NATIONAL STORM WATER QUALITY PROGRAM STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FORMAT

Petroglyph Estates,
Unser Blvd NW and Kimmick Dr. NW
Albuquerque, NM, 87120
Bernalillo County

Prepared for: Pulte
Homes of New Mexico

7601 Jefferson NE
Suite 180, Albuquerque,
NM, 87109, Bernalillo
County

Prepared for Pulte Homes by:

_____ Date of Signature: _____

Approved by Pulte Homes:

_____ Approval Date: _____

Project Pre-Construction Detail Sheet

Project Name: Petroglyph Estates

Project Address or Cross Street Location: Unser Blvd and Kimmik Drive

City: Albuquerque State: NM County: Bernailillo Zip: _____

Latitude (if known): _____ Longitude (if known): _____

Estimated Start Date: 4/22/2021 Estimated Completion Date: 4/21/2021

Total Project Acres: _____ Total Disturbed Acreage: _____ Total Lots: 20

Type of Construction: ☐Commercial ☑Land Development ☐Home Building ☐Linear

Other: _____

Attached Lot List for Home Building SWPPP ○No ◉Yes

Is Project located on Federal or Indian Land? ☑No ☐ Yes Description: _____

Was a 404 Permit (wetlands, dredge/fill permit) required for project? ◉No ○ Yes

Offsite material staging / waste / import / stockpile ○No ◉Yes Description: import will be required

Is dewatering expected at this site? ◉No ○Yes

If so, where will excess water be discharged to? _____

Will Temp. Fencing be installed for duration of project? ◉No ○Yes

If so, please provide sketch or drawing of temp. fencing layout.

Will windscreen be used around Temp. Fencing? ◉No ○Yes

Operator Information:

Legal Name: Pulte LLC

Address: 7601 Jefferson St Suite320 City: Albuquerqeu State: NM Zip: _____

Phone #: 505-238-2857 Company Logo Attached for use on SWPPP ◉Yes ○No

Operator SWPPP Signatory (name, title): Kevin Patton, Director of Land Planning & Entitlements

Phone Number: 505-238-2857 Email: kevin.patton@pultegroup.com

Project On Site Contact Information: Operator SWPPP Responsible Person

Contact: Brian Anderson Title: Land Development PM

Cell Phone: 505-331-8711 Email: _____

Where will SWPPP be kept? On Site

Green Globe Environmental, LLC
PO Box 400 Los Lunas NM 87031
888-712-5120

Owners Information:

Legal Name:_____

Address:_____City:_____State:_____ Zip:_____

Owner SWPPP Signatory (name, title):_____

Phone Number:_____Email:_____

Permitting:

Do you need Green Globe Environmental to prepare your NOI/NOT?

☑Yes ☐No

☑Erosion and Sediment Control Plan (ESCP) - Required for projects in City of Albuquerque for grading and building permit approvals

Inspections:

Will Green Globe Environmental be performing the site inspections?

☑Yes List Inspection Start Date: 4/21/2020, should this date change for any reason, please communicate the new inspection start date to Green Globe Environmental.

If new inspection start date is not communicated, inspection fee will be charged for the listed start date above.

☐No - List Responsible party for inspections (name, address, phone, email)

Company:_____

Address:_____

Phone:_____Email:_____

Operator Responsible for Inserting Their Qualifications into SWPPP, field completion

BMP Installation and Maintenance

Company:_____

Contact:_____

Phone:_____Email:_____

Document Checklist:

Green Globe Environmental needs the following to accurately create a SWPPP - A plan showing general drainage patterns (contours), inlets, etc.

☐PDF copy of full construction plans OR ☐PDF copy of Erosion and Sediment Control Plans OR

☑PDF copy of Grading Plan OR ☐PDF copy of Drainage Plan

☐Landscape Plan

☐Proposed Schedule of Activity

Site/Construction Notes - Additional Details / Information:_____

_____

_____

_____ _____

Client Signature **Date**

Green Globe Environmental, LLC
PO Box 400 Los Lunas NM 87031
888-712-5120

Kevin Patton, Director of Land Planning and Entitlements

Printed Name & Title

By signing, you agree to allow Green Globe Environmental, LLC to prepare the stormwater pollution prevention plan for the above named project. In addition you agree that all information given is accurate and complete to the best of your knowledge, and Green Globe Environmental, LLC cannot be held responsible for inaccurate or incomplete information provided by the client.

Green Globe Environmental, LLC
PO Box 400 Los Lunas NM 87031
888-712-5120

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Section 1.0 Stormwater Pollution Prevention Plan Requirements

1.1 Introduction

The Stormwater Pollution Prevention Plan (SWPPP) is an integral part of the 2017 EPA Construction General Permit (CGP) and plays a crucial role in minimizing the pollution of stormwater runoff from Construction Sites. A properly prepared and implemented SWPPP assist developers and operators with meeting stormwater pollution prevention goals.

Your SWPPP is used to identify all potential pollution sources that could come into contact with stormwater leaving your site. It describes the BMPs you will use to reduce pollutants in your construction site's stormwater discharges, and it includes written records of any amendments, trainings, maintenance, and BMP locations.

1.2 Contact Information

Owner:
Pulte Homes of New Mexico
7601 Jefferson NE Suite 180
Albuquerque, NM 87109
Contact: Kevin Patton, Director of Land Planning & Entitlements, Kevin.Patton@PulteGroup.com
505-341-8591

Operator:
Pulte Homes of New Mexico
7601 Jefferson NE Suite 180
Albuquerque, NM 87109
Contact: Brian Anderson, Land Development PM, brian.anderson@PulteGroup.com
505-331-8711

BMP Installation/Maintenance
Superior Stormwater Services, LLC
PO Box 6507
Albuquerque, NM 87197
Contact: Tim Slatunas, tim@superiorstormwater.com
505-353-2558

Inspector/SWPPP Contact(s)
Green Globe Environmental, LLC
Inspector: Mario Alderete, mario@greenglobenm.com
PO Box 400
Los Lunas, NM 87103
505-301-0059
SWPPP Preparer: Mathew Vallejos, CPESC-IT, CISEC
505-304-8473

1.3 Notice of Intent

All "operators" (as defined in Appendix A) associated with your construction site, who meet the Part 1.1 eligibility requirements, and who seek coverage under this permit, must submit to EPA a complete and accurate NOI in accordance with the deadlines in Table 1.3 prior to commencing construction activities.

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.

Submitting Your NOI

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit your NOI for coverage under the 2017 CGP, unless you received a waiver from your EPA Regional Office. To access NeT, go to https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting.

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 J of the 2017 CGP.

Deadlines for Submitting Your NOI

Table 1.3 Deadlines for Submitting NOI

Type of Operator	NOI Submittal Deadline[7]	Permit Authorization Date[8]
Operator of a new site *(i.e., a site where construction activities commence on or after February 16, 2017)*	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 2012 CGP coverage where construction activities commenced prior to February 16, 2017)*	No later than **May 17, 2017**.	
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.	
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.

Source: 2017 Construction General Permit

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. https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting.

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 of the 2017 CGP.

1.4 Plan Certification

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 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 am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____

Signature

_____

Printed Name

_____

Title

1.5 SWPPP Availability

The SWPPP and any records required to be maintained by the 2017 EPA Construction General Permit (CGP) will maintained on-site at construction job trailer/office.

1.6 SWPPP Amendments

You must modify your SWPPP within 7 calendar days, including the site plan(s), in response to any of the following conditions:

1) Whenever new operators become active in construction activities on your site, or you make changes to your construction plans, storm water control measures, pollution prevention measures, 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 of the 2017 CGP. You do not need to modify your SWPPP if the estimated dates in Part 7.2.5 of the 2017 CGP change during construction.

2) To reflect areas on your site plan where operational control has been transferred (and the date of transfer) since initiating permit coverage.

3) If inspections or investigations by site staff, or by local, state, tribal, or federal officials determine that SWPPP modifications are necessary for compliance with this perm it;

4) Where EPA determines it is necessary to impose additional requirements on your discharge, the following must be included in your SWPPP:
   a. A copy of any correspondence describing such requirements; and
   b. A description of the storm water control measures that will be used to meet such requirements.

5) To reflect any revisions to applicable federal, state, tribal, or local requirements that affect the storm water control measures implemented at the site; and

6) 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) The SWPPP, including the Site plan, should be amended whenever there is a change in design, Construction, operation, or maintenance at the Site that has, or could have, a significant effect on the discharge of pollutants to "waters of the U.S." that has not been previously addressed in the SWPPP;

8) The SWPPP should be amended if during a Government Inspection or a Site Inspection by Pulte, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in storm water discharges from the Site;

9) Based on the results of an inspection, the SWPPP should be modified as necessary to include additional or modified BMPs designed to correct problems identified.

You must maintain records showing dates of all SWPPP modifications. The records must include name of the person authorizing each change and a summary of all changes. Upon determining that a modification to your SWPPP is required, if there are multiple operators covered under this permit, you must immediately notify and operators who may be impacted by the change to the SWPPP. Amendments and revisions to the SWPPP are documented in Appendix C "SWPPP Amendment Log".

1.7 Retention of Records

Records shall be retained and available for inspection for 3 years from the time the project is completed.

1.8 Notice of Termination

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 of the 2017 CGP.

Conditions for Terminating CGP Coverage

You must terminate CGP coverage only if one or more of the following conditions has occurred:

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 the following requirements:

a. For any areas that (1) were disturbed during construction, (2) are not covered over 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 2.2.14b;
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; 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 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 coverage under an individual or alternative general NPDES permit has been obtained.

How to Submit Your NOT

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit your NOT for the 2017 CGP. To access NeT, go to https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting.

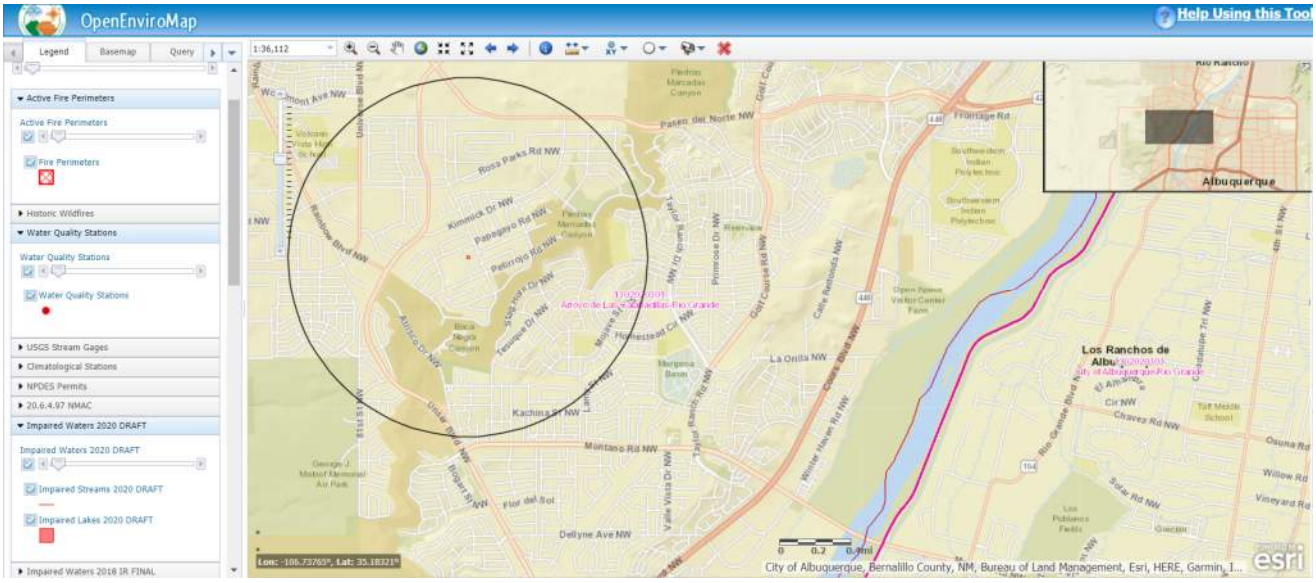
Waivers from electronic reporting may be granted as specified in Part 1.4.1. If the EPA Regional Office grants you approval to use a paper NOT, and you elect to use it, you must complete the form in Appendix K of the 2017 CGP.

1.9 U.S Water's and Endangered Species Description

U.S. Waters within 1 mile of Project's discharge point:

Project lays within the Arroyo de Las Calabacillas-Rio Grande watershed area. Nearest Receiving water is an the Boca Negro Arroyo 0.53 miles to the south eventually making its way to the Rio Grande (Tijeras Arroyo to Alameda Bridge), located 2.49 miles to the southeast of the site. See Figure 1.9.

Figure 1.9 U.S. Water's within 1 mile of Project



Source: NMED OpenEnviroMap Tool

Impairment/Tier Determination

Rio Grande (Tijeras Arroyo to Alameda Bridge) was last assessed in 2016 and is currently listed as impaired for Temperature, Dissolved Oxygen, and E. coli per the 2018-2020 State of New Mexico Clean Water Act 303(d)/305(b) Integrated Report (see Figure 1.9.1).

Rio Grande River is considered Tier 2 per Figure 1.9.2 Tier Determination Flowchart.

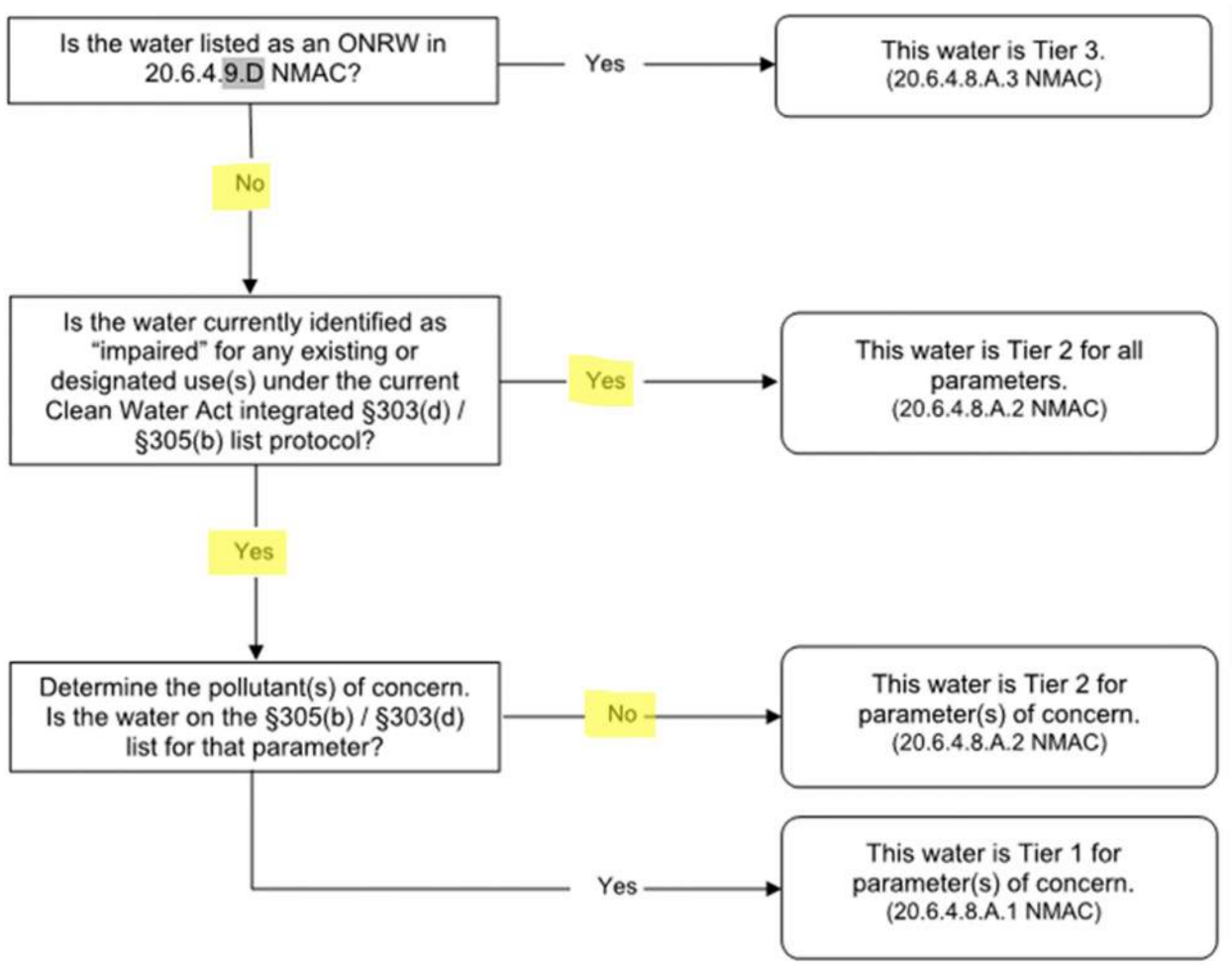
Figure 1.9.1 303(d)/305(b) Integrated Report

2018 - 2020 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated List.

Rio Grande (Tijeras Arroyo to Alameda Bridge)			AU IR CATEGORY	LOCATION DESCRIPTION	
			5/5C	HUC: 13020203	Rio Grande-Albuquerque
AU ID	**WQS REF**	**WATER TYPE**	**SIZE**	**ASSESSED**	**MONITORING SCHEDULE**
NM-2105_51	20.6.4.105	RIVER	11.81 MILES	2016	2023
USE	**ATTAINMENT**	**CAUSE(S)**	**FIRST LISTED**	**TMDL DATE**	**PARAMETER IR CATEGORY**
IRR	Fully Supporting				
LW	Fully Supporting				
MWWAL	Not Supporting	Temperature	2010	2019 (est.)	5/5A
		Dissolved oxygen	2008	2019 (est.)	5/5A
		PCBS - Fish Consumption Advisor	2010		5/5C
PC	Fully Supporting				
PWS	Not Assessed				
WH	Fully Supporting				
AU Comment: TMDL for E. coli. The "PCB in fish tissue" listing is based on NMs current fish consumption advisories for this water body. Per USEPA guidance, these advisories demonstrate non-attainment of CWA goals stating that all waters should be "fishable." Therefore, the impaired designated use is the associated aquatic life even though human consumption of the fish is the actual concern.					

Source: State of New Mexico 2018-2020 303(d)/305(b) Integrated Report

Figure 1.9.2 Tier Determination Flowchart



Source: State of New Mexico Continuing Planning Process

Description of MS4:
The storm runoff is managed by AMAFCA and City of Albuquerque. It is the Operator's responsibility to notify the MS4 that this site will discharge to their storm system during construction activities.

Endangered Species Documentation:
Are endangered or threatened species and critical habitats in the project area?
☐YES ☒NO

If yes, describe the species and/or critical habitat:

Criterion Used:
☒ A ☐ B ☐ C ☐ D ☐ E ☐ F

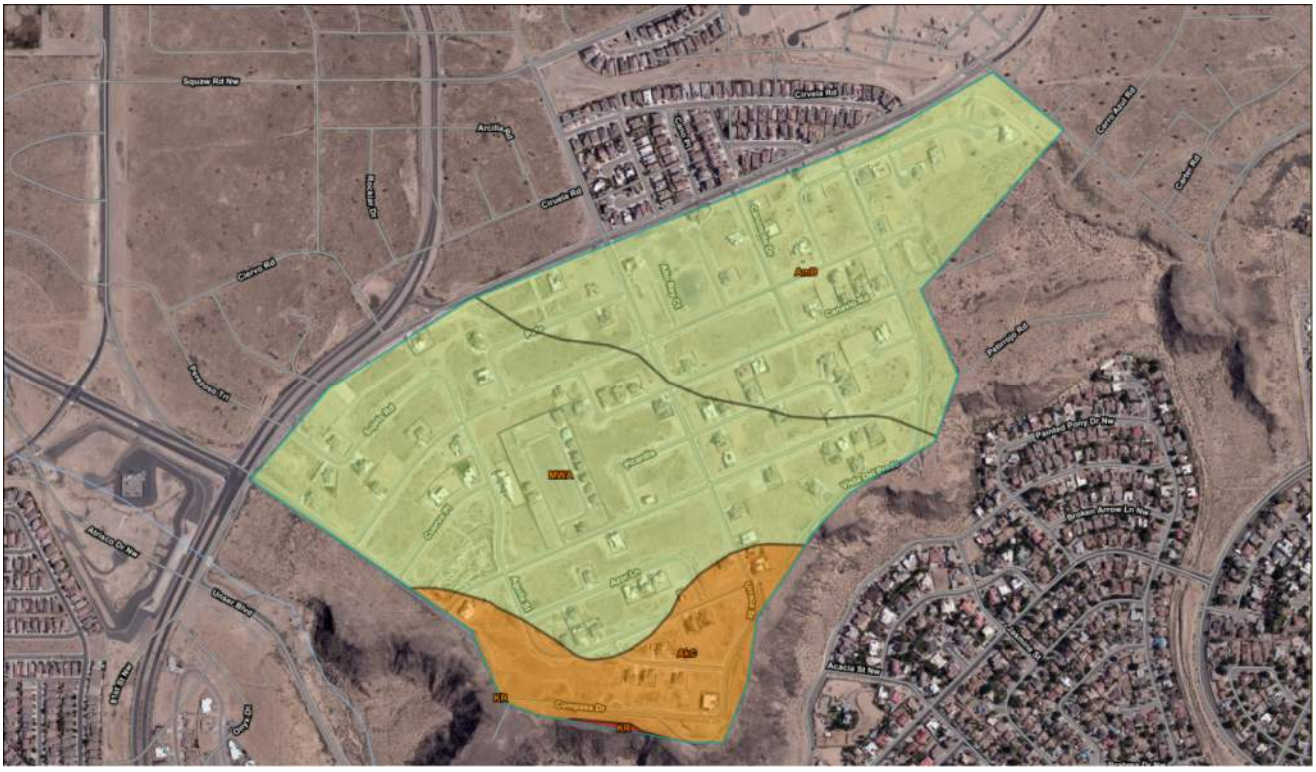
Basis: Per USFWS official list of threatened and endangered species, all threatened or endangered species critical habitat' are outside the project limits.

Determination of Endangered Species:
Fish and Wildlife Service species information, from on-line mapping tool IPaC (the Information, Planning, and Consultation System) located at http://ecos.fws.gov/ipac/ See appendix K for USDI and USFWS official correspondence.

1.10 Soils and Pre-Construction Cover

Soil Type (NRCS Web Soil Survey): Area of interest is considered primarily a combination of Madurez-Wink association, gently sloping and Alemeda sandy loam, 0 to 5 percent slopes. Having a k factor of 0.24. See Figure 1.10 below.

Figure 1.10 Area of Interest



Source: NRCS Web Soil Survey

Table 1.10 K Factor

Tables — K Factor, Whole Soil — Summary By Map Unit

Summary by Map Unit — Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico (NM600)

Summary by Map Unit — Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico (NM600)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AkC	Akela-Rock outcrop complex, 1 to 9 percent slopes	.10	29.3	12.5%
AmB	Alemeda sandy loam, 0 to 5 percent slopes	.24	87.7	37.5%
KR	Kokan-Rock outcrop association	.02	0.4	0.2%
MWA	Madurez-Wink associatin, gently sloping	.24	116.4	49.8%
Totals for Area of Interest			**233.7**	**100.0%**

Source: NRCS Web Soil Survey

Type and Extent of Pre-Construction Cover


Petirrojo


Petirrojo Rd

1.11 Slopes and Drainage Patterns

Pre-Construction Slopes:
Historical slopes of 0 to 5 percent primarily fall from west to east.

Post Construction Slopes:
Final slopes will be within historical slope range with an average slope of 1.0 percent falling from northwest to southeast.

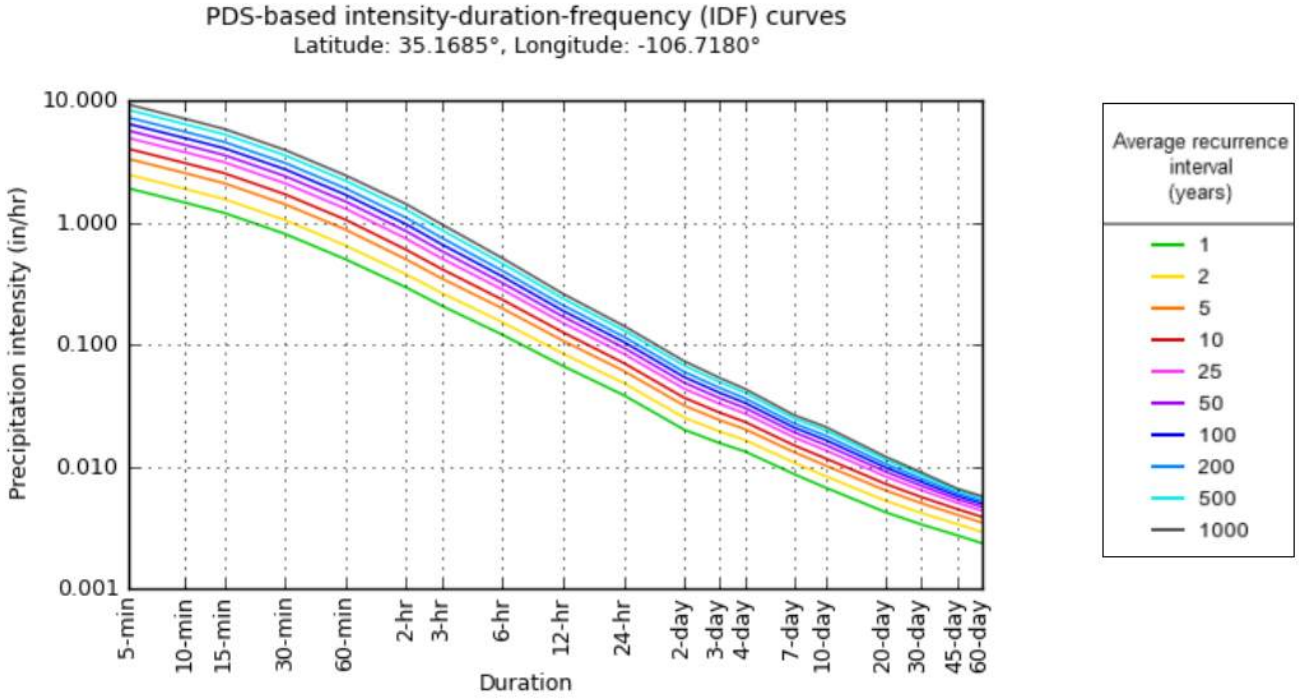
Drainage Patterns:
New drainage system will be installed with multiple drop inlets diverting storm water.

1.12 Erosion and Runoff

Rational Method (Runoff)
Utilizing the IDF Curve to identify Optimal Rainfall Intensity.

IDF Curve

Figure 1.12 Intensity-Duration-Frequency Graph



Source: NOAA Atlas 14 Point Precipitation Frequency Estimates

Optimum Precipitation Intensity for 5-year, 24 hr storm = 0.80 in/hr

Table 1.12.1 Rainfall Runoff Calculation Before Construction

Rainfall Runoff	
Q=CiA	
Q= Rate of runoff (cfs)	7.37219
C= Runoff coefficient	0.426
i= Rainfall intensity (in/hr)	0.08
A= Area of watershed (Acres)	216.32

Calculated Runoff Before Construction = 7.37 cfs

Table 1.12.2 Rainfall Runoff Calculation Post Construction

Rainfall Runoff	
Q=CiA	
Q= Rate of runoff (cfs)	7.4587136
C= Runoff coefficient	0.431
i= Rainfall intensity (in/hr)	0.08
A= Area of watershed (Acres)	216.32

Calculated Runoff After Construction = 7.45cfs

RUSLE Equation (Soil Loss)

A = R x K x LS x C x P (See table 1.12.3)

R = Rainfall Runoff Erosivity Factor (R – Factor Calculation, see figure 1.12.1)

K = Soil Erodibility Factor (NRCS Web Soil Survey)

LS = Slope Length Factor (LS Factors for Construction Sites, see table 1.12.4)

C = Cover Management Factor (See table 1.12.5)

P = Erosion Control Practice Factor

Figure 1.12.1 RUSLE R-Factor Calculation

Facility Information

Start Date: 04/22/2020	**Latitude:** 35.1682
End Date: 04/30/2022	**Longitude:** -106.7164

Calculation Results

Rainfall erosivity factor (R Factor) = **22.67**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an area where EPA is the permitting authority, you must submit a Notice of Intent (NOI) through the NPDES eReporting Tool (NeT).Otherwise, you must seek coverage under your state's CGP.

Source: EPA Rainfall Erosivity Factor Calculator

Table 1.12.3 LS Factors for Construction Sites

USDA-NRCS, NM Agronomy Technical Note 28, Page 19

Table 4 - Values for Disturbed Site Topographic Factor, LS, for high ratio of rill to inter-rill erosion.[3]

Slope	Horizontal slope length (ft)																
(%)	<3	4	9	12	15	25	50	75	100	150	200	250	300	400	600	800	1000
0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
0.5	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.09	0.09	0.10	0.10	0.10	0.11	0.12	0.12	0.13
1.0	0.09	0.09	0.09	0.09	0.09	0.10	0.13	0.14	0.15	0.17	0.18	0.19	0.20	0.22	0.24	0.26	0.27
2.0	0.13	0.13	0.13	0.13	0.13	0.16	0.21	0.25	0.28	0.33	0.37	0.40	0.43	0.48	0.56	0.63	0.69
3.0	0.17	0.17	0.17	0.17	0.17	0.21	0.30	0.36	0.41	0.50	0.57	0.64	0.69	0.80	0.96	1.10	1.23
4.0	0.20	0.20	0.20	0.20	0.20	0.26	0.38	0.47	0.55	0.68	0.79	0.89	0.98	1.14	1.42	1.65	1.86
5.0	0.23	0.23	0.23	0.23	0.23	0.31	0.46	0.58	0.68	0.86	1.02	1.16	1.28	1.51	1.91	2.25	2.55
6.0	0.26	0.26	0.26	0.26	0.26	0.36	0.54	0.69	0.82	1.05	1.25	1.43	1.60	1.90	2.43	2.89	3.30
8.0	0.32	0.32	0.32	0.32	0.32	0.45	0.70	0.91	1.10	1.43	1.72	1.99	2.24	2.70	3.52	4.24	4.91
10.0	0.35	0.37	0.38	0.39	0.40	0.57	0.91	1.20	1.46	1.92	2.34	2.72	3.09	3.75	4.95	6.03	7.02
12.0	0.36	0.41	0.45	0.47	0.49	0.71	1.15	1.54	1.88	2.51	3.07	3.60	4.09	5.01	6.67	8.17	9.57
14.0	0.38	0.45	0.51	0.55	0.58	0.85	1.40	1.87	2.31	3.09	3.81	4.48	5.11	6.30	8.45	10.40	12.23
16.0	0.39	0.49	0.56	0.62	0.67	0.98	1.64	2.21	2.73	3.68	4.56	5.37	6.15	7.60	10.26	12.69	14.96
20.0	0.41	0.56	0.67	0.76	0.84	1.24	2.10	2.86	3.57	4.85	6.04	7.16	8.23	10.24	13.94	17.35	20.57
25.0	0.45	0.64	0.80	0.93	1.04	1.56	2.67	3.67	4.59	6.30	7.88	9.38	10.81	13.53	18.57	23.24	27.66
30.0	0.48	0.72	0.91	1.08	1.24	1.86	3.22	4.44	5.58	7.70	9.67	11.55	13.35	16.77	23.14	29.07	34.71
40.0	0.53	0.85	1.13	1.37	1.59	2.41	4.24	5.89	7.44	10.35	13.07	15.67	18.17	22.95	31.89	40.29	48.29
50.0	0.58	0.97	1.31	1.62	1.91	2.91	5.16	7.20	9.13	12.75	16.16	19.42	22.57	28.60	39.95	50.63	60.84
60.0	0.63	1.07	1.47	1.84	2.19	3.36	5.97	8.37	10.63	14.89	18.92	22.78	26.51	33.67	47.18	59.93	72.15

[3] Such as for freshly prepared construction and other highly disturbed soil conditions with little or no cover (not applicable to thawing soil).

Source: USDA-NRCS, NM Agronomy Technical Note 28

Table 1.12.4 Cover management Factors

TYPICAL "c" COEFFICIENTS FOR 5- TO 10-YEAR FREQUENCY DESIGN STORMS	
Description of Area	**Runoff Coefficients**
Business	
· Downtown areas	0.70-0.95
· Neighborhood areas	0.50-0.70
Residential	
· Single-family areas	0.30-0.50
· Multi-units (detached)	0.40-0.60
· Multi-units (attached)	0.60-0.75
Residential (suburban)	0.25-0.40
Apartment dwelling areas	0.50-0.70
Industrial	
· Light areas	0.50-0.80
· Heavy areas	0.60-0.90
Parks and cemeteries	0.10-0.25
Playgrounds	0.20-0.35
Railroad yard areas	0.20-0.40
Unimproved areas	0.10-0.30
Streets	
· Asphalt	0.70-0.95
· Concrete	0.80-0.95
· Brick	0.70-0.85
Drives and walks	0.75-0.85
Roofs	0.75-0.95
Lawns—course textured soil (greater than 85 percent sand)	
· Slope: Flat (2 percent)	0.05-0.10
Average (2-7 percent)	0.10-0.15
Steep (7 percent)	0.15-0.20
Lawns—fine textured soil (greater than 40 percent clay)	
· Slope: Flat (2 percent)	0.13-0.17
Average (2-7 percent)	0.18-0.22
Steep (7 percent)	0.25-0.35
Source: *Design and Construction of Sanitary and Storm Sewers*, with permission from the publisher, American Society of Civil Engineers, *Manual of Practice*, page 37, New York, 1960.	

Source: U.S. EPA Interim Revised NPDES Inspection Manual 2017

Table 1.12.5 RUSLE Calculation Before Construction

RUSLE	
A = R*K*LS*C*P	
A = Average Soil Loss (tons/acre/year)	0.837339
R = Rainfall-runoff Erosivity Factor	22.67
K = Soil Erodibility Factor	0.24
LS = Slope-Length Factor	0.27
C = Cover Management Factor	0.57
P = Erosion Control Practice Factor	1

Table 1.12.6 RUSLE Calculation During Construction

RUSLE	
A = R*K*LS*C*P	
A = Average Soil Loss (tons/acre/year)	1.248664
R = Rainfall-runoff Erosivity Factor	22.67
K = Soil Erodibility Factor	0.24
LS = Slope-Length Factor	0.27
C = Cover Management Factor	0.85
P = Erosion Control Practice Factor	1

Table 1.12.7 RUSLE Calculation After Construction

RUSLE	
A = R*K*LS*C*P	
A = Average Soil Loss (tons/acre/year)	0.822649
R = Rainfall-runoff Erosivity Factor	22.67
K = Soil Erodibility Factor	0.24
LS = Slope-Length Factor	0.27
C = Cover Management Factor	0.56
P = Erosion Control Practice Factor	1

Section 2.0 Site and Activity Description

2.1 Site Description

Site Location

Project/Site Name: Petroglyph Estates Project Street/Location: Unser Blvd. NW and Kimmick Dr. NW

City: Albuquerque State: NM ZIP Code: 87120

County or Similar Subdivision: Bernalillo County

Acquired: ☐ Raw Land ☒ Finished Lots

Latitude/Longitude (Use one of three possible formats, and specify method)
Latitude: 35.16846 Longitude: -106.71797

Maximum Area to be Disturbed: 14.7 Acres

Method for determining latitude/longitude: Map

Is the project located in Indian country? ☐Yes ☒No

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." Not Applicable

Is this project considered a federal facility? ☐Yes ☒No

NPDES project or permit tracking number:_____

Nature of Construction Activity

This project consists of new residential home construction and land development. This SWPPP covers 37 lots, nearly 14.7 acres of the Petroglyph Estates Project. Pulte is responsible for home building and land development activities including earthwork, infrastructure, and vertical home building. The activities to occur onsite are consistent with residential home construction. If offsite soil borrow or waste areas are needed during construction, they will be identified in the field and are to be marked on the plan in the SWPPP. Refer to Appendix A for vicinity, site plan and BMP plan.

What is the function of the construction activity? ☒Residential (home building) ☐Commercial ☒Land Development ☐Industrial ☐Road Construction ☐Linear ☐Utility ☐Other (please specify): _____

Site Features and Sensitive Areas to be Protected

Description of unique features that are to be preserved: See the site SHPO Correspondence in Appendix L.

Historic Preservation

Are there any historic sites on or near the construction site?

☐Yes ☐No

Describe how this determination was made:

No historical or archeological sites were reported for the site by the owner or operator. See the site SHPO Correspondence in Appendix L.

2.2 Sequence of Proposed Construction Activities

Refer to Appendix E for Operator completed construction schedule.

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 discharge from the initial site clearing and grading, excavating and other earth disturbing activities.

Proposed sequence of major activities:

Estimated Project Start Date: 04/22/2020
Estimated Project Completion Date:04/30/2022

Start Date-Finish Date (dates to be marked on site plan by operator)	Construction Activity, BMPs, and location
Initial Phase	Pre-Site Grading 1. Install perimeter BMPs (silt fence, erosion control logs, downstream inlet protection, etc.) 2. Construct VTC. 3. Set up construction trailer, construction barrier, and material storage areas 4. Implement stabilization procedures where work is complete or ceases for 14 days (per section 2.2.14, 2017 CGP). Refer to SWPPP section 3.2.6. 5. Install sanitary facilities and dumpster
Interim Phase	Site Grading/ Building Construction I. Mass grade site 2. Construct utilities, infrastructure 3. Building, pavement construction 4. Implement stabilization procedures where work is complete or ceases for 14 days (per section 2.2.14, 2017 CGP). Refer to SWPPP section 3.2.6.
Final Phase	Final Stabilization 1. Implement stabilization procedures where work is complete or ceases for 14 days (per section 2.2.14, 2017 CGP). Refer to SWPPP section 3.2.6. 2. Prepare final seeding and landscaping 3. Monitor stabilized areas until final stabilization is reached 4. Remove temporary control BMPs and stabilize any areas disturbed by the removal

2.3 Potential Construction Site Pollutants

The following sources have been identified as potential pollutant generating activities for this site.

Material/Chemical	Expected Use Onsite	Storm water Potential Pollutants	Activity
Disturbed and Stored Soils	☒	Sediments and erosion potential	Any stockpiles and areas of where disturbance has taken place
Vehicle Track-Out	☒	Sediment leaving site	Site entrance/exit
Contaminated Soils	☒	Petroleum Products, Solvents	Vehicle/equipment leakage
Refrigerant or Coolants	☒		Vehicle/equipment leakage
Fertilizers	☒	Nitrogen, phosphorus	Newly Landscaped areas
Sanitary Toilets	☒	Bacteria, fecal matter	Movement/maintenance
Waste/Dumpsters	☒	Material and garbage waste	Movement/haul-off
Soil Stabilization Material	☒	Lime	
Asphalt/Concrete Batch Plants	☐	Limestone, silica, Oil, fly ash	
Fluorescent Light Bulbs	☒	Mercury, asbestos	Remove/replace light fixtures
Mastic, Glazing Compounds, Caulking, Floor Polish	☒	PCBs, asbestos	Roofing, HVAC, polishing
Pesticides, Insecticides, Herbicides	☐	Chlorinated hydrocarbons, carbamates, arsenic	Weed control, pest control
Adhesives	☒	Polymers, epoxies	Flooring
Curing Compounds	☒	Naphtha	Slab, C&G, Sidewalk, etc.
Paints, Stains	☒		Woodwork, wall finish
Dewatering	☐	Sediment transfer	Trenchwork, full depth construction
Wood Preservations	☒	Solvents	Woodwork, wood finish
Asphalt or Roofing Tar	☒	Petroleum products, aggregates	Roadwork, roofing
Fuel or Diesel	☒		Vehicle/equipment fueling
Significant Dust	☒	Surface to air sediment transfer, erosion	Dirt work, excavating, vehicle/equipment travel

2.4 Pre-Construction Photos


Papaya

Section 3.0 Control Measures/Management Practices

3.1 Schedule for BMP Implementation

Erosion Control: These BMPs are used to limit the amount and extent of erosion.

Sediment Control: Sediment control BMPs are designed to capture eroded sediments prior to their conveyance off site.

Procedural Control: These BMPs are related to construction access, staging, and management controls. Procedural practices are Best Management Practices used to reduce or eliminate the contribution of pollutants in storm water runoff; i.e. good housekeeping practices, litter, debris and chemical control, street sweeping, dust control, preventative maintenance practices, spill prevention, employee training, sanitary waste management, etc.

All existing vegetation on site should be maintained in place for as long as possible. Maintaining existing vegetation and existing vegetation buffer strips is one of the most effective storm water pollution prevention techniques.

All BMPs have been selected to reduce or eliminate storm water discharges associated with construction activities. The BMPs have been selected based on historical performance expectations, maintenance requirements, and effectiveness.

See Site and BMP plans in Appendix A of this SWPPP for BMP locations on site. See individual BMP details for descript ion, materials, installation and maintenance standards located in Appendix G.

Table 3.1 Erosion and Sediment Control BMPs and Phase (additional BMPs added or updated in the field are to be marked on the chart by the operator)

	Technique/BMP	Used Onsite	Selected to Control	Installation Phase(s)		
				Initial	Interim	Final
Permanent BMPs	Detention/Retention Pond	☒	Sediment	☐	☐	☐
	Storm Drain System	☒	Erosion	☐	☒	☒
	Sediment Traps	☐	Sediment	☐	☐	☐
	Gabions	☐	Erosion	☐	☐	☐
	Retaining Wall	☒	Erosion	☐	☒	☒
	Rock Outlet Protection	☐	Erosion	☐	☐	☐
	Vegetated Berm	☐	Erosion	☐	☐	☐
	Ditch Checks	☐	Erosion	☐	☐	☐
	Permanent Seeding, Landscaping, Xeriscaping	☒	Erosion	☐	☒	☒

	Diversion Dikes/Interceptor swales	☐	Erosion	☐	☐	☐
Temporary BMPs	Mulch	☐	Erosion	☐	☐	☐
	Seeding	☐	Erosion	☐	☐	☐
	Erosion Control Blanket/Mat	☐	Erosion	☐	☐	☐
	Hydro Seed	☐	Erosion	☐	☐	☐
	Tackifiers (PAM)	☐	Erosion	☐	☐	☐
	Fiber Roll, Sediment Control Logs	☐	Sediment	☐	☐	☐
	Dust Control	☒	Erosion	☒	☒	☒
	Maintain Existing Vegetation	☐	Erosion	☐	☐	☐
	Soil Cement (stabilize creek banks)	☐	Erosion	☐	☐	☐
	Silt Fence (as needed)	☒	Sediment	☒	☒	☒
	Reinforced Silt fence	☒	Sediment	☒	☒	☒
	Triangular Filter Fabric Fence	☐	Sediment	☐	☐	☐
	Wind Fence	☒	Sediment	☐	☐	☐
	Interceptor Swale	☐	Sediment	☐	☐	☐
	Diversion Dike	☐	Sediment	☐	☐	☐
	Sand/Gravel Bag Berm	☒	Sediment	☒	☒	☒
	Rock Dams /Berms/Checks	☒	Sediment	☐	☐	☐
	Velocity Dissipation Devices	☒	Erosion	☐	☐	☐
	Sediment Basin (use the detention pond as tempora1y sediment trap during construction)	☒	Sediment	☐	☐	☐
	Sediment Traps	☐	Sediment	☐	☐	☐
	Inlet Protection	☒	Sediment	☒	☒	☒
	Cut Back Curb	☒	Sediment	☒	☒	☒
	Stabilized Construction Entrance	☐	Sediment	☐	☐	☐
	Dewatering pit	☐	Sediment	☐	☐	☐
	Stabilized Staging Area	☒	Erosion	☒	☒	☐

3.2 Erosion and Sediment Controls

3.2.1 Erosion Controls

The following table list BMPs selected for erosion control on this site. Not all BMPs listed have been selected for this site at the time the SWPPP was prepared. The additional BMPs are listed in case it is determined they are needed during construction and can be checked off in the field as needed. If a BMP is not listed and is implemented, it can be written in at the bottom of the table. Update as changes occur. Refer to Appendix G for individual BMP specifications. The site plan in Appendix A shows the locations of the BMPs. Refer to section 3.1 for installation scheduling of the BMPs. Temporary or permanent stabilization must begin within 7 days (per NMED Tier I requirements) of cessation of ground disturbing activity.

Table 3.2.1 Erosion Controls

	Technique/BMP	Used Onsite	Selected to Control
Permanent BMPs	Storm Drain System	☒	**Erosion**
	Gabions	☐	**Erosion**
	Retaining Wall	☒	**Erosion**
	Rock Outlet Protection	☐	**Erosion**
	Vegetated Berm	☐	**Erosion**
	Ditch Checks	☐	**Erosion**
	Permanent Seeding, Landscaping, Xeriscaping	☒	**Erosion**
	Diversion Dikes/linterceptor swales	□	**Erosion**
Temporary BMPs	Mulch	☐	**Erosion**
	Seeding	☐	**Erosion**
	Bonded Fiber Matrix	☐	**Erosion**
	Erosion Control Blanket/Mat	☐	**Erosion**
	Hydro Seed	☐	**Erosion**
	Tackifiers (PAM)	☐	**Erosion**
	Dust Control	☒	**Erosion**
	Maintain Existing Vegetation	☐	**Erosion**
	Erosion Control Grass Sod/Mesh	☐	**Erosion**
	Soil Cement (stabilize creek banks)	☐	**Erosion**
	Velocity Dissipation Devices	☒	**Erosion**
	Pipe Slope Drain	☐	**Erosion**
	Stabilized Staging Area	☒	**Erosion**
		☐	

3.2.2 Sediment Controls

The following table list BMPs selected for sediment control on this site. Not all BMPs listed have been selected for this site at the time the SWPPP was prepared. The additional BMPs are listed in case it is determined they are needed during construction and can be checked off in the field as needed. If a BMP is not listed and is implemented, it can be written in at the bottom of the table. Update as changes as occur. Refer to Appendix G for individual BMP specifications. The site plan in Appendix A shows the locations of the BMPs. Refer to section 3.1 for installation scheduling of the BMPs. Temporary or permanent stabilization must begin within 7 days (per NMED Tier I requirements) of cessation of ground disturbing activity.

Table 3.2.2 Sediment Controls

	Technique/BMP	Used Onsite	Selected to Control
Permanent BMPs	Detention/Retention Pond	☒	Sediment
	Sediment Traps	☒	Sediment
		☐	Sediment
		☐	Sediment
		☐	Sediment
Temporary BMPs	Silt Fence	☒	Sediment
	Fiber Roll	☐	Sediment
	Stabilized Construction Entrance	☐	Sediment
	Reinforced Silt Fence	☒	Sediment
	Triangular Filter Fabric Fence	☐	Sediment
	Wind Screen	☐	Sediment
	Interceptor Swale	☐	Sediment
	Diversion Dike	☐	Sediment
	Hay Bale Dike	☐	Sediment
	Gravel Bag Inlet Protection	☒	Sediment
	Cut back Curb	☒	Sediment
	Dewatering Pit	☐	Sediment
	Sediment Basin	☒	Sediment
	Waste Containers w/ Cover	☒	Trash/Waste
		☐	Sediment
		☐	Sediment

3.2.3 Drainage and Velocity Dissipation Devices

Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. no significant changes in the hydrological regime of the receiving water). The locations of any dissipation devices are shown on the BMP plan. The velocity dissipation devices should be installed immediately after the outlet has been completed or in conjunction with completing the channel or culvert. Refer to the Appendix G for individual BMP specifications. The site plan in Appendix A shows the locations of the BMPs.

3.2.4 Wind Erosion Controls

Operator is responsible for mitigation of surface to air transport of particles caused by heavy winds by limiting the amount of disturbed area, keeping disturbed area moist while work is taking place and stabilizing the disturbed area as quickly as possible when work is completed.

3.2.5 BMPs to Minimize Off-Site Tracking

Vehicle tracking of sediments and the generation of dust shall be minimized, both on-site and off-site. Off-site tracking of sediments will be controlled using the site entrance pads as called for on the site plan. The pads will need to be cleaned periodically to maintain their effectiveness.

On-site dust control will be accomplished by spraying water or an approved dust suppressant on disturbed areas, dirt haul roads, and dirt roadways as determined. Vehicle access to the construction site will be limited to a controlled access point. Deliveries will be coordinated to reduce the tracking of sediments and debris on-site. Dry sweep streets as needed to reduce on- site tracking of sediment and to reduce dust on paved areas.

Driving on and off the site should be limited, such as using an employee parking area offsite, or located as close to the entrance as possible. Delivery of materials should be organized so that delivery trips are minimized, such as using centralized designated loading and unloading areas that eliminate or reduce trips at the site. Vehicle tracking control devices will be installed and maintained at all entry and exit points on the site. Sediments that are tracked offsite will be cleaned up immediately and returned to the site. Dry street sweeping is allowed. Using water that produces runoff to clean streets is not authorized. Refer to the Appendix G for individual BMP specifications. The site plan in Appendix A shows the locations of the BMPs.

3.2.6 Permanent Stabilization

Landscaping or xeriscaping will be installed as permanent site stabilization. Refer to the landscape plan for locations, installation and maintenance details.

Temporary vegetative cover on disturbed areas should be used to reduce erosion from both wind and water sources. Because of the complex climatic differences that exist throughout the state of New Mexico, seeding guidelines need to be tailored to specific natural resource areas of the state. The guidance of the U.S. Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS) shall serve as the basis for making seeding recommendations for
a site. NRCS Conservation Practice Standard and Specification Code 340, *Cover Crop,* shall serve as the preferred guide for seed species and rates, seeding methods, and seeding dates for construction projects in New Mexico.

3.2.6.1 Stabilization Deadlines

Total Amount of Land Disturbance Occurring At Any One Time[27]	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[28] in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;[29] and • Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.[30]

Total Amount of Land Disturbance Occurring At Any One Time[27]	Deadline
ii. **More than five acres (>5.0)**	• Initiate the installation of stabilization measures immediately[31] in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;[32] and • Complete the installation of stabilization measures as soon as practicable, but no later than seven (7) calendar days after stabilization has been initiated.[33]

***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. (2017 CGP, section 2.2.14.c).**

3.3 Non-Storm Water Management

Table 3.3 Authorized Non-Stormwater Discharges

Discharges from emergency fire-fighting activities
Fire hydrant flushings
Landscape irrigation
Water used to wash vehicles and equipment, if there is no discharge of soaps, solvents, or detergents used for such purposes
Water used to control dust
Potable water including uncontaminated water line flushings
External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (as defined in Appendix A of 2017 CGP)
Pavement wash waters provided spill 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 was waters directly into any water of the U.S., storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control.
Uncontaminated air conditioning or compressor condensate
Uncontaminated, non-turbid discharges of ground water or spring water
Foundation or footing drains where flows are not contaminated with process material such as solvents or contaminated ground water.
Construction dewatering water discharged in accordance with part 2.4 of 2017 CGP.

*Per part 1.2.3 of the 2017 Construction General Permit: 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.

3.3.1 Materials and Waste Management BMPs

All solid waste materials will be collected and disposed of into approved waste containers (dumpsters) located onsite. Dumpsters will be placed away from storm water conveyances and inlets or drains, and meet all federal, state, and municipal regulations. Covered or enclosed containers are recommended to reduce windblown debris and runoff from storm events. The locations and dates will be recorded on the site plan once they have been delivered. Waste will be collected and removed offsite for disposal at a schedule to ensure adequate onsite collection capacity. Only solid waste, litter and construction debris from the site will be deposited in the dumpster. No construction or waste material are permitted to be buried on-site. Personnel will be instructed, during training sessions, regarding the correct disposal of solid waste, litter and construction debris. The individual who manages day to day site operations will be responsible for seeing that these practices are followed.

Per 2.3.3.e of the 2017 Construction General Permit:

- Provide waste containers (e.g., dumpster, trash receptacle) of sufficient size and number to contain construction and domestic wastes.
- Keep waste container lids closed when not in use and close lids at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have 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).
- On business days, clean up and dispose of waste in designated waste containers.
- Clean up immediately if containers overflow.

As stated above for waste containers that do not have lids, Pulte Homes of New Mexico is to place

tarps over containers the night before any expected precipitation is to occur.

Waste containers will be installed once the materials storage area has been established and will be marked clearly on BMP map, refer to Appendix A.

3.3.2 Paint and Paint Waste Management

Paints, stains and sealants will be stored in labeled, sealed and leak proof containers and not exposed to storm events. Surfaces that are exposed to storm events will not be painted, stained or sealed during or immediately prior to a storm event. Care should be exercised to reduce or eliminate any over spray or over application. Tarps or other covering material may be used to protect the surrounding soils and vegetation during painting. Tarps and other covers will be removed and stored inside at the end of each day and prior to or during any storm event.
Painting, staining or sealing will not occur where materials can come into contact with runoff. A designated construction washout area will be provided and maintained onsite. Tools will be cleaned in the designated area. Wash out water is not to be released onsite outside of the construction wash out area.

3.3.3 Sanitary Waste Management

Temporary sanitary facilities (portable toilets) will be provided at the site throughout the construction phase. T heir location is marked on the site plan at the time they are delivered to the site. The portable toilets will be located away from a concentrated flow paths and traffic flow and be placed at least 20' from any storm inlet and be anchored to prevent tipping or blown over.

The portable toilets will be brought to the site once the staging area has been established. The locations of the sanitary toilets will be marked on the plan and updated if their location changes.

All sanitary waste will be collected from the portable facilities a minimum of once a week. The portable toilets will be inspected weekly for evidence of leaking holding tanks. Portable toilets with leaking holding tanks will be removed from the site and replaced with new portable toilets. Use licensed sanitary services to ensure facilities are always in working order.

3.3.4 Spill Prevention and Response

The spill prevention plan is an emergency plan to contain spills of dangerous, hazardous, or toxic wastes that mitigates environmental damage and provides prompt notice to proper authorities.

- Select a designated area for storage.
- All containers must be tightly sealed and labeled.

- Storage areas should be surrounded by a berm.
- Cleanup procedures should be clearly posted, and cleanup materials should be readily available.
- Storage area should be covered and lined with an impermeable liner.
- If a spill occurs, the source of the spill should be stopped as practicable.
- Dispose of any contaminated material in accordance with state or local requirements.
- DO NOT store chemical or hazardous substances within 50 feet of any receiving waters.

In the event of a spill of a hazardous substance, notify the National Response Center (NRC) at (800) 424-8802, the New Mexico Environment Department (NMED) at (505) 827-9329, and the local fire department.

3.3.5 Concrete Materials and Concrete Waste Management

Direct wash water into leak-proof container or leak-proof lined pit designed so that no overflows can occur due to inadequate sizing or precipitation. **DO NOT** dump liquid wastes in storm sewers or waters of the U.S. Locate any washout or cleanout activities as far away as possible from waters of the U.S. and stormwater inlets or conveyances, and designate areas to be used for these activities with proper signage and conduct such activities only in these areas.

3.3.6 Paving Operations Management

Paving will not occur during or immediately prior to storm events. Runoff from fresh pavement will be monitored to ensure no sheens or waste slurry runs off. If needed, absorption materials will be used to remove excess asphalt oils or waste slurry in runoff. Inlet protection should be in place prior to paving and replaced immediately after inlet area is paved. Curing compounds should only be applied in dry weather. Waste asphalt concrete will be removed and handled according to Section 3.3.5. Waste concrete and asphalt will be cleaned up immediately.

3.3.7 Management of Landscape Products

Bulk landscape products should be stored at the material staging area. Liquid landscape products including herbicides, pesticides and fertilizers are to be stored in labeled, sealed and leak proof containers. Products should be applied at the rate and amounts specified by the manufacture.

3.3.8 Vehicle and Equipment Cleaning

Equipment and vehicle washing will be performed off-site to the greatest extent possible at authorized wash facilities. If onsite washing occurs the following BMPs must occur:

- Use paved area dedicated to vehicle washing
- Ensure that inlet protection is provided if connected to a storm drain system Develop a cleanup plan (sweep or pick up soil)
- Prevent hazardous chemical leaks by properly maintaining vehicles and equipment Properly dispose of vehicle wastes and wash water

- Use CWA to clean trowels and mortar / cement waste.

Direct wash water to sanitary sewer systems or other treatment facilities, ensure that vehicle washing areas are impervious and are bermed. Use blowers or vacuums instead of water to remove dry materials from vehicles if possible. Because water alone can remove most dirt adequately, use high-pressure water spray without detergents at vehicle washing areas. If you must use detergents, avoid phosphate or organic based cleaners to reduce nutrient enrichment and biological oxygen demand in wastewater. Use only biodegradable products that are free of halogenated solvents. Clearly mark all washing areas and inform workers that all washing must occur in this area. Do not perform other activities, such as vehicle repairs, in the wash area.

Inspect and maintain wash area before each use. Remove debris and waste in the wash area prior to use.

3.3.9 Vehicle and Equipment Fueling, Maintenance, and Storage

Provide an effective means of eliminating the discharge of spilled or leaked chemicals, including fuels and oils, from these activities; If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR part 112 and Section 311 of the CWA. Ensure adequate supplies are always available to handle spills, leaks, and disposal of used liquids.

Use drip pans and absorbents under or around leaky vehicles. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements. 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.

3.3.10 Dewatering and Ponded Water Management

Construction dewatering will be contained in a sediment basin or sediment trap with a volume capable of holding the expected dewater amount or using a filter device (bags or berms) that traps sediment prior to discharge. Dewatering discharges will need to be monitored to ensure no sediment is released.

3.4 Post-Construction Stormwater Management Measures

Such practices may include but are not limited to: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on the site; and sequential systems (which combine several practices). Update as changes occur. Refer to Appendix G for individual BMP specifications. The site plan in Appendix A shows the locations of the BMPs. Refer to section 2.2 and 3.1 for installation scheduling of the BMPs. Refer to Appendix H for operator completed Post Construction Controls.

3.5 Compliance with State and Local Plans

The SWPPP complies with City of Albuquerque Public Works Department Road and Drainage Standards.

The SWPPP complies with the State of New Mexico Environment Department Surface Water Quality Bureau requirements.

The SWPPP complies with the 2017 EPA Construction General Permit for storm water discharges from construction activities.

This SWPPP complies with MS4 Permit NMS000l01 for the City of Albuquerque.

Section 4.0 Maintenance, Repair, And Inspection

4.1 Maintenance

All erosion and sediment control practices and other protective measures identified in the SWPPP must be maintained in effective operating condition. Proper selection and installation of BMPs and implementation of comprehensive Inspection and Maintenance procedures, in accordance with the SWPPP, should be adequate to meet this condition. BMPs that are not adequately maintained in accordance with good engineering, hydrologic and pollution control practices, including removal of collected sediment outside the acceptable tolerances of the BMPs, are no longer operating effectively and must be addressed in accordance with the requirements listed below. A specific timeline for implementing maintenance procedures is not included in this SWPPP because BMP maintenance is expected to be proactive, not responsive. Observations resulting in BMP maintenance activities can be made during a site inspection, or during general observations of site conditions. Refer to BMP details in Appendix G for specific maintenance actions for each BMP.

If through inspections the permittee determines that BMPs are not operating effectively, maintenance, repair or replacement must be performed before the next anticipated storm event or as necessary to maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable and consistent with the requirements of the 2017 EPA CGP. Action Items identified outside of normal inspection schedule should be addressed as soon as practicable.

Removal of Off-Site Accumulations of Sediment

If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency enough to minimize off-site impacts (e.g. fugitive sediment in street could be washed into storm sewers by the next storm event and/or pose a safety hazard to users of public streets).

Sediment Removal

Sediment must be removed from all BMPs (sediment traps, silt fences, sedimentation ponds, etc.) when design capacity has been reduced by 50%, or the sediments are visible over half the height of a BMP such as silt fences and sediment traps.

Litter, Construction Debris Removal

Litter, construction debris, and construction chemicals exposed to storm water shall be picked up prior to anticipated storm events (e.g. forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for storm water discharges (e.g. screening outfalls, picked up dailyy, etc.).

4.2 Storm Maintenance and Repair

Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery. BMPs will be maintained as needed to ensure they are in working order prior to a storm event.

When new BMPs are installed or BMPs are replaced, the SWPPP must be updated within 7 calendar days. After a storm event, prepare the site for the next storm event. To prevent health and safety hazards, remove mud in traffic areas and remove mosquito-breeding standing water. Clean mud and debris from silt fences and other BMPs. Clogged BMPs will not prevent pollutant releases during subsequent storm events, so clean, repair, or replace them as quickly as possible.

It is critically important that construction site operators pay attention to weather forecasts. To prepare for oncoming storms, the Operator should walk the construction site and ensure that BMPs are cleaned out and operating properly. They should verify that paint and other chemicals
are covered, and no oil spills are present. Operators should also visually inspect all BMPs when the site will be inactive for several days, such as weekends or holidays. This will help to prepare for rains that might occur when workers are off-site. Planning and preparation minimize the risk of on- or off-site property damage occurring because of inoperative or malfunctioning BMPs.

If during Construction, the temporary removal or alteration of a BMP is necessary to accomplish Construction or to protect health and safety, restoration of the BMP should be completed as soon as practicable and consistent with the requirements of the 2017 EPA CGP. Reasonable measures should be taken to prevent unauthorized discharges from the Site during the time that the BMP has been altered or removed, including, but not necessarily limited to, installing new or alternate BMPs where needed on the Site, and timing the removal or alteration of the BMP so that it occurs when precipitation is not forecasted.

4.3 Inspections

4.3.1 Person(s) Responsible for Inspections

The person(s) inspecting your site may be a person on your staff or a third party you hire to conduct site inspections. You are responsible for ensuring that the person who conducts inspections is a "qualified person."

"A qualified person" is 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" (2017 CGP).

The "qualified person" must provide current and up to date certifications to be kept within this

SWPPP.

4.3.2 Inspection Frequency

If the seasonally dry period or period in which drought is occurring, you may reduce the frequency of inspections to every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater. The reduced inspection schedule must be documented in the SWPPP with the beginning and ending dates of the seasonally dry period. However, during the monsoon seasons an inspection must occur at least once every 7 calendar and within 24 hours of a storm event producing 0.25 inches or greater.

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), instead of the inspection frequency specified in Part 4.2, you must conduct inspections in accordance with the following inspection frequencies: Once every seven (7) calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.

To determine if a storm event of 0.25 inches or greater has occurred on your site, check on-site rain gauge, located on Site SWPPP Sign.

4.3.3 Inspection Reporting

You must complete an inspection report within 24 hours of completing any site inspections to include the following:

- Inspection date
- Names and titles of personnel making inspection
- Summary of inspection findings, including any necessary maintenance or corrective actions.
- For storm events 0.25 inches or greater triggering a storm event inspection, include rain gauge reading.
- If it is determined it is unsafe to inspect any portion of the site, need specify reason it was deemed unsafe and location of uninspected area.

Each inspection report must be signed in accordance with Appendix I, Part I.11 of 2017 CGP and a copy of each inspection report must be kept on site or at an easily accessible location so that it can be made available upon request. All inspection reports completed for this site must be retained for at least 3 years from the date your permit coverage expires.

4.4 Corrective Actions

You must take corrective actions to address any of the following conditions identified at your site:

- A stormwater control needs repair or replacement.
- A stormwater control necessary to comply with the requirements of this permit was never installed or was installed incorrectly.
- Your discharges are causing an exceedance of applicable water quality standards or a prohibited discharge has occurred.

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. However, if the problem requires a new or replacement control or significant repair, it must be completed within 7 calendar days of the discovery. If the corrective cannot be made within 7 calendar days, it MUST be documented in the SWPPP why the correction could not be made in the allotted time and the updated timeline of when the corrective action is to be made.

Section 5.0 Training

The Pulte Storm Water Training Program includes: employee storm water training (i.e., storm water awareness training): Site Storm Water Representative training: and annual refreshing training. Training may be live or provided through electronic media. Every instructor presenting the Pulte Storm Water Training program should be either a Stormwater Consultant or a Storm Water Trained Pulte employee.

Pulte Employee Stormwater Training (i.e., Stormwater Awareness Training)
Employee storm water training should be provided to all Pulte employees who, in the field at a Site, primarily and directly supervise (or who primarily and directly assist in the supervision of) construction activity at a Site and who are not covered by Site Storm Water Representative training (see below). Pulte employees must complete the employee storm water training within 30 days of beginning work at a Site. The employee storm water training program may be the same as the Site Storm Water Representative training program.

Site Storm Water Representative Training
Site Storm Water Representative training should be provided to all Pulte Site Storm Water Representative and any Designee of such representative, who is a Pulte employee. To be certified as Stormwater Trained, all Site Storm Water Representative training and Designees, who are Pulte employees, must complete the Site Storm Water Representative Training and pass a written, on- line, or computer-based test. All Site Storm Water Representative and Designees should be certified as Stormwater Trained prior to being a designated Stormwater Compliance Representative or Designee at a site. The certification is valid for up to 15 months.

Annual Refresher Training
Each previously certified Pulte Site Storm Water Representative and Pulte Employee Designee (who continue to work as Site Storm Water Representative or Designees) should complete annual refresher training and pass a written test. The renewal certificate is valid for up to 15 months. All Pulte Site Storm Water Representative and Pulte Employee Designees should maintain a current certification to continue to perform their Stormwater Representatives.

Prior to the commencement of earth-disturbing activities or pollutant-generating activities, whichever occurs first, permittee must ensure that the following personnel understand the requirements of this permit and their specific responsibilities with respect to those requirements:

- Personnel who are responsible for the design, installation, maintenance,

and/or repair of storm water controls (including pollution prevention measures);
- Personnel responsible for the application and storage of treatment chemicals (if applicable);
- Personnel who are responsible for conducting inspections; and
- Personnel who are responsible for taking corrective actions.

Permittee is 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, but you must ensure that such personnel understand any requirement s of the permit that may be affected by the work they are subcontracted to perform.

5.1 Pulte Training Certificates:

Section 6.0 Trade Contractor Compliance

Stormwater Orientation Program

Prior to each Listed Contractor (see reference list below) or Stormwater Consultant beginning work for Pulte, Pulte should provide the following information either by posting on an internet site or otherwise delivering to each Listed Contractor or Stormwater Consultant; an overview of Pulte' s stormwater program; information explaining how to contact a Site Storm Water Representative; and, a description of the potential consequences for failure to comply with Storm Water Requirements.

No later than 7 days after the Stormwater Pre-Construction Review Form is signed, a sign should be erected at a conspicuous location at the site, such as the site entrance or exit. The sign should include the following information: Identification and contact information for the Site Stormwater Representative(s); Pulte' s compliance expectations; how to obtain additional stormwater compliance information; and, the potential consequences of non-compliance.

This information may be provided to Listed Contractors or Stormwater Consultants by an alternative means of delivery.

Contractor and Stormwater Consultant Compliance

The applicable Pulte "Trade Sheets" should be provided to each Listed Contractor or Stormwater Consultant prior to their commencement of work for Pulte. The Trade Sheets should be provided either by posting on an internet site or other means of delivery.

Listed Contractors include:

1. Earthmoving Contractors
2. Storm Drain Installation Contractors
3. Water and Sewer Installation Contractors
4. Paving Contractors (including curb and gutter installation)
5. Masonry Contractors
6. Interior and Exterior Painting and Staining Contractors
7. Stucco Contractors
8. Landscape Installation Contractors
9. Framing/ Siding Contractors
10. Drywall Contractors
11. Portable Toilet Contractors

Pulte requires that Listed Contractors and Stormwater Consultants:

(i) comply with the EPA 2017 Construction General Permit and with

instructions by Pulte's Site Storm Water Representative to comply with Stormwater Requirements;

(ii) circulate the Pulte Trade Sheets to their employees and sub-contractors who will be working at the Site;

(iii) designate a Contractor Representative or Stormwater Consultant Representative, respectively, with the authority to oversee, instruct, and direct their respective employees and subcontractors at a Site regarding compliance with Stormwater Requirements

(iv) contact a Site Storm Water Representative(s) to obtain any additional storm water compliance information;

(v) be informed of the consequences for failure to comply with the EPA 2017 Construction General Permit (i.e., through master contracts); and,

(vi) where storm water compliance information is provided through an internet site (provided by Pulte), the Listed Contractor Representative or Storm Water Consultant Representative should review the posted information.

Update the "Responsible Parties and Contractors" list in Appendix I as appropriate throughout the Construction process.

Appendices

Appendix A Vicinity Map, Site Map, BMP Map

Appendix B Construction General Permit and Blank Forms

Appendix C SWPPP Amendment Log

Appendix D Documentation of Permit Eligibility Related to Total Maximum Daily Loads

Appendix E Construction Schedule

Appendix F Construction Activities and Associated Pollutants

Appendix G BMP Reference Sheets

Appendix H Description of Post-Construction BMPs

Appendix I Responsible Parties and Contractors

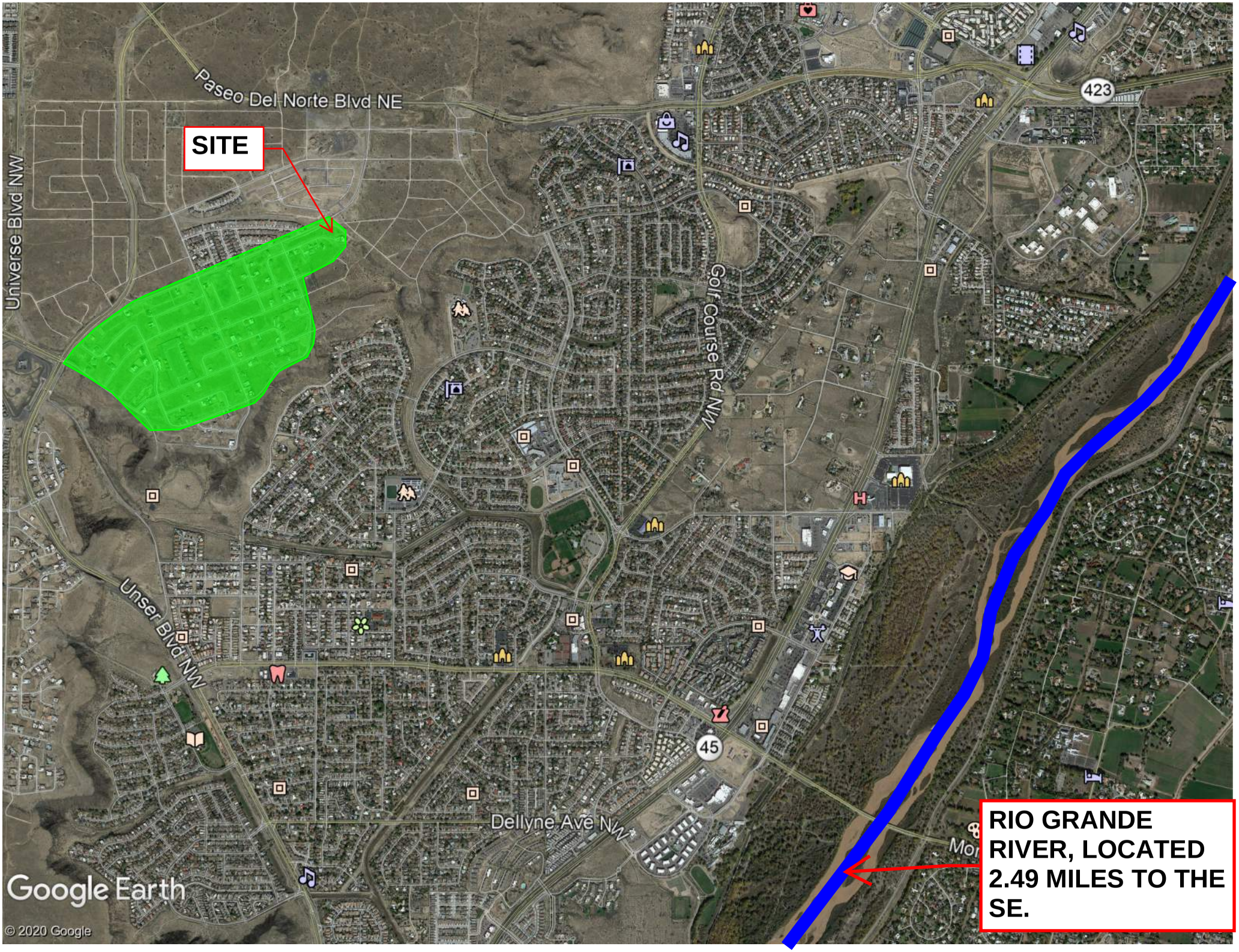
Appendix J Completed Site Inspection Reports

Appendix K USFWS Official List of Threatened and Endangered Species

Appendix L Site SHPO Correspondence

Appendix M Spill Response and Reporting Form

Appendix A
Vicinity Map, Site Map, BMP Map


Paseo Del Norte Blvd NE
SITE
Universe Blvd NW
Golf Course Rd NW
423
Unser Blvd NW
45
Dellyne Ave NW
RIO GRANDE RIVER, LOCATED 2.49 MILES TO THE SE.
Google Earth
© 2020 Google

Appendix B
Construction General Permit

Appendix C
SWPPP Amendment Log

SWPPP AMENDMENT LOG

PROJECT NAME:

SWPPP CONTACT:

AMENDMENT NO.	DESCRIPTION OF THE AMENDMENT	DATE OF AMENDMENT	AMENDMENT PREPARED BY NAME(S) AND TITLE

SWPPP AMENDMENT LOG

PROJECT NAME:

SWPPP CONTACT:

AMENDMENT NO.	DESCRIPTION OF THE AMENDMENT	DATE OF AMENDMENT	AMENDMENT PREPARED BY NAME(S) AND TITLE

Appendix D
TMDL Documentation

Rio Grande (Tijeras Arroyo to Alameda Bridge)			AU IR CATEGORY	LOCATION DESCRIPTION	
			5/5C	HUC: 13020203 Rio Grande-Albuquerque	
AU ID	**WQS REF**	**WATER TYPE**	**SIZE**	**ASSESSED**	**MONITORING SCHEDULE**
NM-2105_51	20.6.4.105	RIVER	11.81 MILES	2016	2023
USE	**ATTAINMENT**	**CAUSE(S)**	**FIRST LISTED**	**TMDL DATE**	**PARAMETER IR CATEGORY**
IRR	Fully Supporting				
LW	Fully Supporting				
MWWAL	Not Supporting	Temperature	2010	2019 (est.)	5/5A
		Dissolved oxygen	2008	2019 (est.)	5/5A
		PCBS - Fish Consumption Advisory	2010		5/5C
PC	Fully Supporting				
PWS	Not Assessed				
WH	Fully Supporting				

AU Comment: TMDL for E. coli. The "PCB in fish tissue" listing is based on NMs current fish consumption advisories for this water body. Per USEPA guidance, these advisories demonstrate non-attainment of CWA goals stating that all waters should be "fishable." Therefore, the impaired designated use is the associated aquatic life even though human consumption of the fish is the actual concern.

Rio Grande (non-pueblo Alameda Bridge to HWY 550 Bridge)			AU IR CATEGORY	LOCATION DESCRIPTION	
			5/5A	HUC: 13020203 Rio Grande-Albuquerque	
AU ID	**WQS REF**	**WATER TYPE**	**SIZE**	**ASSESSED**	**MONITORING SCHEDULE**
NM-2105.1_00	20.6.4.106	RIVER	11.74 MILES	2016	2023
USE	**ATTAINMENT**	**CAUSE(S)**	**FIRST LISTED**	**TMDL DATE**	**PARAMETER IR CATEGORY**
IRR	Fully Supporting				
LW	Not Supporting	Gross Alpha, Adjusted	2012	2019 (est.)	5/5A
MWWAL	Not Supporting	Polychlorinated Biphenyls (PCBs)	2012	2019 (est.)	5/5A
		PCBS - Fish Consumption Advisory	2010		5/5C
PC	Fully Supporting				
PWS	Not Assessed				
WH	Not Supporting	Polychlorinated Biphenyls (PCBs)	2012	2019 (est.)	5/5A

AU Comment: TMDL for E. coli (2010). The "PCB in fish tissue" listing is based on NMs current fish consumption advisories for this water body. Per USEPA guidance, these advisories demonstrate non-attainment of CWA goals stating that all waters should be "fishable." Therefore, the impaired designated use is the associated aquatic life even though human consumption of the fish is the actual concern.

Appendix E
Construction Schedule

Table E1: Construction Schedule

Construction Activity Milestones		
Section I: Pre-Site Disturbance Checklist (Provide information below as tasks are completed)	**Completed**	**Initials**
Has a Master Site List ID Number been obtained? If so, list number below. **MSL ID =** _____	☐	
Has a SWPPP been prepared in accordance with the Pulte Format (Table of Contents) and Applicable Permit (e.g., CGP or Individual Permit)?	☐	
Has one primary SSWR with current Pulte Storm Water Manager Training and State/Local Certification (if required) been assigned to the Site?	☐	
If a Third-Party Consultant will be completing Site Inspections…Has the Third-Party Consultant met the State/Local Inspector Certification requirement (if required)? If not applicable…please indicate at the column to the right.	☐	
Provide "actual" dates below. Do NOT provide estimated dates based on forecasted schedule.	**Start Date**	**Completion Date**
Date Notice of Intent (NOI) was submitted to the permitting authority		
Effective date of permit coverage (This date must be consistent with the Site-specific effective date included in the acknowledgement letter/Notice of Coverage letter from the permitting authority, if applicable)		
Installation of initial Erosion and Sediment Control BMPs per Applicable Permit/Local requirements (e.g., CGP)		
1. Perimeter Silt Fence		
2. Stabilized Construction Entrances		
3. Other:		
4. Other:		
5. Other:		
6. Other:		
UPON COMPLETION OF SECTION I, FORWARD A COPY TO THE DCE. **DO NOT COMMENCE SITE DISTURBANCE UNTIL THIS TABLE HAS BEEN RECEIVED/REVIEWED.**		

Table E1: Construction Schedule

Section II: Site Disturbance Activities 1. If Site Disturbance Activities were completed "by others" (e.g., Pulte is purchasing Finished Lots), indicate that in the columns to the right. 2. As applicable, complete a separate Section II (Site disturbance activities table) for each phase, section, pod, etc. indicate phase, section, pod below: **Phase, Section, Pod = _____**	**Start Date**	**Completion Date**
Clearing and Grubbing		
Demolition		
Mass Grading – see BMP Map for installation dates of storm water management facilities		
Installation of "Wet" and/or "Dry" Utilities:		
1.		
2.		
3.		
4.		
5.		
Dates and Locations when Land Development/Construction Activities Temporarily Cease:		
1.		
2.		
3.		
4.		
Paving Activities		
Vertical Construction		
Final Stabilization:		
1.		
2.		
3.		
Landscaping		
Date Notice of Termination (NOT) was submitted to the permitting authority		

Appendix F

Construction Activity and Associated Pollutants

PROPRIETARY PULTE MATERIAL

Table F1: Construction Types & Work Activities. Checked activities are expected to occur on site.

Construction Type	Associated Work Activity/Products with Potential to Contribute to Storm Water Pollution	
☐ Demolition	Grading/Earthwork (includes disturbance of contaminated soil), HVAC (removal), Insulation removal, Planting/Vegetation Management (removal)	Sanitary Waste, Solid Waste, Vehicle and Equipment Use
☐ Grading/Utility Installation (trenching and pipe laying)	Adhesives, Grading/Earthwork, Planting/Vegetation Management (removal)	Solid Waste, Utility Line testing and Flushing, Vehicle and Equipment Use
☐ Paving (streets, curbs, sidewalks)	Asphalt (paving/curbs), Grading/Earthwork (finish), Liquid Waste (equipment rinsing; street cleaning), Concrete /Masonry (paving/curbs)	Painting (street striping), Sanitary Waste, Solid Waste, Vehicle and Equipment Use.
☐ Structure Construction (residential, commercial, or industrial development)	Adhesives, Cleaners, Concrete/Masonry, Drywall, Earthwork (for foundations), Framing/Carpentry, HVAC, Insulation	Liquid Waste, Painting, Plumbing, Pools/Fountains, Roofing, Sanitary Waste, Solid Waste, Vehicle and Equipment Use.
☐Landscaping	Adhesives, Liquid Waste, Planting/Vegetation Management, (pesticides/herbicides), Sanitary Waste	Soil Preparation (use of soil additives/amendments), Solid Waste (includes vegetation), Vehicle and Equipment Use.

Table F2: Construction Site Work Activities & Associated Potential Pollutants. Checked materials are expected to be used on site.

General Work Activity/Products with Potential Storm Water Pollutants	Specific Work Activity/Products with Potential Storm Water Pollutants	Associated Visible Indicator	Associated Non-Visible Potential Pollutants
☐ Adhesives	☐Adhesives, glues, resins, epoxy synthetics, PVC Cement ☐ Caulks, sealers, putty, sealing agents ☐ Coal tars (naphtha, pitch)	Oil sheen or other discoloration form some products	Phenolics, formaldehydes, asbestos, benzene, phenols and naphthalene.
☐ Asphalt (paving/curbs)	☐ Hot and cold mix asphalt	Oil sheen.	Oil, petroleum distillates.
☐ Cleaners	☐ Polishes (metal, ceramic, tile). ☐ Etching agents ☐ Cleaners, ammonia, lye, caustic sodas, bleaching agents and chromate salts.	Discoloration/plume from some products.	Metals, acidity/alkalinity, chromium.
☐ Concrete/Masonry	☐ Cement and brick dust ☐ Colored chalks ☐ Concrete curing compounds ☐ Glazing Compounds ☐ Surface cleaners ☐ Saw cut slurries ☐ Tile cutting	Discoloration/plume from some products.	Sediments, acidity, metals, asbestos, particulates.
☐ Drywall	☐ Saw-cutting drywall	Discoloration/plume from drywall dust.	Copper, aluminum, sediments, minerals, and asbestos.
☐ Framing/Carpentry	☐ Sawdust, particle board dust, and treated woods. ☐ Saw cut slurries	Sawdust, slurry plume	BOD, formaldehyde, copper and creosote.
☐ Grading/Earthwork	☐ Blasting ☐ Dewatering ☐ Grading activities ☐ Vegetation removal ☐ Disturbance of contaminated soil.	Sediment discharge/plume, non-storm water discharges, vegetation debris	Soil amendments (gypsum, lime), historic soil contaminants
☐ Heating, Ventilation, Air Conditioning (HVAC)	☐ Demolition or Construction of air condition and heating systems.	None	Asbestos, Freon

PROPRIETARY PULTE MATERIAL

Table F2: Construction Site Work Activities & Associated Potential Pollutants (cont.). Checked materials are expected to be used on site.

General Work Activity/Products with Potential Storm Water Pollutants	Specific Work Activity/Products with Potential Storm Water Pollutants	Associated Visible Indicator	Associated Non-Visible Potential Pollutants
☐ Insulation	☐ Demolition or Construction involving insulation, venting systems	None	Asbestos, aluminum, zinc
☐ Liquid Waste	☐ Wash Waters ☐ Irrigation line testing/flushing	Non-storm water discharges, detergents, sediment, oily sheen, concrete rinse or other plume	See non-visible pollutants listed in other categories
☐ Painting	☐ Paint thinners, acetone, methyl ethyl ketone, stripper paints, lacquers, varnish, enamels, turpentine, gum, spirit, solvents, dyes, stripping pigments and sanding.	Paint plume	VOCs, metal, phenolics and mineral spirits.
☐ Planting/Vegetation Management	☐ Vegetation control (pesticides/herbicides) ☐ Planting ☐ Plant maintenance ☐ Vegetation Removal	Mulch, sediment, vegetation.	BOD, fertilizers, pesticides, herbicides, nutrients (nitrogen, phosphorus, and potassium) acidity/alkalinity, metals, aluminum sulfate, sulfur.
☐ Plumbing	☐ Solder (lead, tin), flux, (zinc, chloride), pipe fitting ☐ Galvanized metal in nails, fences, and electric wiring	None	Lead, copper, zinc, and tin.
☐ Pools/Fountains	☐ Chlorinated	Non-storm water discharges	Chlorine or other disinfectant.
☐ Removals of Existing Structures	☐ Demolition of asphalt, concrete, masonry, framing, roofing, metal structures	Sediment, other particulates	Toxics (paint strippers, solvents, adhesives), trace metals (galvanized metal, painted surfaces, preserved wood)

PROPRIETARY PULTE MATERIAL

Table F2: Construction Site Work Activities & Associated Potential Pollutants (cont.). Checked materials are expected to be used on site.

General Work Activity/Products with Potential Storm Water Pollutants	Specific Work Activity/Products with Potential Storm Water Pollutants	Associated Visible Indicator	Associated Non-Visible Potential Pollutants
☐ Roofing	☐ Flashing ☐ Saw cut slurries (tile cutting) ☐ Shingle scrap and debris	Debris, slurry plume	Oil, petroleum distillates
☐ Sanitary Waste	☐ Portable Toilets ☐ Disturbance of existing sewer lines	Visible sanitary waste	Bacteria, BOD, pathogens
☐ Soil Preparation/Amendments	☐ Use of soil additives/amendments	Mulch, sediment	Soil amendments
☐ Solid Waste	☐ Litter, trash and debris ☐ Vegetation	Plastic, paper, cigarettes, wood products, steel, vegetation waste, etc.	
☐ Utility Line Testing and Flushing	☐ Hydrostatic test water ☐ Pipe flushing	Non-storm water discharge, sediment	Chlorine
☐ Vehicle and Equipment Use	☐ Equipment operation ☐ Equipment maintenance ☐ Equipment washing ☐ Equipment fueling	Oil sheen, sediment	Total petroleum hydrocarbons, coolants, benzene and derivatives

Appendix G
BMP Reference Sheets

Silt Fence Detail

Non-woven Silt Fence

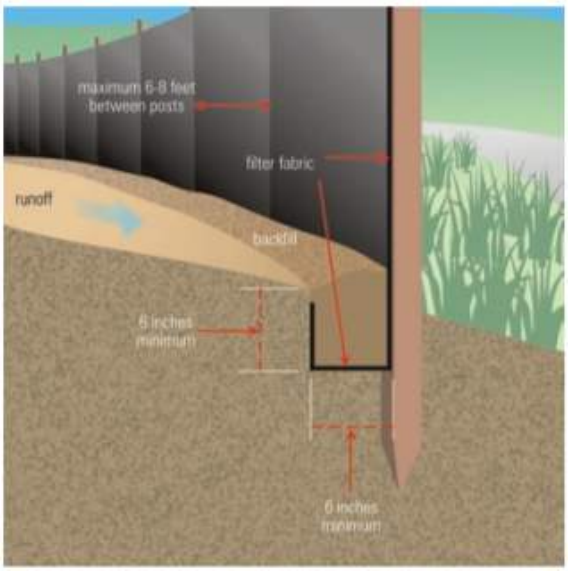
A silt fence is a temporary sediment barrier consisting of a geotextile attached to supporting posts and trenched into the ground. Intended to retain sediment that has been dislodged by stormwater.

Use silt fence as a perimeter control particularly at lower or down slope edge of a disturbed area. Leave space for maintenance between slope and silt fence or roll. Trench in the silt fence on the uphill side (6 in deep by 6 in wide). Install stakes on the downhill side of the fence. Curve silt fence up-gradient to help it contain runoff.

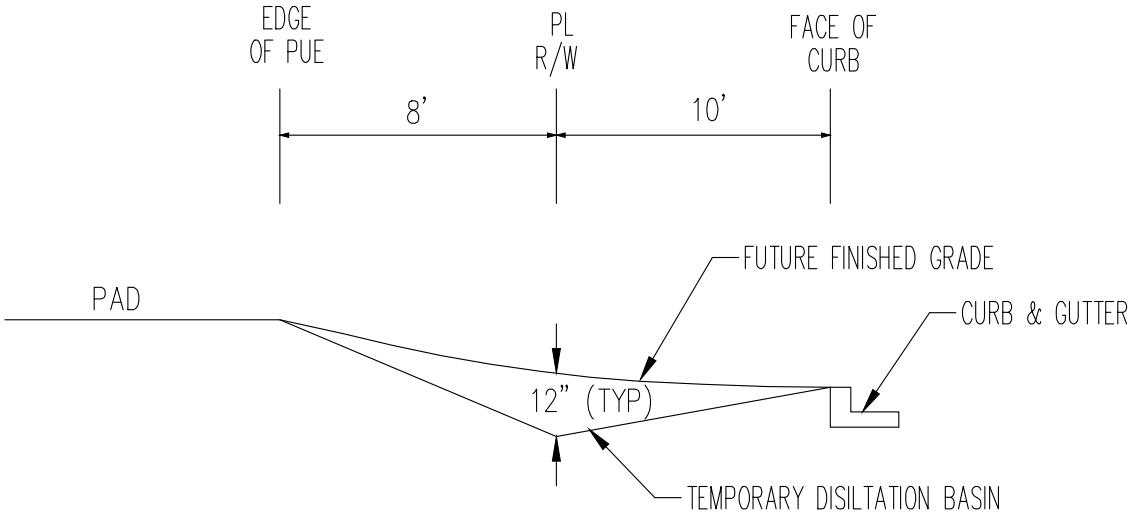
To maintain remove sediment when it reaches one-third of the height of the fence. Replace the silt fence where it is worn, torn, or otherwise damaged. Retrench or replace any silt fence that is not properly anchored to the ground. If the silt fence cannot be toed in properly due to existing hard surface, place mulch filter sock at base to prevent sediment from leaving site.

8’ max wood stake spacing and 10’ max spacing for steel T-post.

Silt Fence Installation



Source: USEPA Guide for Construction Site



TEMPORARY DESILTATION
SECTION A-A

NOT TO SCALE

Coir Mat Inlet Protection

UV Resistance (ASTM D 4355 – 500 hour exposure) Tensile Properties (ASTM D 5035/ECTC)

(4 inch wide strip specimen)

Baseline Properties	
MD – Maximum Load (ppi)	14.6
TD – Maximum Load (ppi)	18.7
MD – Elongation @ Max Load (%)	19.3
TD – Elongation @ Max Load (%)	27.7

500 Hour Exposed Properties	
MD – Maximum Load (ppi)	10.2
TD – Maximum Load (ppi)	13.8
MD – Elongation @ Max Load (%)	16.9
TD – Elongation @ Max Load (%)	16.6

Light Penetration (ECTC Guidelines)	
Baseline Reading	125
Reading with sample	10
% Light Penetration	<8

Resiliency (ASTM D 6524)	
Pre-loading thickness (mils)	1943
Post-loading thickness (mils)	326
% change	-83

Swell (ECTC)	
Dry thickness (mils)	1984
Thickness after soak (mils)	2098
% change	6

Mass/Unit Area (ASTM D 6565)	
Mass/unit area (oz/sq. yd)	50.89
Mass/unit area (g/sq. meter)	1725

Water Absorption (ASTM D 1117/ECTC)	
Pre-soak Weight (grams)	69
Post-Soak (grams)	152
Weight change (grams)	82
% Weight Change	119

Smolder Resistance (ECTC)	
Maximum Burn Distance (in)	.29

Sediment Control (ASTM D 5141)	
Test material:	Sand sieved thru No. 10 sieve
Filtering Efficiency (%)	40.8
Flow Rate (liter/minute)	150

Green Globe Environmental, LLC
821 Rankin Rd NE, Albuquerque, NM 87107
888-712-5120

GRAVEL BAG INLET PROTECTION

Inlet gravel bags are manufactured on site to fit in the gutter pan on the upstream side of the inlet. Filled with smooth rounded pea gravel. The ends are sealed with ½'' #12 hog rings. The gravel bags are connected together with the hogs to help create weight and stability.

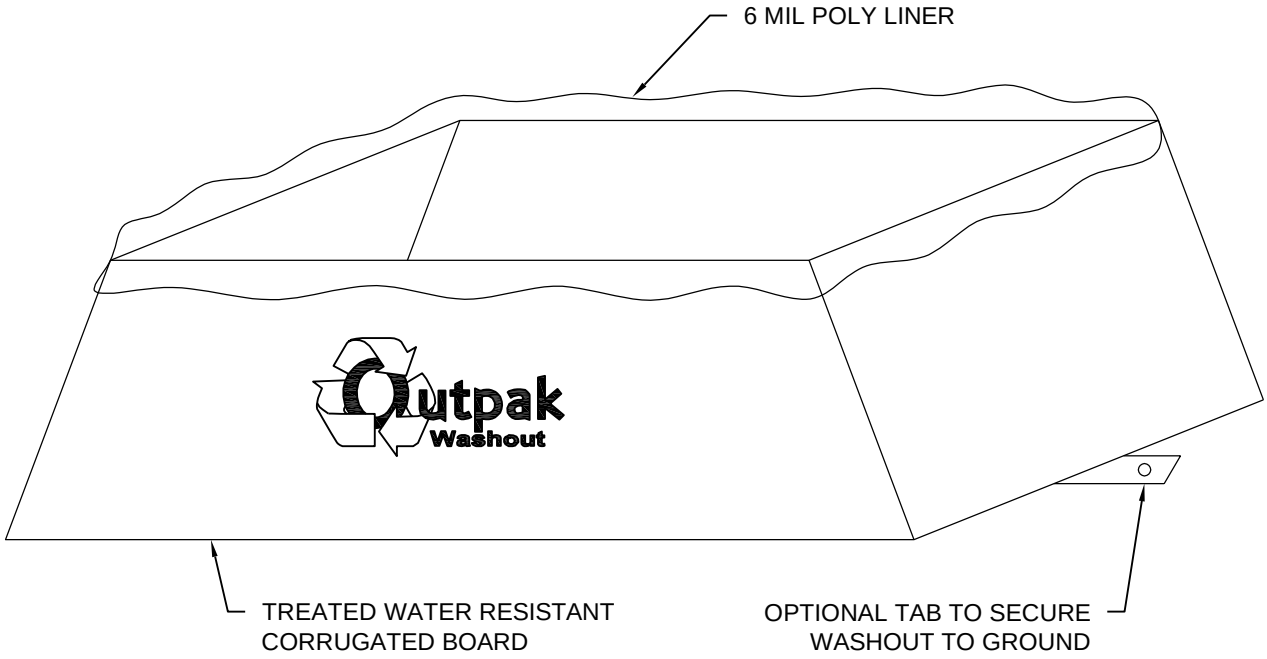
FABRIC PHYSICAL SPECIFICATIONS:

Property Test Method Woven (typical)

Fabric Weight	ASTDM D-5261	5 oz/sq./yd.
Grab Tensile (MD/TD)	ASTDM D-4632	350/220 lbs.
Trapezoid Tear (MD/TD)	ASTM D-4533	146/75 lbs.
Puncture	ASTM D-4833	112 lbs.
Mullen Burst	ASTM D-3786	388 psi.
UV Resistance (2000hrs)	ASTM D-4355	>70%
Water Flow	ASTM D-4355	195 gpm/sq-ft
Material		High Density Polyethylene (HPDE)

THE ABOVE VALUES ARE M.A.R.V. (minimum average roll values)

Green Globe Environmental, LLC
PO Box 400, Los Lunas, NM, 87031
888-712-5120



NOTES:

1. THE WASHOUT SHALL BE INSTALLED PRIOR TO USING MATERIALS THAT REQUIRE WASHOUT ON THIS PROJECT.
2. AS NECESSARY, SIGNS SHALL BE PLACED THROUGHOUT THE SITE TO INDICATE THE LOCATION OF THE WASHOUT.
3. THE WASHOUT AREA WILL BE REPLACED AS NECESSARY TO MAINTAIN CAPACITY FOR LIQUID WASTE.
4. WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE FACILITY.
5. DO NOT WASHOUT INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
6. AVOID DUMPING EXCESS CONCRETE IN NON-DESIGNATED DUMPING AREAS.
7. LOCATE WASHOUT AT LEAST 50' (15 METERS) FROM STORM DRAIN, OPEN DITCHES, OR WATER BODIES.
8. THE WASHOUT SHALL BE USED ONLY FOR NON-HAZARDOUS WASTES.

CORRUGATED WASHOUT

SPECIFICATIONS

Outpak Washout
Boise, Idaho
208-890-0383
outpak.com

TYPICAL CONCRETE WASHOUT-BELOW GRADE

- Install appropriate signage to inform concrete equipment operators of the proper washout location.
- An appropriate stabilized entrance shall be installed where applicable. The length and width of the stabilized entrance may vary based on size and location of the washout.
- Washout facilities must be sized to contain washout water and solids.
- Typical dimensions are 10 feet long by 10 feet wide but may vary upon site limitations.
- Pit shall be delineated with Orange Filter Sock and A-Framed staked.
- The pit shall be lined with 10mil (minimum) polyethylene impermeable liner on the bottom and sides overlapping the top edges completing a leak-proof container.

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P.O. Box 400, Los Lunas, NM, 87031
888-712-5120

Appendix H
Description of Post Construction BMPs

Table H1: Upfront Design Considerations for Post-Construction Site BMPs

Minimizing Impervious Areas
☐ Reduce sidewalk widths or put sidewalks on one side of the street
☐ Incorporate landscaped buffer areas between sidewalks and streets
☐ Design residential streets for the minimum required pavement widths
☐ Minimize the number of residential street cul-de-sacs and incorporate landscaped areas to reduce their impervious cover
☐ Use open space (Conservation Design) development that incorporates smaller lot sizes
☐ Increase building density while decreasing the building footprint
☐ Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together
☐ Reduce overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, and using pervious materials in spillover parking areas
☐ Design concave medians instead of convex medians
☐ Use curb cuts to divert low flow into vegetated areas
☐ Use grassed swales in lieu of curbs and gutters
Increase Rainfall Infiltration
☐ Use permeable materials for private sidewalks, driveways, parking lots, and interior roadway surfaces (examples: hybrid lots, parking groves, permeable overflow parking, etc.)
☐ Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas, and avoid routing rooftop runoff to the roadway or the urban runoff conveyance system
Maximize Rainfall Interception
☐ Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs
Minimize Directly Connected Impervious Areas
☐ Drain rooftops into adjacent landscaping prior to discharging to the storm drain
☐ Drain parking lots into landscape areas co-designed as biofiltration areas
☐ Drain roads, sidewalks, and impervious trails into adjacent landscaping
Slope and Channel Protection
☐ Use natural drainage systems to the maximum extent practicable
☐ Stabilize permanent channel crossings
☐ Plant native or drought tolerant vegetation on slopes
☐ Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels
Maximize Rainfall Interception
☐ Store runoff in cisterns
☐ Use foundation planting to intercept roof runoff
Increase Rainfall Infiltration
☐ Direct roof or other drains to dry wells
Other
☐ Other BMPs. Storm Drain System, Detention Pond, Retaining Walls to reduce slope

Table H2: Post-Construction Source Control BMPs

☐ Storm drain system stenciling and/or signage
☐ Outdoor material and trash storage area designed to reduce or control rainfall runoff
☐ Landscaping BMPs: irrigation controls; integrated pest management program; use of drought resistant, native plants; grouping of plants to optimize water use and natural pest control *(select appropriate topics or add others)*
☐ Street sweeping and catch basin cleaning
☐ Other BMPs *(describe)*
Public Education ☐ Training for homeowner association managers/commercial facility owners ☐ Brochures/flyers on storm water pollution control ☐ Good housekeeping practices (proper waste disposal, etc.)
☐ Topics covered include: Hazardous waste collection; Landscape irrigation controls; Reduction of vehicle use impacts; Storage and application of fertilizers, pesticides and other landscape management products

Table H3: Post-Construction Treatment Control BMPs

Biofilters ☐ Grass swale ☐ Grass strip ☐ Wetland vegetation swale ☐ Bio-retention
Dry Detention Basins ☐ Extended/dry detention basin with grass lining ☐ Extended/dry detention basin with impervious lining
Infiltration Basins ☐ Infiltration basin ☐ Infiltration trench ☐ Porous asphalt ☐ Porous concrete ☐ Porous modular concrete block
Wet Ponds and Wetlands ☐ Wet pond (permanent pool) ☐ Constructed wetland
Drainage Inserts ☐ Oil/water separator ☐ Catch basin insert ☐ Storm drain inserts ☐ Catch basin screens
Filtration Systems ☐ Media filtration ☐ Sand filtration
Hydrodynamic Separation Systems ☐ Swirl concentrator ☐ Cyclone separator

Appendix I
Responsible Parties and Contractors

Table I1: SWPPP Responsibilities - Land

PositionTitle	Company	Responsibility
		Responsible for overall SWPPP implementation, compliance with the Applicable Permit, and ensuring that field activities are planned and conducted in accordance with the SWPPP (including ensuring that materials and personnel are made available for the successful implementation and maintenance of all erosion and sediment control and other BMPs specified in the SWPPP).
		Responsible for documenting any amendments to the SWPPP in Appendix C.
		Responsible for maintaining an up-to-date copy of this SWPPP on Site at all times, from commencement of Construction to final Site stabilization.
		Responsible for providing a copy of the SWPPP for inspection by outside authorized regulatory authorities upon request.
		Responsible for documenting any changes in contractors and for ensuring that all contractors involved with Construction Activities, that may potentially affect storm water quality at the Site, are made aware of, and their contracts reflect that they should comply with the applicable provisions of this SWPPP.
		Responsible for directing on-going regular BMP maintenance activities (e.g., silt fence repair, fiber roll replacement, sediment removal in sediment basin, timely waste disposal, etc.) and implementing and overseeing necessary corrective actions to the erosion/sediment control measures and other BMPs identified during regular or storm-related Site Inspections.
		Responsible for maintaining all Site records pertaining to maintenance of erosion and sediment controls and other BMPs as well as records detailing the dates on which major Construction Activities began and were completed.
		Designated Site contact for Government Inspections (by any federal, state, and/or local agencies authorized to oversee compliance with the Applicable Permit).

Table I1: SWPPP Responsibilities - Vertical

Position Title	Company	Responsibility
		Responsible for overall SWPPP implementation, compliance with the Applicable Permit, and ensuring that field activities are planned and conducted in accordance with the SWPPP (including ensuring that materials and personnel are made available for the successful implementation and maintenance of all erosion and sediment control and other BMPs specified in the SWPPP).
		Responsible for documenting any amendments to the SWPPP in Appendix C.
		Responsible for maintaining an up-to-date copy of this SWPPP on Site at all times, from commencement of Construction to final Site stabilization.
		Responsible for providing a copy of the SWPPP for inspection by outside authorized regulatory authorities upon request.
		Responsible for documenting any changes in contractors and for ensuring that all contractors involved with Construction Activities, that may potentially affect storm water quality at the Site, are made aware of, and their contracts reflect that they should comply with the applicable provisions of this SWPPP.
		Responsible for directing on-going regular BMP maintenance activities (e.g., silt fence repair, fiber roll replacement, sediment removal in sediment basin, timely waste disposal, etc.) and implementing and overseeing necessary corrective actions to the erosion/sediment control measures and other BMPs identified during regular or storm-related Site Inspections.
		Responsible for maintaining all Site records pertaining to maintenance of erosion and sediment controls and other BMPs as well as records detailing the dates on which major Construction Activities began and were completed.
		Designated Site contact for Government Inspections (by any federal, state, and/or local agencies authorized to oversee compliance with the Applicable Permit).

Table I2: Contractor List

Name/Title	Company Name	Trade/ Responsibilities	Phone Number(s)

Appendix J
Completed Site Inspection Reports

Appendix K

USFWS Official List of Threatened and Endangered Species

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
http://www.fws.gov/southwest/es/NewMexico/
http://www.fws.gov/southwest/es/ES_Lists_Main2.html

In Reply Refer To: April 09, 2020
Consultation Code: 02ENNM00-2020-SLI-0844
Event Code: 02ENNM00-2020-E-01797
Project Name: Petroglyphs Estates

Subject: List of threatened and endangered species that may occur in your proposed project location, and/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 (MBTA) as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). 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.

FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

If you determine that your proposed action may affect federally-listed species, consultation with the Service will be necessary. Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

The scope of federally listed species compliance not only includes direct effects, but also any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects that may occur in the action area. The action area includes all areas to be affected, not merely the immediate area involved in the action. Large projects may have effects outside the immediate area to species not listed here that should be addressed. If your action area has suitable habitat for any of the attached species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts.

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: www.emnrd.state.nm.us/SFD/ForestMgt/Endangered.html

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

The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the Service's Migratory Bird Office. To minimize the likelihood of adverse impacts to migratory birds, we recommend construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged.

We recommend review of Birds of Conservation Concern at website www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html to fully evaluate the effects to the birds at your site. This list identifies birds that are potentially threatened by disturbance and construction.

BALD AND GOLDEN EAGLES

The bald eagle (*Haliaeetus leucocephalus*) was delisted under the ESA on August 9, 2007. Both the bald eagle and golden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For information on bald and golden eagle management guidelines, we recommend you review information provided at www.fws.gov/midwest/eagle/guidelines/bgepa.html.

On our web site www.fws.gov/southwest/es/NewMexico/SBC_intro.cfm, we have included conservation measures that can minimize impacts to federally listed and other sensitive species. These include measures for communication towers, power line safety for raptors, road and highway improvements, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

We also 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 fish, wildlife, and plants.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. For further consultation on your proposed activity, please call 505-346-2525 or email nmesfo@fws.gov and reference your Service Consultation Tracking Number.

Attachment(s):

- Official Species List
- 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

Consultation Code: 02ENNM00-2020-SLI-0844

Event Code: 02ENNM00-2020-E-01797

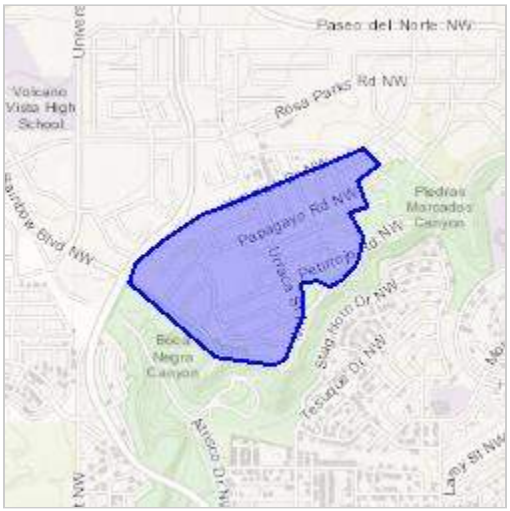
Project Name: Petroglyphs Estates

Project Type: DEVELOPMENT

Project Description: New residential home construction.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/35.16819524783432N106.71712270982513W



Counties: Bernalillo, NM

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
New Mexico Meadow Jumping Mouse *Zapus hudsonius luteus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7965	Endangered

Birds

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Rio Grande Silvery Minnow *Hybognathus amarus*	Endangered

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/1391

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

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)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list 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
Brewer's Sparrow *Spizella breweri* 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/9291	Breeds May 15 to Aug 10

NAME	BREEDING SEASON
Burrowing Owl *Athene cunicularia* 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/9737	Breeds Mar 15 to Aug 31
Chestnut-collared Longspur *Calcarius ornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Golden Eagle *Aquila chrysaetos* 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/1680	Breeds Jan 1 to Aug 31
Grace's Warbler *Dendroica graciae* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 20 to Jul 20
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds Apr 1 to Jul 31
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
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
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
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Virginia's Warbler *Vermivora 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

NAME	BREEDING SEASON
Willow Flycatcher *Empidonax traillii* 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/3482	Breeds May 20 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 and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

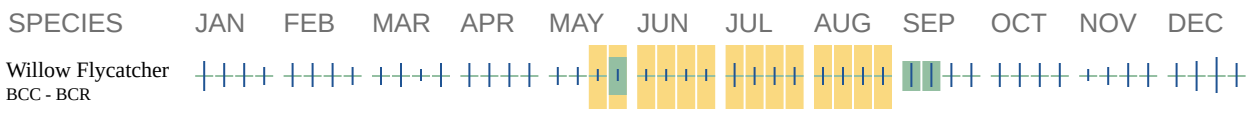
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical

Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Appendix L
Site SHPO Correspondence

Michelle Lujan
Grisham
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

April 14, 2020

Mathew Vallejos
Green Globe Environmental, LLC
matt@greenglobenm.com

Re: HPD Log 112826b, SWPPP for new residential home construction at Petroglyph Estates near Unser Blvd NW and Kimmick Dr. NW, Albuquerque, NM, 87120, Bernalillo County (35.16846, -106.71797)

Dear Mr. Vallejos:

In order to assess the potential for the proposed SWPPP to impact historic properties, I reviewed our State Register of Cultural Properties, the National Register of Historic Places (NRHP), and our cultural resource records database.
The general project area (as defined in the Petroglyph Estates Vicinity Map) has been surveyed and it contains three historic properties. These properties, all archaeological sites, have been deemed eligible or recommended as eligible for the NRHP. The specific project locations for these SWPPPS, the 20 house lots described in the Community Layout Plan, do not contain any historic properties. However, as some are situated close to archaeological sites, care should be taken to confine all ground disturbance activities to the specified house lot locations.

We can be reached at (505) 827-6320, or, if you have any concerns or questions, please contact me by phone at (505)-452-6115 or e-mail me at richard.reycraft@state.nm.us.

Sincerely,
Richard Reycraft
Richard Reycraft
Archaeologist

Appendix M
Spill Response and Reporting Form

Significant spills, leaks or other releases

Date of incident:_____
Location of incident: _____
Description of incident:

_____
_____
_____

Circumstances leading to release:

_____
_____
_____

Actions taken in response to release:

_____
_____

Measures taken to prevent recurrence:

_____
_____
_____

Date of incident: _____
Location of incident: _____
Description of incident:

_____
_____
_____

Circumstances leading to release:

_____
_____
_____

Actions taken in response to release:

_____
_____
_____

Measures taken to prevent recurrence:

_____
_____
_____

Significant spills, leaks or other releases (cont.)

Date of incident:_____
Location of incident: _____
Description of incident:

_____
_____
_____

Circumstances leading to release:

_____
_____
_____

Actions taken in response to release:

_____
_____

Measures taken to prevent recurrence:

_____
_____
_____

Date of incident: _____
Location of incident: _____
Description of incident:

_____
_____
_____

Circumstances leading to release:

_____
_____
_____

Actions taken in response to release:

_____
_____
_____

Measures taken to prevent recurrence:

_____
_____
_____

Spill Report Form

NMED Incident# _____ District Code _____ Country: _____

*Received by: _____ *Date received: _____ Time: _____

Date spill occurred _____ Time: _____

*Date spill discovered _____ Time: _____

Date spill stopped _____ Time: _____

Caller Name: _____ Title: _____

Address: _____ City: _____

Telephone No. _____ State: _____ Zip Code _____

*Spiller (RP) _____

Address: _____ City: _____

Telephone No. _____ State: _____ Zip Code _____

*Spill Location _____
(such as highway, street names, etc.)

Source/Cause: _____

_____

Materials spilled: _____ Amount: _____

2) _____ Amount: _____

Weather Conditions: _____ Injuries: _____

Environmental Damage: _____

Mitigate Actions: _____

Nearest waterbody affected: _____

Depth to Groundwater: _____

More Info Menu

1) NMED contacts

NMED 24-Hour
Emergency Reporting
Number: (505) 827-9329

Offices contacted: SWQB _____ GWB _____ USTB _____ SWB _____

District/Field Office: _____

NPDES Permits # _____ Groundwater Permit # _____

2) Other contacts (other agencies)

U.S. Fish & Wildlife _____ NM Game & Fish _____ USEPA _____

Epidemiology _____ Downstream Users_____

Other: _____
(Fire Department, Police, City Officials, Indian Pueblos, etc.)

Other _____

3) Communication & Correspondence _____

4) HWB detail ...(nothing in there)

5) SWQB 1-203 Detail

Agency Jurisdiction _____
(Private, Municipality, Doe, DOD, Parks, etc...has a lookup)

Latitude _____ Longitude _____

And/or

Township, Range, Section _____
(Very important for future GIS use)

Cleanup started: Yes o No o Date: _____ Time: _____

Cleanup completed: Yes o No o Date: _____ Time: _____

Comments: _____