



Truckee Meadows Water Authority Highland Ditch RCB and Spillway Project Best Management Practices Plan

1.0 COMPLIANCE SUMMARY

The proposed 2008 / 2009 Highland Ditch Reinforced Concrete Box Project has been permitted under the Nevada Division of Environmental Protection Rolling Stock, Stormwater Pollution Prevention Program (SWPP) and Clean Water 401 Program, Nevada State Lands, Army Corps of Engineers 404 program, and the Carson Truckee Water Conservancy District Program. All conditions identified within those permits shall be adhered to by the contractor. In addition to those conditions, the following best management practices have been developed to optimize environmental protection throughout the construction and restoration effort.

The contractor shall be required to obtain the SWPP and Washoe County Air Quality permits prior to start of construction.

2.0 BEST MANAGEMENT PRACTICES AND STORMWATER CONTROLS

The following measures are required during construction to control pollutants in stormwater discharges between the time construction has begun and final site stabilization has been achieved.

2.1 GENERAL BMPS

- Prior to start of work and at the conclusion of the project, all vehicles working within noxious weed areas shall be steam cleaned.
- Vegetation removed from the site may be staged to allow for final chipping and mulching for project restoration.
- Prior to start of work each morning, equipment will be visually inspected to ensure no grease or oil leaks. In the event of a leak, the equipment will need to be repaired immediately prior to commencing work. In addition, any oil or grease leak that contaminates soil will need to be immediately cleaned by removing the impacted soil. If the quantity of soil impacted is greater than 3 cubic yards, the TMWA Environmental Contact for the project (Karen Schlichting 742-0599) should be immediately notified as agency notification will be required.

- During the project, all vehicles will be required to utilize existing roadways throughout the rebuild effort, all imported material (if required) shall be trucked directly to the required placement with little, if any staging of material, and vehicle engines shall be turned off when not in operation.
- No petroleum based products or any chemicals should be located within 100 feet of the river bank during construction.
- Public streets will be swept if project-related vehicles track visible soil material onto the roadway.
- All hazardous waste materials will be properly labeled in accordance with Title 40 of the CFR Part 262. At this time, no hazardous materials and/or waste products are planned or anticipated for use during the installation of flume facilities and the roadway.
- Equipment refueling and equipment repair will be conducted at least 100 feet away from the Truckee River Ordinary High Water Mark and any other flowing water.
- Schedule earth-disturbing activities to low runoff periods, whenever possible.
- Confine all vehicular traffic associated with construction to the existing or new access roadways.
- Train all construction personnel before they are allowed to begin working on the project of environmental concerns, pertinent laws and regulations, and elements of this plan.
- If dewatering becomes necessary (direct accumulated water into heavily vegetated non-disturbed surfaces to avoid soil erosion and conduct all dewatering activities according to project permits. Detention basins constructed of sediment barriers (e.g., straw bales, silt fence, etc.) or mobile storage tanks may be used where appropriate to dispose of groundwater or collected stormwater.
- Use drainage control structures, where necessary, to direct surface runoff away from disturbed areas and reduce erosion and off-site sedimentation. Such structures include culverts, ditches, waterbars (berms and cross ditches), rolling dips, and sediment traps.
- At least two feet of free board will be maintained on any vehicles hauling material susceptible to being dropped, spilled, leaked, or to generate dust. Alternatively, tarps or similar cargo covers will be used to prevent the generation of airborne dust and the loss of material.

- Septic Waste will be managed on-site during construction by Sani-Hut of Nevada (or similar septic waste management company). Following heavy winds, a site visit will be conducted to ensure that the temporary facilities have not been tipped or damaged. Repair shall occur immediately if required.

2.2 ROADWAY AND ACCESSWAYS

- Roadway grading shall be completed within the limits as defined on the project drawings. Some field exceptions will be allowed in order to reduce disturbance and optimize access. This should be directly coordinated with the on-site TMWA Construction Manager.
- Water bars will be placed appropriately along the roadway to manage anticipated run-off throughout the project. Water will be directed to areas with the most natural vegetative filtration.
- In areas where fill is required to establish the roadway, imported materials will be required to be certified weed free.
- All roadway fill areas will require soil stabilization on the downstream edge of roadway. This will consist of appropriate waddle placement, silt fencing or straw bail placement. The specific BMP to be used will be field determined based on the existing and disturbed condition.
- All waddle installations will be required to be left in-place at the conclusion of the project. As such, wood staking shall be used to install the waddles. No rebar or steel rods will be acceptable.

2.3 EXCAVATION AND SOIL MANAGEMENT

- Excavation shall occur in a manner to best manage soil handling. Waddles or straw bails shall be installed around all over night soil staging. In the event that excavated soil will only be temporarily staged for a period not more than one day, and is not left unattended, the soil can be placed without BMP protection. However, this temporary staging site must be cleaned with all soil removed by close of day. In the event of anticipated wet weather or on-going wet weather, all soil staging will require the placement of waddles or straw bails around the staging site, even for short duration staging.
- During heavy wet weather, soil staging sites shall be covered with plastic sheeting to minimize and manage run-off.
- All imported material shall be certified weed free.

- The top 2 inches of all excavated material will be segregated for use during site restoration. In areas where there are noxious weeds such as white top, the top soil will not be salvaged and should be hauled off with other excavated material. The segregated top soil should be secured with Silt Fencing or similar BMP around the entire pile to minimize sediment transport in the event of wet weather.

2.4 CONCRETE MANAGEMENT

- Concrete placement shall be conducted in a manner to ensure water quality and avoid any risk of concrete release to flowing water.
- Prior to any placement, the contractor shall ensure that the receiving area is dry with no flowing water. In the event that groundwater is encountered, a dewatering effort will be required to capture contaminated water to ensure no release to the Truckee River. BMP options include pumping to a baker tank, or other means to capture the water. If this condition occurs, field remedies will need to be discussed to obtain a workable solution.
- Concrete clean-out shall optimally occur by utilizing the next pour area for chute wash-out. This will require the aggressive coordination by the contractor to stay ahead with excavation. In the event this is not feasible, contractor shall prepare a wash-out location that is at least 100 feet away from the ordinary high water mark of the Truckee River. This wash-out concrete shall be removed from site at the conclusion of the project.
- On all downstream edges of access roadways, contractor shall place waddles (straw or coconut fiber). Waddles shall be placed in accordance with industry standard practices and within compliance of State regulations.

2.5 WORKING BELOW ORDINARY HIGH WATER MARK

Due to the extremely small size of the project area, the minor volume of excavation, and short duration of work within the Truckee River, direct, short-term effects to Lahontan cutthroat trout (*Onchorhynchus clarki henshawi*) (LCT) habitat are possible but remote. Additional measures to avoid and further minimize potential adverse effects include:

- Project construction will not occur during LCT spawning, which generally occurs from April through July. Project construction below Ordinary High Water will be completed within one day, sometime between October 15 and January 15.
- Project construction will be timed to occur when river flows are lowest, so flow will not be present in the work area during construction. This would minimize the potential release of sediment can affect the health of individual LCT.

- BMP's will be implemented to comply with the Nevada Department of Environmental Protection (NDEP) Section 401 Water Quality Certification, and Temporary Work in Waterways Permit Storm Water Construction General Permit (GNV9800002) to meet state and federal water quality standards.
- Minimal riparian vegetation consisting mostly of coyote willow will be disturbed during construction. Willows will be salvaged and replanted. No mature trees will be removed. This measure will minimize loss of streamside vegetation need to maintain in-stream water temperatures.
- Equipment working below the ordinary high water mark shall be limited to the bucket of the track or back hoe. No rubber or track mounted equipment shall fully enter the Truckee River. Work below the ordinary high water mark shall be limited to rock placement for energy dissipation. In the event equipment must enter the river to place the rip rap rock, close coordination will occur with the TMWA assigned Environmental Specialist. All travel will be completed to minimize any turbidity in the river.
- Immediately prior to work below the ordinary high mark, the equipment shall be steam cleaned to ensure that seeds and spoors, as well as all silt and dirt clumps are removed. A visual inspection shall also be completed to verify no oil leaks around the bucket.

2.6 FIRE RISK MANAGEMENT

- During high fire risk time, smoking will only be permitted within employee vehicles. All burning tobacco, matches, butts and ashes must be maintained within the employee vehicles.
- Fire suppression equipment will be present in areas where construction tools or equipment have the potential to spark a fire.
- All flammable material, including dead vegetation and dry grasses, will be cleared a minimum of 10 feet from areas of equipment operation that may generate sparks or flames.
- Approved welding or cutting activities will only be performed in areas cleared of vegetation a minimum of 10 feet around the area. Welding or cutting activities will cease one hour before all fire response personnel leave a construction area to reduce the possibility of welding activities smoldering and starting a fire. Welder vehicles will be equipped with fire suppression equipment. **Contractor is responsible for special welding or fire permits required by the Nevada Division of Forestry, or any other fire protection agency.**
- Contractor will provide continuous access to roads for emergency vehicles during construction.

Emergency Fire Response Contacts

CALL 911 FIRST		
Department		Phone Number
City of Reno Fire Department		911
Reno Public Safety Fire/Sheriff	Dispatch	Emergency: (775) 334-2161
Nevada Division of Forestry	Carson Field Office	Emergency: (775) 684-2500

2.7 FINAL SITE RESTORATION

- Photo documentation of the entire process, from pre-site conditions to final site clean-up must be completed. In addition, a comprehensive written log of the work completed, including all equipment on-site, weather encountered, morning leak inspections, number of loads of imported material, and logging details will need to be completed.
- Upon final project completion, all roadways will be reclaimed to original contours and condition. This shall include an immediate re-seeding effort based on the recommended seed mix and rate as approved by the Washoe County Parks and Recreation Department.
- In non-roadway areas with surface disturbance, the area shall be restored to original contour with the installation of willow starts. Willow shall be harvested from on-site vegetation. Starts will be placed at least 1½ foot below grade and backfilled with disturbed top soil.
- Wooded material and vegetation removed from the site can be chipped and spread on all disturbed areas to support re-vegetation and erosion control.
- Prior to final de-mobilization, a site inspection shall be conducted to ensure that all final BMPs are adequate to address erosion control.

3.0 INSPECTION AND BMP MAINTENANCE PROCEDURES

The contractor or his qualified agent will be required to inspect all disturbed areas, areas used for storage of materials and equipment that are exposed to precipitation, including vehicle entrance and exit locations and all erosion and sediment control BMPs. Inspections shall occur weekly, prior to forecasted rain events, and within 24

hours after any actual rain event. The following sources may be used to obtain weather forecasts:

- The National Weather Service: Telephone: (775) 673-8100
Website: <http://www.wrh.noaa.gov/Reno/>
- The Western Regional Climate Center
Website: <http://www.wrcc.dri.edu/CURRENTOBS.html>
- The Weather Channel
Website: <http://www.weather.com/weather/detail/USNV0076>

To ensure proper installation and maintenance of erosion control structures throughout construction, the General Construction Contractor will designate an Environmental Coordinator who will be responsible for the inspection and maintenance of erosion and sediment controls and respond to environmental issues as they arise. This individual may be the Primary Contractor General Foreman as long as his responsibilities are clearly defined. The Environmental Coordinator must have the personnel and equipment necessary to fulfill required duties (e.g., inspection, maintenance, and repair work), and may be required to work during holiday and weekend periods when work may not be in progress. During construction, temporary erosion control structures will be inspected:

- daily by the Contractor's Environmental Coordinator in areas of active construction or equipment operation,
- on a weekly basis in areas with no equipment operation, and
- In all affected areas within 24 hours of each 0.5-inch or greater rainfall event (where soils and weather conditions permit).

If structures clog, deteriorate, fail, are damaged, require maintenance, or are ineffective, the Prime Construction Contractor will ensure that remedial actions are taken within 24 hours, soil or weather conditions permitting. Ineffective measures may be indicated by the presence of sheet, rill, and/or gully erosion, sloughing or slumping, and/or mass wasting.

4.0 SPILL CONTINGENCY PLAN

Well-maintained equipment will be used to perform the work, and when practicable, equipment maintenance will be performed offsite. In the event of oil, fuel, and hydraulic fluid leaks, clean-up will be conducted as soon as possible. A spill kit will be available at all times and is recommended in each vehicle on the Project site. If the leak is on pavement or a compacted surface, an oil absorbing product such as Absorb® will be applied. Once the clean up product has absorbed the leak it will be swept up and disposed of according to federal, state, or local regulations. If the leak occurs on soil, the contaminated soil will be removed and disposed of according to federal, state, or

local regulations. In the event of a major spill (> 55 gallons) the following actions should be taken, in addition to any federal, state, and local health and safety regulations:

1. Contain the spread or migration of the spill, using on-hand supply of erosion control structures and/or by creating dirt berms, as feasible and necessary.
2. Notify the site manager immediately.
3. Within 24 hours of an identified spill, the site manager or a designated representative will notify the following agency:
4. NDEP - Bureau of Water Pollution Control, 775-687-4670 ext. 3149
5. Post-emergency follow-up will include cleaning of emergency equipment, replacing used supplies, and proper disposal of waste and contaminated protective clothing.

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