, 2004.)

SWQB Res ponse: *SWQB appreciates the references to bacteria studies in relation to the longevity of bacteria in the environment. Language reflecting this distinction has been added to Section 4.7.*

Section 6.4 **Stormwater Permitting Requirements and Presumptive Best Management Practices Approach** (pages 55 to 58) - NMED has stated that the TMDL is not a regulatory document. Therefore, the word "shall" should not be used anywhere in the TMDL document. However, the Middle Rio Grande MS4 permittees are concerned that TMDL "goals" will be converted into hard "maxima" and placed in our compliance requirements for future permits. In addition, the EPA cannot approve a permit that negatively impacts either cultural resources or listed species. This means that if, for example, AMAFCA reduces flows to the river because it's treating bacteria, USF&WS could argue that this contributes to decline of the endangered RGSM or Southwestern Willow Flycatcher. This could limit the actions of the permittees under the TMDL.

Any reduction in runoff to the river could impact the permittees obligations under the biological opinion of USF&WS. It could also impact compliance with Office of State Engineer Interstate Stream Commission obligations under the RG Compact.

SWQB Response: *Based on numerous public comments, the term "shall" in Items 1 and 2 of Subsection 6.4(B) has been replaced with the terms "should" and "should consider." As noted in the paragraph immediately preceding Subsection 6.4, the language in Subsection 6.4 was submitted for inclusion by EPA R6 and the ultimate decision about TMDL implementation will be decided during the NPDES permit process. EPA does not have the authority to approve Implementation Plans in TMDLs and states that fact in every TMDL approval letter we receive from EPA R6. For example, the approval letter for the Jemez River TMDLs (September 2009) reads:*

> *"Included in this TMDL submittal was a TMDL Implementation Plan. Presently, EPA has no duty to approve or disapprove implementation plans under Section 303(d) of the Clean Water Act (CWA). Therefore, EPA is taking no action to approve or disapprove the TMDL Implementation Plan submitted by NMED."*

The Implementation Section is merely a suggested guide for future permit development or other relevant watershed activities. Considerations regarding Endangered Species issues, Rio Grande Compact obligations, and other permit requirements will be addressed during the NPDES permit process.

Appendix D **E.coli Data** (Table D.1) – In this reach of "non-Pueblo Alameda Bridge to Angostura Diversion", samples were collected by both the NMSWQB and USGS. The densities of E.coli sampled by NMSWQB were significantly different than the densities in samples collected by the USGS. It should be noted that there was only 1 exceedence in 36 samples (3%) collected by the NMSWQB versus 5 exceedences in the 9 samples (56%) collected by the USGS. These were evaluated by the Mann-Whitney rank order test. Can NMED explain this variation in these diverse results? According to page 28 of the TMDL, "Overall, the target values for the bacteria TMDLs will be determined...(3) the ability to easily monitor and produce quantifiable and reproducible results."

Table D.2 shows only the exceedences of the State standards. This table should be corrected to show exceedences for Pueblo standards for the appropriate reaches. (See also Tables 4.4 and 4.5 as well as Figures 4.7 and 4.8 on pages 34 and 35.)

Sincerely,

Roland Penttila, P.E.
Stormwater Management Section
City of Albuquerque

Kevin Daggett, P.E.
Environmental Engineer
AMAFCA

Mary Murnane
Water Resources Program Manager
Bernalillo County

Vern Hershberger
Environmental Engineer
University of New Mexico

Tom Allen, Vice-Chair
Board of Supervisors
Ciudad Soil and Conservation District

Trevor Alsop, P.E.
Drainage/Environmental Engineer
SSCAFCA

attachments

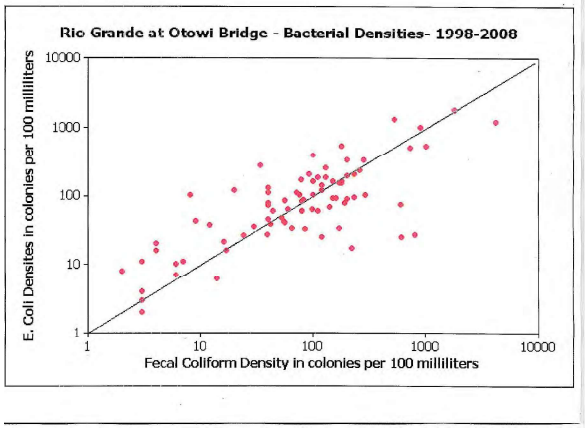
Katherine Trujillo, P.E.
Assistant District Engineer
NMDOT, District Three

SWQB Response: *As previously noted, SWQB E.coli samples were collected by SWQB staff operating under the NMED/SWQB Standard Operating Procedures for Data Collection and analyzed per IDEXX Laboratories, Inc and Colilert® -18 procedures as described in Standard Methods for the Examination of Water and Wastewater, protocol 8310 B. The USGS E.coli data were collected by USGS staff operating under the National Field Manual for the Collection of Water-Quality Data (Chapter A.7). The data from both agencies is publically available and collected with EPA-approved methods and is therefore eligible to be included in water quality assessments. SWQB noted the differences in the E.coli data during the assessment process, but had no reason to discard either dataset as invalid. Due to the dynamic nature of the Rio Grande, varying E.coli results across a given time period are not atypical.*

A footnote has been added to Tables D.1 and D.2 to indicate those samples that have exceeded the Tribal single sample E.coli criterion.

E45

E46



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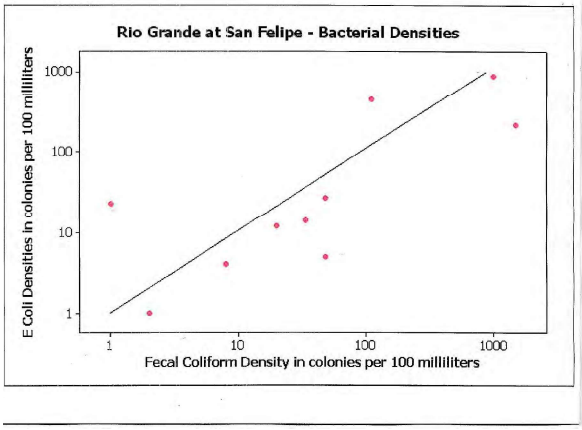

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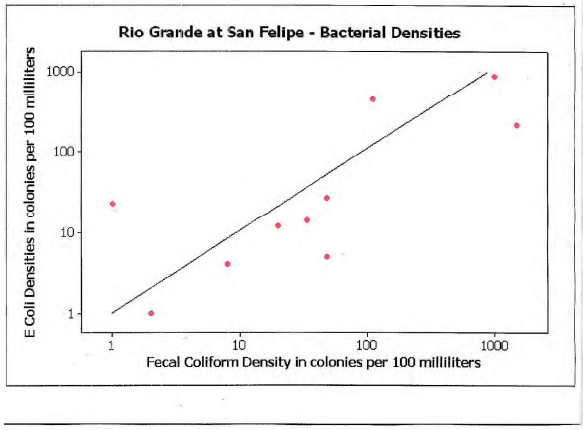

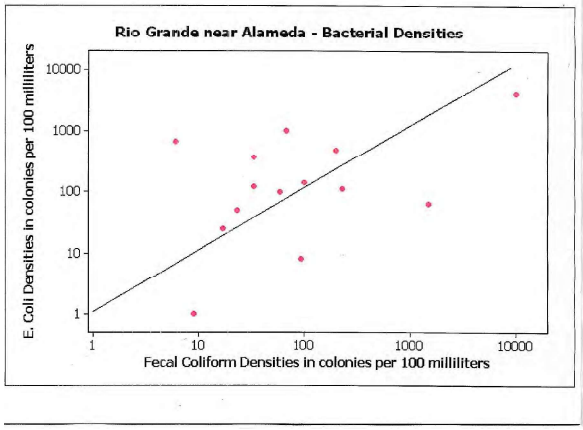

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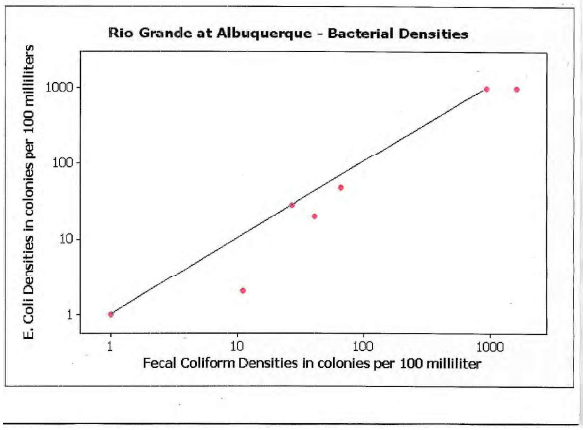

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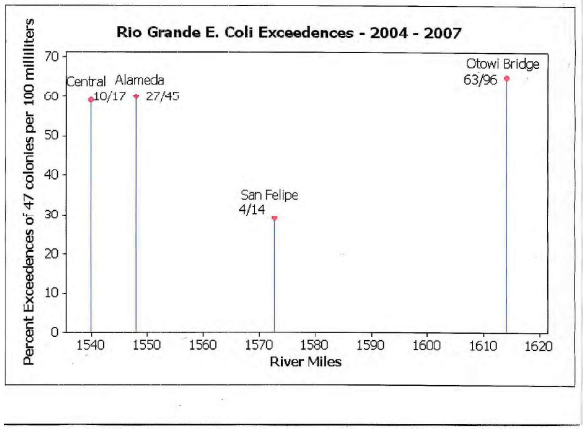

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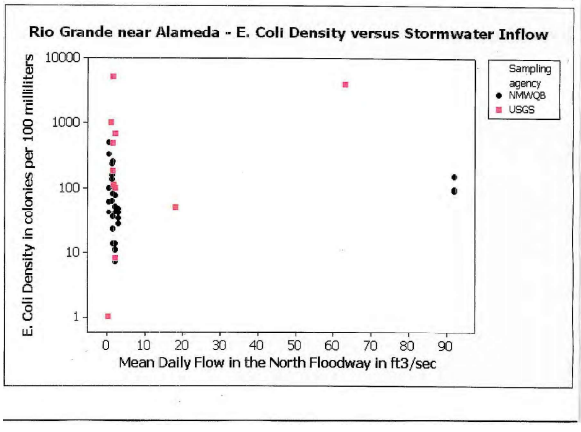

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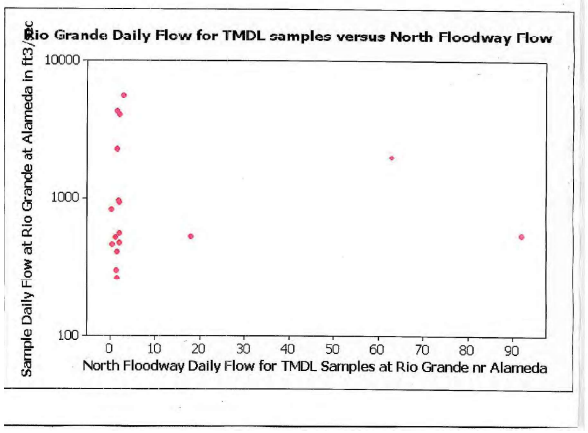

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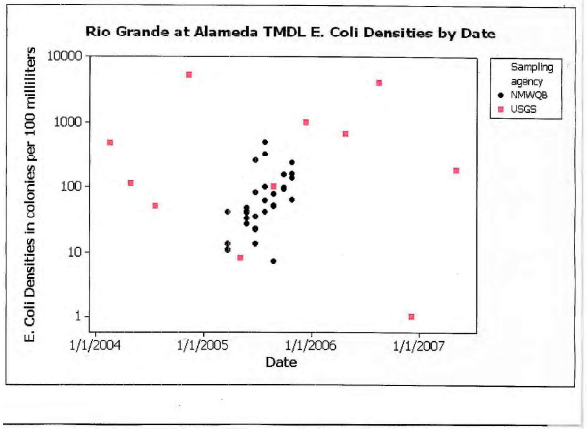

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Comment Set H:

PUEBLO OF SANTA ANA
OFFICE OF THE GOVERNOR

October 26, 2009

NOV 0 3 2009

Ms. Heidi Henderson
NMED SWQB
PO Box 5469
Santa Fe, NM 87502

Dear Ms. Henderson:

The Pueblo of Santa Ana (the Pueblo) recently reviewed the New Mexico Environment Department's (NMED) Public Comment Draft Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed and has developed the following technical questions to aid in clarification:

1. What was the technical basis for NMED to conduct monitoring below the Angostura Diversion? Is this monitoring site considered a reference point, and if so, what is the justification for this?
2. Is NMED considering additional monitoring stations above the Angostura Diversion with new wastewater treatment plants online to discharge to the Rio Grande? What is the process for adding sites upstream of the Angostura Diversion for future consideration in NMED's "Water Quality Monitoring of the Middle Rio Grande" report?
3. The current area of concern for *E. coli* in the Middle Rio Grande falls below the 550 bridge at the point of Bernalillo's Wastewater Treatment Plant discharge. It would be helpful to include approximate or recorded flow data within the document for NMED's monitoring sites (i.e. Table D.1) as it may assist with interpreting *E. coli* results.
4. What is the protocol for developing a TMDL in "shared waters" of dual jurisdiction; waters that, on one side of the channel are State lands and on the other side are Tribal or Pueblo lands?
5. The State of NM will undergo the triennial review of its water quality standards at the end of 2009. Considering the proposed designated use changes of secondary contact to primary contact and the inclusion of public water supply (segment 20.6.4.106), how will the TMDL for *E. coli* be revised and how does NMED propose to address this designated use change?
6. How and when will the provisional data collected on dissolved oxygen (DO) and other parameters in the Middle Rio Grande be incorporated into potential future TMDLs? Why was DO not included in the 2009 TMDL schedule as stated in the 2008-2010 State of New Mexico Integrated List?

If you have any questions regarding the Pueblo's comments, please contact Jennifer Wellman, Water Resources Division Manager, at (505)771-6754 or Genevieve McGeisey, Water Quality Scientist, at (505)771-6757. Thank you for your consideration of these issues.

Sincerely,

Bruce Sanchez
Governor

02 Dove Road • Santa Ana Pueblo • NM 87004
Tel: 505-867-3301 • Fax: 505-867-3395 •

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SWQB Response: *Thank you for your comments. Although the comments were received after the end of the 45-day public comment period, SWQB chose to respond to the comments.*

1. *SWQB conducted water quality sampling at the Rio Grande below Angostura Diversion Works (30RGrand473.7) site during the 2005 water quality survey. This site was chosen because it is at the uppermost site of the Rio Grande (non-Pueblo Alameda Street Bridge to Angostura Diversion) Assessment Unit (AU) and is representative of the Rio Grande as it enters this AU. The site is considered a reference or background site for this study as it is located upstream of the municipalities in the Middle Rio Grande watershed.*

2. *For the purposes of the 2005 Middle Rio Grande survey, SWQB defined the Middle Rio Grande as the watershed from the Angostura Diversion to Elephant Butte Reservoir. SWQB has established Assessment Units upstream of the Angostura Diversion; the next two upstream are the Rio Grande (non-Pueblo Angostura Diversion to Cochiti Reservoir) and Rio Grande (Cochiti Reservoir to San Ildefonso bnd) Assessment Units. SWQB has three established stations in the Rio Grande (Cochiti Reservoir to San Ildefonso bnd) AU, but none in the Rio Grande (non-Pueblo Angostura Diversion to Cochiti Reservoir) AU due to the limited length of State waters along this reach of the Rio Grande.*

3. *Flow data has been added to Appendix D.*

4. *SWQB develops multi-jurisdictional TMDLs by using the most conservative water quality standard in the TMDL calculations. In this case, SWQB developed the TMDLs for the Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge) and Rio Grande (non-Pueblo Alameda Street Bride to Angostura Diversion) by using the Pueblo of Isleta and Pueblo of Sandia standards, respectively. The regulations in 40 CFR §131.10(b) require the development of the TMDL using the tribal standards in order to be protective of the downstream standards. The regulations in 40 CFR §122.4(d) require allocations and effluent limits to be developed using the tribal standards in order to be protective of the downstream waters. A statement addressing this issue has been added to Section 2.3.*

5. *The NMED" Proposed Amendments to the Standards for Interstate and Intrastate Surface Waters, 20.6.4 NMAC" proposes a change from secondary contact to primary contact as well as the addition of the public water supply designated use for Segments 20.6.4.105 and 20.6.4.106. NMED proposes to change secondary contact to primary contact so that the designated use is consistent with the assigned criteria; the monthly geometric mean and single sample criteria already reflect primary contact E.coli criteria recommendations, so only the term for the designated use is included in the proposed changes. According to the NMED Proposed Amendments document,*

   "…the Department does not propose criteria at this time to apply generally to the public water supply use. The reason is that public water systems are required to provide treatment to comply with the Drinking Water Regulations. As a result, the water provided by public water systems must be safe to drink regardless of the quality of the source water. Nonetheless, it may be prudent to establish ambient water quality criteria as a preventative approach that could reduce treatment

E56

costs. The Department intends to commence a stakeholder discussion after the triennial review to discuss the issue further."

SWQB will continue to monitor the Rio Grande and apply the Procedures for Assessing Use Attainment for the State of New Mexico Integrated Clean Water Act §303(d)/§305(b) Water Quality Monitoring and Assessment Report (January 2008) to collected water quality data in order to assess the impairment status of the Rio Grande.

6. *The Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge) and Rio Grande (non-Pueblo Alameda Street Bridge to Angostura Diversion) were listed as impaired for dissolved oxygen on the 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated List. However, per the February 2009 Record of Decision, EPA delisted these two segments of the Rio Grande for dissolved oxygen. However, the dissolved oxygen listings for these two segments of the Rio Grande are included in the Draft 2010-2012 State of New Mexico CWA §303(d)/§305(b) Integrated List. A schedule set for the dissolved oxygen TMDLs for these Assessment Units will not be set until after the impairment has been approved by the WQCC and EPA. Likewise, a TMDL for the ambient toxicity listing for the Rio Grande (non-Pueblo Alameda Street Bride to Angostura Diversion) has not been scheduled.*

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APPENDIX F
JURISDICTIONAL AREA APPROACH

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EPA released a memo entitled "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs" in November 2002 clarifying EPA regulations regarding Waste Load Allocations (WLA) and Municipal Separate Storm Sewer Systems (MS4s) in TMDLs. In November 2008, EPA released the draft TMDLs to Stormwater Handbook to provide guidance to states as to how to include WLAs for MS4s in TMDLs. The handbook provides a number of options for states to consider when developing TMDLs that include MS4 allocations. One of the waterbody-based approaches to TMDL development includes the jurisdictional area approach:

"Jurisdictional area: loading capacity is allocated to permitted stormwater sources (and other land-based sources) on the basis of the portion of the drainage area included within their physical boundary. Without knowing the specific area draining to a stormwater conveyance system, the stormwater source area can be represented by the jurisdictional or operational area of the source (e.g., urbanized area for an MS4). For example, if the loading capacity is 100 lbs/day and the urbanized area of an MS4 represents 30 percent of the area draining to the assessment location, the MS4 WLA is specified as 30 lbs/day." (Section 4.3.2)

The handbook also gives specific direction on incorporating WLAs for MS4s in TMDLs developed using Load Duration Curves:

"TMDLs developed using the load duration approach most often identify the portion of the loading capacity for the stormwater WLA(s) on the basis of jurisdictional area. However, because the duration curve framework establishes a series of individual flow-variable loading capacities, the portion of each loading capacity attributed to individual sources typically will also vary by flow. Figure 19 illustrates a TMDL that was developed using a duration curve framework. In the Figure 19 example, stormwater WLAs for MS4 communities are based on the percent jurisdictional area approach. In this case, 3 percent of the watershed falls within the jurisdiction of MS4 communities. Thus, the MS4 WLA is 3 percent of the available allocation for each flow zone. The remaining 97 percent is designated for nonpoint sources and natural background as the LA for each zone." (Section 4.3.2.2)

The excerpts from the TMDLs to Stormwater Handbook provide the framework from which SWQB developed the WLA for the Phase I and Phase II MS4 permittees for each impaired Assessment Unit. However, the MRG-area presented two additional challenges. Unlike the 2002 Middle Rio Grande fecal coliform TMDL, the MRG E.coli TMDL includes both Phase I and Phase II MS4 permits. Additionally, the two permits each include jurisdictional area in the Rio Grande (Isleta Pueblo boundary to Alameda Bridge) and Rio Grande (non-Pueblo Alameda to Angostura Diversion) Assessment Units. As both AUs are also impaired for *E.coli,* TMDL calculations are therefore included for both AUs. The following explanation provides additional detail on these jurisdictional area calculations to supplement the information provided in Section 4.4.1.

Determination of Contributing Watershed Area

For the purposes of the MS4 WLA determinations, the contributing watershed is considered to be the Rio Grande drainage from Isleta Pueblo boundary to Cochiti Reservoir. This contributing drainage includes the USGS Hydrologic Unit Codes (HUCs) displayed in Figure F.1 and Table F.1. The total contributing area from the 8 HUCs is 2084.15 sq. mi.

As noted in Figure F.1, HUCs 1302020303 and 1302020302 do not contribute drainage to the Rio Grande (Alameda Bridge to Angostura Diversion) AU. Additionally, HUC 1302020301 only partially contributes to the Rio Grande (Alameda Bridge to Angostura Diversion) AU. The fraction that contributes to this AU (i.e. is upstream of the Alameda Bridge) was estimated to be 259 sq mi based on an east-west line drawn at the Alameda Bridge. Therefore, the total watershed area contributing to the Rio Grande (Alameda Bridge to Angostura Diversion) AU is the sum of these areas, totaling 1612.72 sq mi.

Phase I Permit Jurisdictional Area Approach

Four entities are authorized to discharge under the Phase I MS4 permit: City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), New Mexico Department of Transportation District 3, and University of New Mexico. The Phase I permit states:

> *"This permit covers all areas, except agricultural lands, within the corporate boundary of the City of Albuquerque, New Mexico served by, or otherwise contributing to discharges from municipal separate storm sewers owned or operated by the permittees listed above."*

Based on the incorporated city limits of the City of Albuquerque from GIS coverages, the Incorporated Area of the City of Albuquerque was determined to be 188.08 square miles (sq. mi.). However, 7.2 sq. mi. fall into the Rio Grande (Alameda Bridge to Angostura Diversion) AU while 180.88 sq. mi. fall into the Rio Grande (Isleta Pueblo bnd to Alameda Bridge) AU, again this division is based on an east-west line drawn at the Alameda Bridge.

Therefore, for the Rio Grande (Isleta Pueblo bnd to Alameda Bridge) AU, the Phase I MS4 WLA is calculated as follows (see Table F.2):

Total jurisdictional area / Total contributing drainage area =
180.88 sq. mi. / 2084.15 sq. mi. = 8.68%

The Phase I MS4 WLA for the Rio Grande (Alameda Bridge to Angostura Diversion) AU is calculated as follows (see Table F.2):

Total jurisdictional area / Total contributing drainage area =
7.2 sq. mi. / 1612.72 sq. mi. = 0.45%

These calculations are summarized in Section 4.4.1. The Phase I MS4 WLA values used in the TMDL document were rounded from these percent jurisdictional estimates to 9% and 1%, respectively.

Phase II Permit Jurisdictional Area Approach

The nine sMS4 permittees eligible for coverage under the general Phase II MS4 permit are listed in Table 4.7. The Phase II sMS4 permit (NMR040000) reads:

> *"This permit authorizes the discharge of storm water from small municipal separate storm sewer systems (MS4s) provided the MS4 is located fully or partially within an urbanized area as determined by the 2000 Decennial Census."*

The Urbanized Areas (UA) upstream from the Isleta Pueblo boundry within the Rio Grande drainage was determined from GIS coverages to be 108.89 sq. mi.; 29.53 sq. mi. fall into the Rio Grande (Isleta Pueblo bnd to Alameda Bridge) AU and 79.35 sq. mi. fall into the Rio Grande (Alameda Street Bridge to Angostura Diversion) AU. This UA values exclude the Incorporated Area of the City of Albuquerque. For the purposes of the MS4 WLA determinations, the contributing watershed is considered to be the Rio Grande drainage from Isleta Pueblo boundary to Cochiti Reservoir. This contributing drainage includes the USGS Hydrologic Unit Codes (HUCs) displayed in Figure F.1 and Table F.1. The total contributing area from the 8 HUCs is 2084.15 sq. mi.

Therefore, for the Rio Grande (Isleta Pueblo bnd to Alameda Bridge) AU, the Phase II MS4 WLA is calculated as follows (see Table F.3):

Total jurisdictional area / Total contributing drainage area =
29.53 sq. mi. / 2084.15 sq. mi. = 1.42%

The Phase II MS4 WLA for the Rio Grande (Alameda Bridge to Angostura Diversion) AU is calculated as follows (see Table F.3):

Total jurisdictional area / Total contributing drainage area =
79.35 sq. mi. / 1612.72 sq. mi. = 4.92%

These calculations are summarized in Section 4.4.1. The Phase II MS4 WLA values used in the TMDL document were rounded from these percent jurisdictional estimates to 1% and 5%, respectively.

Thus, the total WLA assigned to each AU for both Phase I and Phase II permits is as follows:

Rio Grande (Isleta Pueblo bnd to Alameda Bridge): 9 + 1 = 10%
Rio Grande (Alameda Bridge to Angostura Diversion): 1+ 5 = 6%

Without rounding of these estimated values, the Rio Grande (Isleta Pueblo bnd to Alameda Bridge) WLA is 10.10% and the Rio Grande (Alameda Bridge to Angostura Diversion) WLA is 5.37%. In evaluating the potential impact, SWQB finds that, while the WLA is slightly smaller for the Rio Grande (Isleta Pueblo bnd to Alameda Bridge), this approach results in both a larger overall WLA allocation for MS4 permitees within the Middle Rio Grande and a 10% larger WLA for the Rio Grande (Alameda Bridge to Angostura Diversion) AU providing the permittees a larger WLA with which to work.

The remaining ninety percent was designated for nonpoint sources and natural background as the LA for each zone in the Rio Grande (Isleta Pueblo boundary to Alameda Street Bridge) AU. The remaining ninety four percent was designated for nonpoint sources and natural background as the LA for each zone in the Rio Grande (Alameda Street Bridge to Angostura Diversion). The WLA values for NMS000101 (Albuquerque Phase I MS4 permit) and NMR040000 (Phase II MS4s) are listed in Tables 4.11 and 4.12.

The TMDLs were calculated as described in Tables 4.4 and 4.5. From this calculated TMDL value, the Margin of Safety (MOS) and the NPDES permits were subtracted for each flow duration interval. In order to calculate the Phase I and Phase II MS4 permit WLAs, the percentages, derived using the jurisdictional area approach, were applied to the remaining TMDL quantity for each flow duration interval. For example, the high flow WLA for the Rio Grande (Isleta Pueblo bnd to Alameda Street Bridge) AU was calculated as follows:

TMDL –MOS* – NPDES WLA** = LA
$5.27 \times 10^{12} - 1.40 \times 10^{12} - 1.35 \times 10^{11} = 3.73 \times 10^{12}$ cfu/day

**as discussed in Section 4.7*
***note: sum of WLA for NM0022250 and NM0027873*

The MS4 WLAs were assigned as a percentage of the LA.
Phase I MS4 WLA = 9% and Phase II MS4 WLA = 1%, therefore;

NMS000101 WLA = $0.09 \times 3.73 \times 10^{12}$ cfu/day = 3.36×10^{11} cfu/day
NMR040000 WLA = $0.01 \times 3.73 \times 10^{12}$ cfu/day = 3.73×10^{10} cfu/day
Total MS4 WLA = NMS000101 WLA + NMR040000 WLA = 3.73×10^{11} cfu/day

The remaining available load is allocated to the LA. The final TMDL allocations read as follows:

TMDL – MOS – NPDES WLA – MS4 WLA = LA
$5.27 \times 10^{12} - 1.40 \times 10^{12} - 1.35 \times 10^{11} - 3.73 \times 10^{11} = 3.36 \times 10^{12}$ cfu/day

References:

US EPA, 2002. "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs." Washington, D.C.

US EPA, 2008. TMDLs to Stormwater Permits Handbook (draft). Washington, D.C.

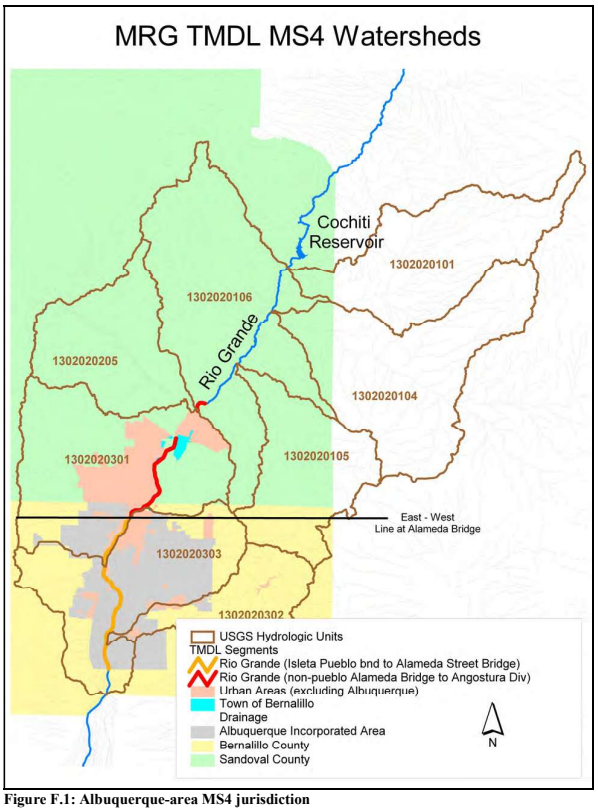

Figure F.1: Albuquerque-area MS4 jurisdiction

Table F.1: USGS Hydrologic Unit Code (HUC) areas

HUC	Total Area (sq mi)	Total Contributing Watershed Areas: Rio Grande (Isleta Pueblo bnd to Alameda Bridge)	Total Contributing Watershed Areas: Rio Grande (Alameda Bridge to Angostura Div)
1302020301- Arroyo de Las Calabacillas-Rio Grande	329.97	329.97	259
1302020303 - City of Albuquerque-Rio Grande	268.72	268.72	n/a
1302020302 - Tijeras Arroyo	131.74	131.74	n/a
1302020106 - Arroyo Tonque-Rio Grande	388.81	388.81	388.81
1302020101 - Santa Fe River	256.06	256.06	256.06
1302020205 - Lower Jemez River	192.60	192.60	192.60
1302020104 - Outlet Galisteo Creek	322.37	322.37	322.37
1302020105 - Arroyo Tonque	193.88	193.88	193.88
Totals	**2084.15**	**2084.15**	**1612.72**

Table F.2: Phase I MS4 WLA allocations

	Rio Grande (Isleta Pueblo bnd to Alameda Bridge)	Rio Grande (Alameda Bridge to Angostura Div)
Incorporated Area of the City of Albuquerque (sq mi)	180.88	7.2
Total contributing watershed area (see Table F.1)	2084.15	1612.72
Percent jurisdictional area	**8.68%**	**0.45%**

Table F.3: Phase II MS4 WLA allocations

	Rio Grande (Isleta Pueblo bnd to Alameda Bridge)	Rio Grande (Alameda Bridge to Angostura Div)
Urbanized Area within Rio Grande drainage excluding Albuquerque (sq mi)	29.53	79.35
Total contributing watershed area (see Table F.1)	2084.15	1612.72
Percent jurisdictional area	**1.42%**	**4.92%**

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542

In Reply Refer To: 07/02/2025 16:53:20 UTC
Project Code: 2025-0117076
Project Name: Albuquerque School of Excellence

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act as amended (16 USC 668-668(c)). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area, and to recommend some conservation measures that can be included in your project design.

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the ESA is to provide a means whereby threatened and endangered species and

the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA; 42 USC 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico State agencies. These lists, along with species information, can be found at the following websites.

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program: https://www.emnrd.nm.gov/sfd/rare-plants/

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html, integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

In addition to responsibilities to protect threatened and endangered species under the ESA, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 CFR 10.12 and 16 USC 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a Federal nexus) or a Bird/Eagle Conservation Plan (when there is no Federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds. We also recommend review of the Birds of Conservation Concern list (https://www.fws.gov/media/birds-conservation-concern-2021) to fully evaluate the effects to the birds at your site. This list identifies migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent top conservation priorities for the Service, and are potentially threatened by disturbance, habitat impacts, or other project development activities.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 thereby provides additional protection for both migratory birds and migratory bird habitat. Please visit https://www.fws.gov/partner/council-conservation-migratory-birds for information regarding the implementation of Executive Order 13186.

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico

Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State protected and at-risk species fish, wildlife, and plants.

For further consultation with the Service we recommend submitting inquiries or assessments electronically to our incoming email box at nmesfo@fws.gov, where it will be more promptly routed to the appropriate biologist for review.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
(505) 346-2525

PROJECT SUMMARY

Project Code: 2025-0117076
Project Name: Albuquerque School of Excellence
Project Type: Commercial Development
Project Description: Construction of a school
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.121709749999994,-106.70397979268996,14z

Counties: Bernalillo County, New Mexico

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Mexican Wolf *Canis lupus baileyi* Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3916 General project design guidelines: https://ipac.ecosphere.fws.gov/project/KWLZJKC6N5HWNFVA5JCR63NXO4/documents/generated/9162.pdf	Endangered
New Mexico Meadow Jumping Mouse *Zapus hudsonius luteus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7965 General project design guidelines: https://ipac.ecosphere.fws.gov/project/KWLZJKC6N5HWNFVA5JCR63NXO4/documents/generated/9163.pdf	Endangered

BIRDS

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911 General project design guidelines: https://ipac.ecosphere.fws.gov/project/KWLZJKC6N5HWNFVA5JCR63NXO4/documents/generated/9183.pdf	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee *Bombus suckleyi* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

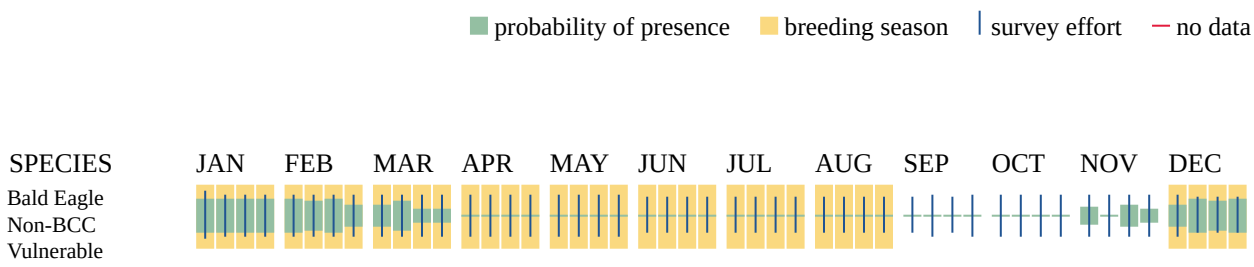
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

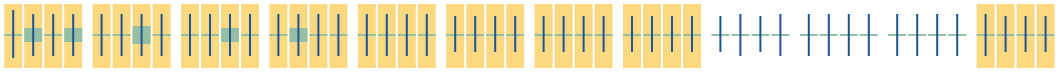
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Golden Eagle
Non-BCC
Vulnerable



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10

NAME	BREEDING SEASON
Black-chinned Sparrow *Spizella atrogularis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9447	Breeds Apr 15 to Jul 31
Broad-tailed Hummingbird *Selasphorus platycercus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11935	Breeds May 25 to Aug 21
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
Cassin's Finch *Haemorhous cassinii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10575	Breeds Jun 1 to Aug 31
Clark's Nutcracker *Nucifraga columbiana* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9421	Breeds Jan 15 to Jul 15
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9465	Breeds May 15 to Aug 10
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Grace's Warbler *Setophaga graciae* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9514	Breeds May 20 to Jul 20
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere

NAME	BREEDING SEASON
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Virginia's Warbler *Leiothlypis virginiae* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9441	Breeds May 1 to Jul 31
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

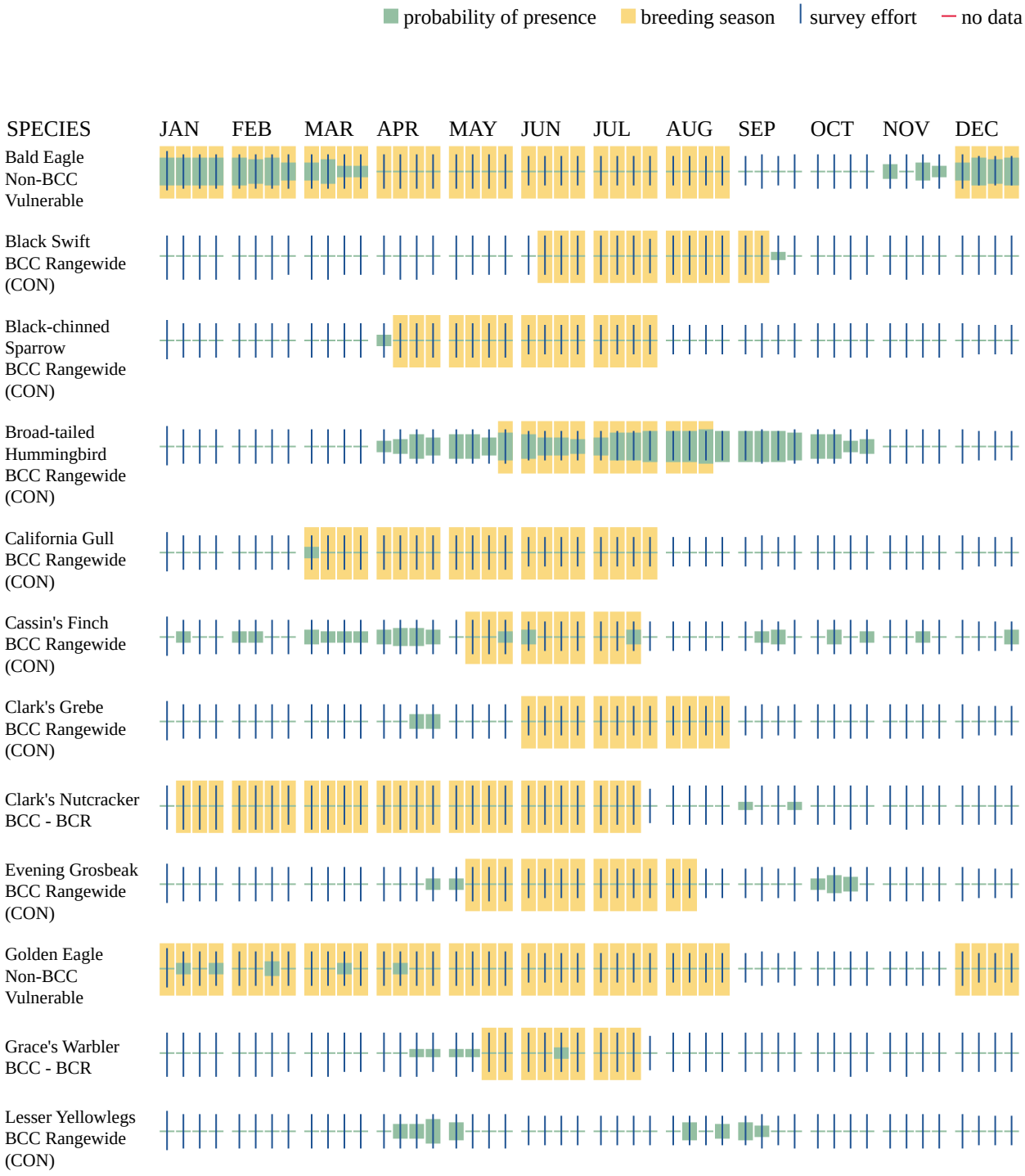
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

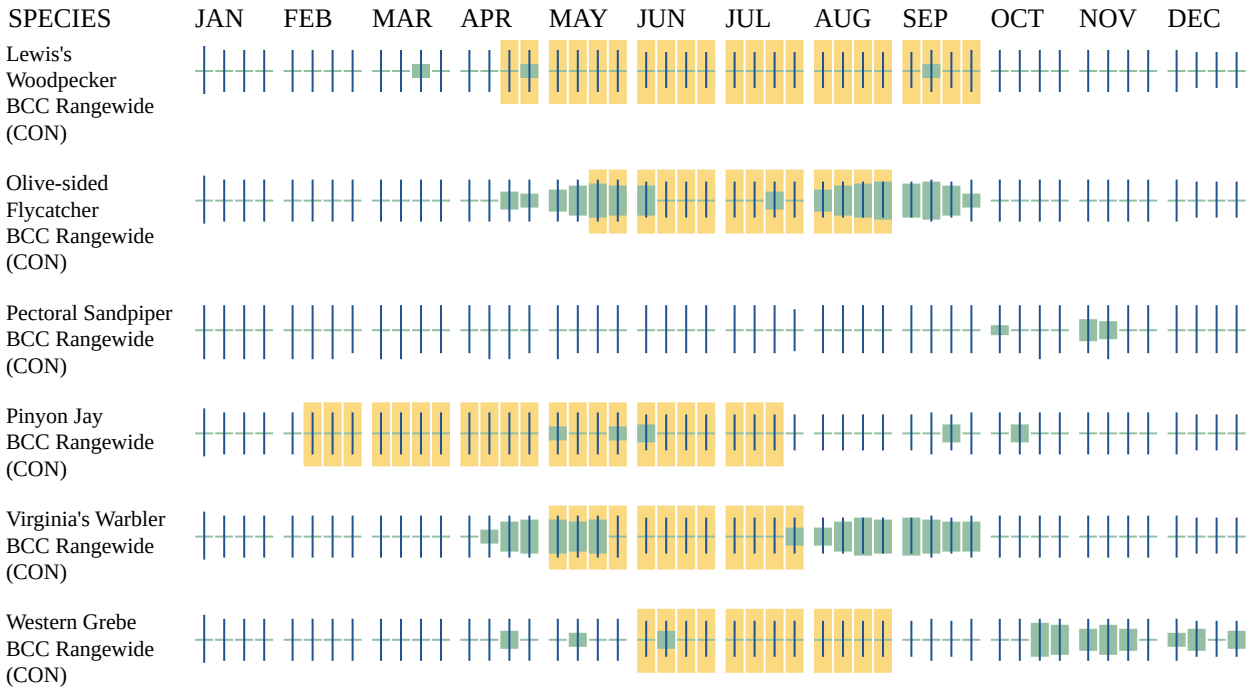
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

IPAC USER CONTACT INFORMATION

Agency:	Merit Professional
Name:	Melissa Singer
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Address Line 2:	Suite 2020
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