

Temporary erosion and sediment controls (ESC) measures for the Bull Run Filtration Facility reflect project-specific requirements and constraints, including the following:

- Stockpile and protect existing topsoil across the site
- Deep (up to 30') excavations for treatment processes generating large volumes of excavated materials in the first few months of construction
- Stockpiles for excavated materials to allow off-haul at a measured pace
- Extensive staging and laydown areas needed for simultaneous activities by multiple trades at multiple locations throughout the site

To efficiently perform the work, the Contractor will establish initial ESC measures for the entire site at the start of construction, and then expand the work area and implement additional ESC measures as the work progresses, as described below. These measures are consistent with the 1200-CA permit and plans approved by DEQ.

- Stage 1. Initial Erosion Control Installation – Initial establishment of limits of construction activity with silt fencing and tree protection fencing, and the establishment of the stabilized construction entrances and wheel wash.
- Stage 2. Initial Site Development – Establish temporary construction roadways and gravel laydowns. Site ditches and temporary ponds will be constructed at the same time. Water treatment plan will be set up at East of Basin 2 once area is graded and graveled.
- Stage 3. Mass Excavation – Excavation of Basin 1 and 2, excavation of Area 30 and Area 40. Soil from excavation will be hauled to the stockpile area. Active and inactive Stockpile area will be maintained according to ESC plan. Flow spreaders will be constructed south of Basin 2 once the area is ready for construction. The flow spreader discharge area will be stabilized per design drawings.
- Stage 4. Sapolite Underground Dewatering – Water control piping will be set up from ponds and Area 30 and Area 40 to Basin 1. Once the excavation progressed and the water treatment system is ready to discharge, dewatering pumps will be activated.
- Stage 5. Facility Construction – Mass excavation areas are completed, and slopes stabilized per ESC plan. Site water control measures will be maintained, and ponds will be continually pumped to Basin 1 and treated and discharged through the flow spreader. Completion of the ESC installation, with the excavation of Basin 2, and mass excavation at Area 30, as well as the establishment of laydown and continued use of stockpiling areas.

Further detail behind the chosen controls and phasing of construction is set out in the General Notes on Sheet LU-501, including:

- Clearing and grading will be sequenced to the maximum extent possible to prevent exposed inactive areas from becoming a source of erosion (Note 5).
- Preserve existing vegetation outside project limits as delineated by tree protection fencing and sediment fencing and re-vegetate all unpaved areas within the project limits. Temporary re-vegetation is required during construction (Note 7).
- Perimeter sediment control (e.g., silt fences, inlet protection) will be installed in Stage 1 prior to any ground disturbing activities (Note 9).



- Peak stormwater flow rates and total volume will be minimized by the establishment of the temporary stormwater ponds prior to land disturbance in the contributing subcatchment to minimize erosion at outlets (Stage 2-3) (Note 10 and 37).
- Temporary and/or permanent soil stabilization measures will be applied on all disturbed areas as grading progresses (Note 13 and 38).
- Tracking of sediment onto public or private roads will be prevented using stabilized construction entrance(s) and an exit tire wash. These BMPs will be established in Stage 1 prior to any ground disturbing activities (Note 16).
- Exposed soils will be temporarily stabilized at the end of the shift before holidays and weekends, if needed, and contractor shall ensure that soils are stable during rain events at all times of the year (Note 25).
- Soil stockpiles will be stabilized or covered (or other BMPs implemented) as needed based on weather conditions at the end of each workday to prevent discharges (Note 26).
- Maintenance will be conducted on the BMPs such as removing trapped sediment from silt fences (Note 27), wattles, biobags, etc. (Note 28) and catch basins (Note 29).
- Any part of the site where construction activities cease for 14 days or longer will be temporarily stabilized with a covering of blown straw and a tackifier, loose straw or compost mulch, and temporary seed until work resumes on that portion of the site (Note 33).
- ESC practices will not be removed until permanent vegetation or other cover of exposed areas is established (Note 34).

At the completion of Stage 4, all controls shown on the ESC drawings will have been established, and construction will continue with these controls in place. As construction activities are completed in a given area, exposed soils will be stabilized and permanent irrigation, planting and stormwater management measures installed.