Appendix 3-D.8. Construction Best Management Practices

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Appendix 3-D.8. Construction Best Management Practices

Construction activities of the NWP may have temporary impacts to human and environmental resources. The contractor would be required adhere to the standards and specifications as outlined in contract documents. Resources anticipated to be impacted and the best management practices (BMPs) to minimize effects are discussed below.

3-D.8.1 Air Quality

Temporary and localized construction impacts to air quality may result from fugitive dust emissions, carbon monoxide (CO) emissions, NO_X and volatile organic compounds (VOC) emissions, $PM_{2.5}$ and PM_{10} emissions. NWP construction would include the use of mechanized construction equipment and vehicles, which would result in a temporary increase in motor vehicle exhaust emissions in the project study area. Such impact would be temporary and would not have a long-lasting impact on air quality in the area. The contractor will be required to implement BMPs as follows:

- Periodic and routine watering or applying dust suppressants of borrow and spoil material areas, and access roads to minimize fugitive dust emissions
- The methods of mixing, handling, and storing cement and concrete aggregate would include means of eliminating atmospheric discharges of dust
- Minimizing the extent of disturbed surfaces
- Restricting earthwork activities during times of abnormal high wind
- Limiting the use of and speeds on unimproved road surfaces
- All vehicles and equipment will be maintained and licensed in accordance with local, state, and federal laws to minimize exhaust pollution
- The contractor would comply with all applicable federal, state, and local laws and regulations, regarding the prevention, control, and abatement of dust pollution.

- The contractor will be required to prepare and implement a fugitive dust–control plan approved by the Utah Division of Air Quality and will apply dust-suppressing measures to reduce increased fugitive dust emissions during construction.

3-D.8.2 Noise and Vibration

Residents and businesses near the construction of the NWP may experience temporary inconvenience due to construction related noise and vibration. Extended disruption of normal activities is not anticipated, since no single area would be exposed to construction noise for long duration. Temporary construction noise would be minimized through adherence to standard specifications for noise levels in the construction area:

- **Noise Levels in the construction area:** the contractor will comply with applicable federal, state, and local laws, orders, and regulations concerning the prevention, control, and abatement of excessive noise. The contractor will monitor construction noise levels within the construction area. Mufflers on construction equipment shall be checked regularly to minimize noise.

Vibration may be generated during construction of the NWP and could be an inconvenience to nearby residents and businesses. However, the impacts would be temporary and only occur during the construction phase of this project. The majority of construction vibration is a result of heavy equipment use and shoring practices. The contractor would be required to adhere to standard specifications for compliance with laws and regulations.

3-D.8.3 Waters of the U.S. and Wetlands

Depending on the acreage of impact resulting from the NWP, a stream channel alteration permit, administered by the State of Utah, or a Clean Water Act Section 404 Permit, administered by the Army Corps of Engineers, would be needed prior to disturbance and crossing of waters of the U.S. These include the Spanish Fork River, Peteetneet Creek, and potential others depending on final design considerations. The contractor will be required to protect wetlands and waters of the U.S. to the extent possible and to minimize impacts to these crossings through the application of BMPs.

3-D.8.4 Hazardous Waste

The contractor would be required to implement BMPs for hazardous wastes generated from construction-related activities. The BMPs may include:

- All hazardous waste materials, including wastes, petroleum products, and solid wastes, would be handled, stored, and disposed of in conformance with federal and state regulations to prevent soil, groundwater, or surface water contamination.
- The Utah Division of Environmental Response and Remediation (DERR) would be contacted immediately if any contaminated soil or hazardous material is discovered during construction, including petroleum hydrocarbons or other previously unidentified hazardous materials or contaminated soils. The appropriate characterization and handling of the material would be conducted in accordance with DERR guidance.
- Absorbent pads or sheets would be readily available onsite. If onsite maintenance of construction equipment is required, absorbent pads would be placed under likely leak or spill sources. Mitigation for incidental spills or leaks of hydraulic fluid or diesel fuel from construction equipment would be implemented, including cleaning up the spill immediately, removing contaminated soil from the site, and properly disposing of it in conformance with federal and state regulations.

3-D.8.5 Transportation

There would be temporary travel delays, temporary changes in roadway alignments, and road closures along certain roadways during construction due to the movement of heavy machinery, construction of pipelines across roadways, and other equipment and supplies. Travel in the area to and from private property or for other public purposes would be maintained throughout construction. Prior to construction, the contractor would be required to prepare and submit a Traffic Control Plan to address traffic concerns and approved.

3-D.8.6 Water Resources

Construction activities in the project study area would disturb the soils and increase the potential for temporary soil erosion and sedimentation/siltation impacts. In order to prevent construction impacts, the contractor would be required to comply with all federal and state laws and regulations regarding control and abatement of water pollution. All waste materials and sewage from construction activities or project-constructed features would be disposed of as specified by federal and state health and pollution control regulations.

Construction specifications would require construction activities to be performed using methods that would prevent entrance or accidental spillage of solid matter, contaminants, debris, and other objectionable pollutants and wastes into flowing or dry watercourses and underground water sources. Potential pollutants and wastes include refuse, garbage, cement, concrete, sewage effluent, industrial waste, oil, and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution. Excavated materials would not be stockpiled or deposited near or on surface waters or other watercourse perimeters where they could be washed away by storm runoff or encroach upon the sensitive area.

The contractor will be required to develop and submit a Storm Water Pollution Prevention Plan (SWPPP) to comply with the Utah Pollutant Discharge Elimination System permit (UPDES). The SWPPP may include such measures as using silt fences, fiber mesh rolls, check-dams, or other techniques to minimize impacts to the surrounding receiving waters. The contractor will be required to adhere to standard specifications for drainage and sediment control.

The construction of the NWP may encounter groundwater which would require dewatering. A dewatering plan would be developed during the design phase of this project.

3-D.8.7 Wildlife

Tree removal would be performed outside of the nesting season to avoid the potential for impacts to migratory bird nests or fledglings. If it is necessary to remove vegetation during the migratory bird nesting season a qualified biologist would conduct nesting surveys, prior to construction activities, to verify that no migratory birds are nesting in the vegetation to be removed. These pre-construction nesting bird surveys would be conducted for the construction footprint and 100 feet on either side of the footprint and would not occur more than seven days prior to vegetation alteration or surface disturbance. The survey area for active bird nests would include areas where vegetation removal and disturbance would be necessary. These surveys would be conducted in consultation with the appropriate agency(ies).

If occupied nests are located, construction activities would not occur within the species-specific spatial and seasonal buffer zones as outlined in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances*. Coordination with USFWS and UDWR would also be reinitiated to discuss monitoring and reporting.

All records of observation of any state sensitive or federally protected species would be reported to UDWR and USFWS.

3-D.8.8 Cultural Resources

During construction there is the potential to discover previous, unknown, cultural resources and Native American artifacts. In the event of cultural resources or Native American artifacts being discovered during construction, all work would cease until a qualified archaeologist was able to evaluate the site, document cultural resources, and coordinate with SHPO.

The contractor would be required to be trained on the procedures and protocol for discovery of cultural resources during construction prior to ground-disturbing activities.

3-D.8.9 Agricultural

The NWP may temporarily impact agricultural operations within the project study area. These impacts may include disruption of irrigation services, traffic and access disruptions and detours, dust, and loss of agricultural production. The contractor would be required to coordinate with affected property owners to maintain irrigation deliveries, if impacted during construction, provide access to their properties, and to minimize dust.

3-D.8.10 Soils

Several procedures would be used as necessary to prevent and minimize erosion and siltation during construction and during the period needed to reestablish permanent vegetative cover on disturbed sites. These include the use of a native and approved seed mix on disturbed areas. Vegetation clearing schedules would be arranged to minimize the practical exposure of soils. Final erosion control and site restoration measures would be initiated as soon as an area is no longer needed for construction, stockpiling, or access.

Upon project completion, all yards, offices, and construction buildings, including concrete footings and slabs, and all construction materials and debris would be removed from the site. Construction roads, if needed, would be restored to the original contour. Erosion control measures would be initiated as soon as an area is no longer needed for construction, stockpiling, or access. Upon completion of construction, any land disturbed, but not permanently occupied by new facilities would be graded to provide proper drainage and blend with the natural contours of the land and restored to its pre-construction condition. Where such lands were vegetated, they would be covered with topsoil stripped from construction areas, and revegetated, as appropriate, with plants native to the area and beneficial to wildlife.

3-D.8.11 Vegetation and Invasive Species

The NWP construction activities would disturb the ground surface and result in the removal of established vegetation. This disturbance could allow for the establishment or spread of invasive species and noxious weeds. Construction specifications require the contractor to preserve the natural landscape and prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the work vicinity. All trees, native shrubbery, and other vegetation would be preserved and protected from construction operations and equipment except where clearing operations are required for permanent structures, approved construction roads, or excavation operations. All maintenance yards, field offices, and staging areas would be arranged to preserve trees and vegetation to the maximum practicable extent. Clearing operations would be limited to those needed for construction. Areas around structures would be backfilled and compacted, and all disturbed areas reclaimed to the native vegetation type.

Disturbed areas, other than the grade and alignment for the proposed future roadway, if constructed, would be seeded with native grasses and erosion control measures would be put in place to prevent the incursion of invasive weed species while still complying with Reclamation and District standards regarding allowable vegetation.

To prevent the spreading of invasive species, the contractor would be required to adhere to the following guidelines as outlined in the specifications:

- Comply with the District's Integrated Pest Management Program, which requires ongoing monitoring for invasive species and noxious weeds, as well as treatment within the construction impact area
- The contractor will be required to limit the introduction or spread of invasive species from equipment, vehicles, and fill material
- Identify invasive and noxious weeds within the areas planned for earthwork operations;
- Treat areas identified as having invasive and noxious weeds with an approved herbicide within 10 days before starting earthwork operations
- Clean all earth-moving before entering the project site

3-D.8.12 Public Health and Safety

Construction of the NWP would increase traffic during construction to, from, and within the project study area. However, a Traffic Control Plan would be developed to address traffic concerns and minimize the hazards associated with construction related traffic. Further,

construction barriers and fencing would be used to clearly demarcate construction zones and prevent access to all but construction personnel.

The contractor will be required to develop a public involvement plan and to notify and update on construction activities that may impact them.

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