

4.10 *Stormwater Conveyance Channels*

OBJECTIVE:

Incorporating conveyance channels into a project demonstrates well-developed engineering practices. Control methods must address and prevent channel deterioration to ensure the channel does not contribute to sedimentation and pollution of waters of the U.S. It is equally important to include velocity dissipation measures to ensure:

- The velocity gradient in the channel is moderated
- The geometry of the channel is maintained
- Pollutants are controlled
- Sediment is captured and contained onsite

4.11 *Sediment Basins/Retention Ponds*

SEDIMENT BASINS OR TRAPS/ RETENTION PONDS WILL BE INSTALLED AS A CONTROL IN THE PROJECT.

OBJECTIVE:

Sediment traps/Retention Ponds are impoundments that allow sediment to settle from construction runoff. They are usually installed in a drainage way or other discharge point. Sediment traps are most commonly used at channels, slope drains, dewatering locations, construction site entrance wash tracks, conveyance discharge points or any other runoff outlet.

Sediment traps/Retention Ponds detain sediments in stormwater runoff to protect receiving streams, lakes, drainage systems and the surrounding area. The traps are formed by excavating an area or by placing an earthen embankment across a low area or drainage swale.

Drainage swales, sediment traps or sediment basins capture runoff and sediment on a larger scale than smaller BMPs. They are sized to manage large storm or drainage areas. Sediment basins also allow for the controlled return of surface water in dewatering situations while simultaneously capturing sediment. Lastly, sediment traps/Retention Ponds provide collections points for sediment at the perimeter of site discharge locations meeting the ELG regulatory requirements.

The retention ponds to be installed at this site will comply with CGP Section 9.4.1.c

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

West Mesa RV Park

INSTALLATION:

- When excavating an area for a retention pond/sediment trap, the side slopes should not be steeper than 2:1 and the top of the embankment no more than 5 feet from the original ground surface.
- Ensure stability of side walls, mounds and barriers by Machine-compacting all embankments. If the trap is created above grade it should be lined with well-graded stone to reduce flow rate from the trap the outlet.
- The spillway weir for each temporary sediment trap/pond should be at least 4 feet long for a 1-acre drainage area and increase by 2 feet for each additional drainage acre added, up to a maximum drainage area of 5 acres.

INSPECTION AND MAINTENANCE:

- Inspect the sediment trap/ retention pond per the schedule outlined in this plan. At each inspection, ensure the pond is retaining properly. Remove sediments/floating solids when the basin reaches 50% sediment capacity. Inspect the structure for damage from erosion by reviewing the depth of the spillway and maintain it at a minimum of 18 inches below the lowest point of the trap embankment. Ensure that there is no visible sheen on the water from materials other than natural causes.
- Take care to situate sediment traps for easy access by maintenance crews. The primary maintenance consideration for temporary sediment traps is to remove accumulated sediment. Do this periodically to ensure ongoing operation. Perform re-compaction of side walls, mounds and barriers after extended periods of water retention to ensure each is competent to accept future flows.
- The pond should have exclusion fencing to prevent people and animals from entering the pond.

4.12 Chemical Treatment

Chemical treatment is not employed as a BMP on this project.

4.13 Dewatering Practices

Dewatering is not expected on this project.