

**MITIGATION MONITORING PROGRAM
CEMENT HILL PUMP ZONE
Nevada Irrigation District**

NID's project manager will oversee the following best management practices (BMPs) and mitigation measures to ensure that they are implemented during the project. This includes ensuring that the BMPs and measures are included in construction contracts, and that field inspections are made as necessary in order to ensure that the contracted requirements are being implemented.

Project BMPs

NID will incorporate the following BMPs into the proposed project.

1. Construction activities shall be limited to a designated work area (including the work corridor and staging area). The work area will be clearly identified on the construction drawings and will be staked and flagged where necessary prior to initiation of construction activities.
2. The Underground Service Alert will be contacted 48 hours before construction to allow underground utilities to identify the location of their underground facilities and thus greatly reduce the possibility of an interruption in utility services.
3. All open trenches shall be filled or covered each night to protect pedestrians and vehicles as well as avoid entrapment of wildlife.
4. If adverse weather conditions threaten the transport of disturbed soils off site, temporary erosion control measures shall be immediately installed. Soil disturbance shall cease if worsening weather conditions increase the likelihood of transporting soil off site.
5. Where possible, minimize or avoid the removal of mature trees during construction. Any activities that may occur in the dripline of trees shall be minimized to the extent possible.
6. Construction will be limited to the hours between 7 a.m. and 7 p.m. on weekdays and Saturdays. Construction work on holidays recognized by NID will be avoided when practical.
7. All construction equipment must have sound-control devices no less effective than those provided on the original equipment. No equipment shall have an unmuffled exhaust system.
8. Additional noise-reduction measures will be implemented as appropriate, including but not limited to:
 - a. changing the location of stationary construction equipment when practical;
 - b. limiting equipment (i.e., construction equipment and trucks) to 5 or fewer minutes of idling time as well as rescheduling construction activity; and
 - c. notifying nearby residents 48 hours in advance of starting construction in an area not previously affected by recent construction activities.
9. To reduce potential contamination by spills, no refueling, storage, servicing, or maintenance of equipment will be performed within 50 feet of sensitive

environmental resources. No refueling or servicing will be done without absorbent material or drip pans underneath to contain spilled fuel. Any fluids drained from the machinery during servicing will be collected in leak-proof containers and taken to an appropriate disposal or recycling facility. If such activities result in spillage or accumulation of a product on the soil, the contaminated soil will be assessed and disposed of properly. Under no circumstances will contaminated soils be added to a spoils pile or trench backfill.

10. All maintenance materials (i.e., oils, grease, lubricants, antifreeze) will be stored at off-site staging areas. If these materials are required during field operations, they will be placed in a designated area away from site activities and sensitive resources.
11. Construction equipment exhaust emissions shall not exceed Northern Sierra Air Quality Management District (NSAQMD) *Rule 202 Visible Emission* limitations. Rule 202 stipulates:
 - a. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:
 - A. As dark or darker in shade as that designated as No. 1 on the Ringlemann Chart, as published by the United States Bureau of Mines, or
 - B. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (A) of this section.
12. The following required NSAQMD control measures will be implemented to control emissions from construction activities.
 - a. Alternatives to open burning of vegetative material will be used unless otherwise deemed infeasible by the NSAQMD. Among suitable alternatives are chipping, mulching, or conversion to biomass fuel.
 - b. Adequate dust control measures will be implemented in a timely and effective manner during all phases of project development and construction.
 - c. All material excavated, stockpiled, or graded should be sufficiently watered, treated or covered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.
 - d. All areas (including unpaved roads) with vehicle traffic should be watered or have dust palliatives applied, as necessary, for regular stabilization of dust emissions.
 - e. All on-site vehicles should be limited to a speed of 15 miles per hour (mph) on unpaved roads.
 - f. All land clearing, grading, earth moving or excavation activities on a project site will be suspended as necessary when winds are expected to exceed 20 mph.
 - g. All material transported off site will be either sufficiently watered or securely covered to prevent a public nuisance.

- h. Temporary traffic control will be provided during all phases of the construction to improve traffic flow as deemed appropriate by local transportation agencies and/or Caltrans.
 - i. Construction activities should be scheduled to direct traffic flow to off-peak hours as much as practicable.
 - j. All inactive portions of the construction site should be covered, seeded, or watered until a suitable cover is established.
 - k. The lead agency will be responsible for applying County-approved non-toxic soil stabilizers (according to manufacturer's specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours) in accordance with the local grading ordinance. Acceptable materials that may be used for chemical stabilization of soils include petroleum resins, asphaltic emulsions, acrylics and adhesives that do not violate Regional Water Quality Control Board or California Air Resource Board standards.
14. Construction shall comply with the BMPs set out in the NSAQMD's *Rule 226 Dust Control*. All grading operations will be suspended if fugitive dust exceeds Rule 226 Dust Control limitations. This consists of "visible dust of such opacity as to obscure an observer's view to a degree equal to or greater than an opacity of 20%, for a period or periods aggregating more than three (3) minutes in any one (1) hour." (The provisions of Rule 226, as of June 19, 2007 are attached to this MMRP.)
15. Construction activities located away from public and private road easements (i.e., off-road sites such as cross-country pipelines and the storage tank site) shall be contained to the width of acquired easements.
16. Should the tank site be located along the northerly edge of the area shown in Figure 3 of the IS/MND, the tank, future tank, and probably the future pump station would be visible to the existing residence and a few future residential home sites. Under these circumstances, if preferred by the owners, bushes, or trees, starting as seedlings or saplings, could be planted on the owners property by NID in such a way as to eventually filter their view of the tank(s).

Adopted Mitigation Measures

The following measures have been adopted by the NID Board of Directors as part of the approval of this project.

Mitigation Measure AIR-1. Implement Construction Emissions Control Technology.

The project construction contractor (or contractors) shall provide a plan, for approval by NID and NSAQMD, demonstrating that any heavy-duty (> 50 hp) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent ARB fleet average at time of construction. Control measures available to achieve emissions reductions include, but are not limited to, use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology (e.g., diesel

particulate matter filters and lean-NO_x or diesel oxidation catalysts) after-treatment products, and/or other options as they become available.

Mitigation Measure AIR-2. Require the Large Diesel-powered Off-road Equipment such as the Excavator, Crane, and Backhoe/Loader to Meet Federal Emissions Standards for Tier 1 or Tier 2.

The terms of the NID contract will provide that the construction contractor (or contractors) shall use off-road equipment that meets federal diesel particulate emissions standards for Tier 1 or Tier 2 or use DPM filters and/or diesel oxidation catalysts to reduce DPM emissions.

Mitigation Measure AIR-3. Implement ARB Airborne Toxic Control Measure (ATCM) for Naturally Occurring Asbestos.

If naturally occurring asbestos is found, the project proponent shall implement all feasible control measures required by the NSAQMD to comply with the requirements listed in the ARB's *Asbestos Airborne Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations*. Such measures include, but are not limited to, the following:

1. The NSAQMD is to be notified in writing at least fourteen (14) days before the beginning of the activity or in accordance with a procedure approved by the air district.
2. All the following dust control measures are implemented during any road construction or maintenance activity:
 - a. Unpaved areas subject to vehicle traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 % asbestos;
 - b. The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 mph unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 mph from emitting dust that is visible crossing the project boundaries;
 - c. Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 % asbestos; and
 - d. Activities must be conducted so that no track-out from any road construction project is visible on any paved roadway open to the public.
3. Equipment and operations must not cause the emission of any dust that is visible crossing the project boundaries.

Mitigation Measure BIO-1: Conduct Focused Surveys for Special-Status Plant Species.

A qualified biologist shall be engaged to conduct a focused survey for the following potentially occurring special-status plant species during the appropriate blooming season prior to initial ground disturbance to

determine presence or absence of the following species in the proposed project area.

- Butte County fritillary—March through May
- Brandegees' clarkia and Cantelow's lewisia—May through July
- Red-anthered rush, brownish-beaked rush, and bog club-moss—July

Mitigation Measure BIO-2: Avoid and Minimize Impacts on Special-Status Plant Species.

If the special status-plant species are present in the proposed project area, the biologist shall implement the following measures to avoid or minimize impacts on special-status plant species.

- Redesign or modify the project to avoid direct and indirect impacts on special-status plant species, if feasible.
- Protect special-status plant species in and near the proposed project area by installing environmentally sensitive area fencing (orange construction barrier fencing) around special-status plant populations. The environmentally sensitive area fencing shall be installed at least 20 feet from the edge of the population where feasible. Where special-status plant populations are located in wetlands, silt fencing shall also be installed. The location of the fencing shall be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications shall contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.

Mitigation Measure BIO-3: Compensate for Impacts on Special-Status Plant Species.

If avoidance is not feasible, NID shall compensate for the loss of area occupied by special-status plants. NID will coordinate with the appropriate resource agencies and local experts to determine whether transplantation of special-status plant species is feasible. If the agencies concur that it is a feasible mitigation measure, NID will retain a qualified restoration ecologist to work closely with resource agency specialists and knowledgeable individuals to identify a transplantation area and ensure that the area can be managed and protected in-perpetuity.

Transplantation of the plants that would be affected by the proposed project would involve: 1) identifying a suitable transplant site; 2) moving the plant material to the transplant site; and 3) monitoring the transplant sites to document recruitment and ensure survival.

The restoration ecologist will develop a detailed transplantation and monitoring plan that provides information on:

- coordination efforts with agencies and knowledgeable individuals;
- methods for collecting plant material from the affected populations;

- storage and transplantation methods;
- planting plan and specifications (including planting locations and densities and irrigation system, if needed);
- measurable success criteria that can be achieved within a 5-year period;
- monitoring and reporting methods and schedule;
- funding source and responsible party; and
- adaptive management measures to ensure that the desired success criteria are achieved.

The transplantation populations will be monitored to document the survival and recruitment rates over a period of time established through consultation with the resource agencies, but not less than 5 years. The populations would be monitored annually to document success rates and identify remedial actions and ensure transplantation success. The detailed transplant and monitoring plan would provide specific monitoring protocol and documentation process. A copy of the annual monitoring reports and the final monitoring report would be provided to the appropriate agencies, for their review.

Mitigation Measure BIO-4: Determine Whether CRLFs Occur in the Proposed Project Area.

NID shall retain a qualified biologist to prepare a site assessment and, if deemed necessary by the USFWS, the biologist will conduct protocol-level surveys to document the presence or absence of CRLF before implementation of the proposed project. The biologist shall implement USFWS' *Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog—August 2005* in all suitable aquatic habitat and surrounding areas.

The biologist shall first prepare and submit a site assessment for USFWS to determine whether there is potential for CRLFs to occur in aquatic and upland habitat in the proposed project area. If USFWS determines that suitable habitat for CRLF does occur in the proposed project area, NID can either assume presence or conduct protocol-level surveys to determine presence or absence.

If NID decides to pursue protocol-level surveys, they must conform to USFWS guidelines. The guidelines recommend that up to eight surveys be conducted to determine the presence of CRLF in the proposed project area. Two day surveys and four night surveys are recommended during the breeding season (January through June); and one day and one night survey is recommended during the non-breeding season (July 1 through September 30). Each survey must take place at least 7 days apart and at least one survey must be conducted prior to August 15. The survey period must be conducted over a minimum period of 6 weeks. If CRLF are identified at any time during the survey, no additional surveys will be

necessary. Any CRLF identified during the survey will be mapped and documented as part of the public record.

If NID assumes presence of CRLF or CRLF are identified during protocol-level surveys, NID will apply for take authorization through USFWS through Section 7 or 10 prior to the start of construction activities.

Mitigation Measure BIO-5: Avoid or Minimize Impacts to CRLFs by Protecting Frog Populations during Construction.

If CRLF are determined or assumed to be present, NID or its contractor shall implement the following measures before and during construction activities occurring within suitable habitat to minimize both direct and indirect impacts on CRLFs. USFWS may determine additional avoidance, minimization, and compensation requirements during the Section 7 or 10 process.

- Obtain a USFWS-approved biologist to conduct a preconstruction survey immediately preceding any construction activity that occurs in CRLF habitat or any activity that may result in take of the species. The USFWS-approved biologist will carefully search all obvious potential hiding spots for CRLFs and the perimeter of any aquatic habitat. In the event that a CRLF is found during the preconstruction survey, the biologist will implement minimization and avoidance measures identified in the Biological Opinion or Habitat Conservation Plan.
- Prepare an erosion and sediment control plan that will include measures to prevent impacts wetlands and aquatic habitat outside of the proposed project area. Tightly woven natural fiber netting or similar material will be used for erosion control or other purposes in the proposed project site to ensure that CRLFs are not trapped. This limitation will be communicated to the contractor through use of special provisions included in the bid solicitation package. Coconut coir matting is an acceptable erosion control material. No plastic monofilament matting will be used for erosion control.
- Limit access routes to proposed project area and the size of staging and work areas to the minimum necessary to achieve the project goals. Clearly mark routes and boundaries of the access roads prior to initiating construction/grading.
- Enclose all food and food-related trash in sealed trash containers at the end of each workday and remove it completely from the construction site once every 3 days.
- No pets will be allowed on the construction site.
- Maintain a speed limit of 15 mph on dirt roads.

- Maintain all equipment so that there will be no leakage of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly.
- Store all hazardous materials such as fuels, oils, solvents, etc., in sealable containers in a designated location that is at least 200 feet from the drainages or other aquatic habitats. All fueling and maintenance of vehicles and other equipment will occur at least 200 feet these areas.
- Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas and temporary roads, will be recontoured, if necessary, and revegetated to promote restoration of the area to preproject conditions. An area subject to “temporary” disturbance means any area that is disturbed during the project but that after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with revegetation experts.

Mitigation Measure BIO-6: Conduct Tree and Shrub Trimming and Removal Activities during the Non-breeding Season for Cooper’s Hawk, Sharp-Shinned Hawk, and Non-Special-Status Migratory Birds and Raptors or Retain a Qualified Biologist to Conduct a Nesting Bird Survey before Tree Removal Activities.

To avoid removing any active Cooper’s hawk, sharp-shinned hawk, or other non-special status bird and raptor nests, tree and shrub trimming and removal activities shall be conducted during the non-breeding season for these species (generally between August 16 and February 28).

If tree and shrub trimming and removal activities are conducted during nesting season (generally between March 1 and August 15), a preconstruction survey shall be conducted by a qualified biologist retained by NID to determine if there are active nests present. The survey will be conducted no more than 14 days prior to construction. If the biologist determines that the area surveyed does not contain any active nests, then trimming and removal activities can commence without any further mitigation.

If an active migratory bird or raptor nest is discovered during the nesting survey, a no-disturbance buffer will be established around the nest to avoid disturbance or destruction of the nest. The distance around the no-disturbance buffer will be determined by the biologist in coordination with California Department of Fish and Game and will depend on the level of noise or construction activity, the level of ambient noise in the vicinity of the nest, and line-of-sight between the nest and disturbance. The no-disturbance buffer will remain in place until after the nesting season (March 1 through August 15) or until the biologist determines that the young have fledged.

Mitigation Measure BIO-7: Implement Avoidance Measures on Drainage

Prior to beginning construction, NID will retain a qualified biologist to delineate Environmentally Sensitive Areas (ESAs) for limiting work areas near potential waters of the United States to the minimum possible area. The ESAs will be delineated on the ground prior to construction with temporary orange safety fencing. The fencing will include signs that clearly identify the habitat as an ESA.

Mitigation Measure BIO-8: Install Temporary Construction Fencing or Flagging to Protect Landmark Trees.

NID will require the contractor to install a 1.2-meter (4-foot) tall, brightly colored (usually yellow or orange), synthetic mesh high visibility exclusionary fence surrounding the trees' root zone. The fence shall be staked 10 feet on center maximum spacing, with 5-foot steel "T" posts, 2" by 2" square or greater than 2" diameter wood posts. The exclusionary area shall be under the tree's branched canopy and extending out to the tree's longest dripline radius as a circle. NID will avoid trenching within the dripline of landmark trees whenever practical. However, when it is not practical, and where excavation will be within the root protection zone, the fencing shall be 2 feet from the trench and extend around the rest of the canopy of the tree from that point. The fencing shall be maintained and not removed until the completion of excavation. The fencing may be removed once the NID completes the pipeline installation and backfills the trenches. If fencing is not practical because of access or traffic limitations, orange flagging around landmark tree trunks will act as a visual indicator for tree protection.

No construction activity, including grading, shall be allowed until this condition is satisfied. The fencing or flagging indicates the need for the contractor to exercise caution in those areas.

The fencing or flagging does not ensure the survival of the tree.

Efforts shall be made to save landmark trees where feasible.

The temporary construction fencing or flagging for landmark trees, and a note reflecting this condition, shall be shown on the design plans.

Mitigation Measure BIO-9: Where Practical, Avoid Large Trees During the Design Process.

Where practical design the project such that it will avoid removing large trees during construction. Use the following tree-sensitive design protocol. Preserve as many large trees as practicable during the design process while considering: 1) the specie of the tree (a cedar tree is not deemed as desirable as a pine tree or oak tree), 2) abundance of a particular specie within the immediate area (removing one pine tree from a group of six or seven large pine trees would not have as great an impact as removing one large solitary cedar), 3) apparent health of the tree (given the choice between removing a large healthy tree or one or more large diseased or otherwise impaired or disfigured tree or trees; save the healthy tree), proximity of a large tree to other large trees

(attempt to avoid the single solitary large tree in favor of taking one or two trees that are close to and which loss will be otherwise somewhat compensated for by the remaining large trees), proximity of large trees to homes or that are part of a developed landscaped area (avoid trees close to homes that provide shade, and other aesthetic value to landscaped areas), the general aesthetic value of the large tree to the overall area (avoid specific large trees that provide unique aesthetic value).

Mitigation Measure BIO-10: Where Practical, Hand Dig or Bore under the Roots to Save Larger Trees.

Where practical, boring might be utilized to lessen the impact to the root systems and/or to save landmark or other native trees. Boring might be done by machine or hand digging. Roots larger than 1 inch in diameter shall be clean cut with pruners, loppers, or handsaws after the trenching. If any construction equipment cuts any roots larger than 3 inches in diameter, the root should be cut squarely to remove any scraps, rips, or breaks.

Mitigation Measure BIO-11: Mulch below Landmark or Other Native Trees after Trenching

NID will require the contractor to mulch the area under trees that occur outside of road cross-sections (top of cut to toe of fill) that have been stripped of natural mulch with pine needles or a fine shredded redwood bark (up to 4-6 inches) to hold moisture in the root system. Mulching right up to the trunks should be avoided, as this will cause the trunks to be more prone to rot.

Mitigation Measure CR-1: Conduct Built Environment Historical Resource Studies

If the proposed project physically alters or causes the destruction of any built environment resources, then prior to construction, NID would ensure that an inventory and evaluation is conducted for buildings, structures, and/or linear features (canals) that are 50 years old or older (including any associated features) and are in close proximity (approximately 30 feet) to proposed construction. The inventory and evaluation would include a field survey, background research on the history of the project area, and property specific research. Based on this research, the significance of built environment resources located in the project area would be evaluated using criteria for listing in the CRHR. Additionally, the buildings, structures, or linear features would be recorded on the appropriate Department of Parks and Recreation (DPR) 523 forms, photographed, and mapped. The DPR forms would be produced and forwarded to the NCIC. For linear features, mitigation such as boring under may be suggested. It should be recognized, however, that if the project results in the substantial loss of historic integrity to character-defining features of, or the demolition or destruction of a historically significant built environment resource that it cannot be mitigated to a less-than-significant impact, and subsequent CEQA analysis may be necessary to make such a finding.

Mitigation Measure CR-2: Conduct Archaeological Resource Studies

NID would ensure that an archaeological inventory of the proposed project area is conducted as indicated in Implementation Measure CR-1. This study would include contacting Native American representatives and other interested parties, conducting background research, and conducting a pedestrian inventory of the proposed project area. All resources located as a result of a survey would be recorded on the appropriate Department of Parks and Recreation (DPR) 523 forms, photographed, and mapped. Archaeological resources would be plotted on a 7.5-minute U.S. Geological Survey (USGS) topographic map using data collected with a GPS receiver. Site records would be produced and forwarded to the Central California Information Center. The significance of resources would be evaluated using criteria for listing in the CRHR. Impacts to historical resources located as a result of a survey would be analyzed and mitigated if they cannot be avoided. Mitigation measures may include archaeological excavation or monitoring.

Mitigation Measure CR-3: Implement Plan to Address Discovery of Unanticipated Buried Cultural or Paleontological Resources

If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, or paleontological resources are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the NID and other appropriate agencies.

Mitigation Measure CR-4: Implement Plan to Address Discovery of Human Remains

If remains of Native American origin are discovered during proposed project construction, it shall be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the NAHC. If any human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- the County coroner has been informed and has determined that no investigation of the cause of death is required; and
- if the remains are of Native American origin:
 - the most likely descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or
 - the NAHC has been unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

Mitigation Measure HWQ-1: Implement BMPs to Control Discharge of Construction-Related Pollutants to Surface Waters

Because project construction will cover an area greater than 1 acre, a SWPPP will be prepared by NID or its contractors, as required by the State Water Resources Control Board (SWRCB) under the statewide *NPDES General Permit for Discharges of Storm Water Associated with Construction Activity* (National Pollutant Discharge Elimination System Permit No. CAS000002). The SWPPP shall meet the requirements of the SWRCB, as well as any requirements of the County.

The discharger (NID) will submit a Notice of Intent (NOI) to the SWRCB and obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit prior to any soil disturbance. Coverage under this permit would not commence until the discharger develops an adequate SWPPP for the project. The SWPPP must be implemented at the appropriate level to protect water quality at all times throughout the life of the proposed project. The SWPPP's major objectives are to:

Identify all pollutant sources, including sources of sediment, from the construction site as follows:

- identify non-storm water discharges;
- construct and implement BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges; and
- develop a maintenance schedule for all post-construction BMPs designed to reduce or eliminate pollutants.

The NPDES General Construction Permit requires development and implementation of a monitoring program. The program must be implemented at the start of construction activity and include inspections that:

- identify areas contributing to stormwater discharge;
- evaluate whether BMPs identified in the SWPPP are adequate and functioning properly;
- evaluate whether additional control practices or corrective maintenance activities are needed; and

- develop a sampling and analysis plan that accurately identifies potential sources of pollutants and the locations where these pollutants have the potential to discharge off site.

When construction is complete, NID will submit a Notice of Termination (NOT) to the SWRCB to revoke coverage under the NPDES General Construction Permit. The NOT form will certify that:

- construction activities have been completed;
- all elements of the site specific SWPPP have been completed;
- construction materials and waste have been disposed of properly;
- the site is in compliance with all local stormwater management requirements; and
- a post-construction stormwater operation and management plan is in place.

Mitigation Measure HWQ-2: Implement a Hazardous Spill Prevention and Control Program

In addition to BMP Numbers 9 and 10 included in the *Project Description* of the IS/MND, and as part of requiring compliance with the NPDES General Construction Permit, NID or its contractors shall develop and implement a spill prevention and control program to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities. The plan shall be completed before any construction activities begin, and shall include provisions for preventing, containing, and reporting spills of hazardous materials. NID or its contractors shall be responsible for training workers regarding the sensitivity of creeks in the proposed project area. Fueling and equipment maintenance will be prohibited in these areas.

NID shall review and approve the spill prevention and control program before onset of construction activities. NID shall routinely inspect the construction area to verify that the measures specified in the spill prevention and control program are properly implemented and maintained. NID shall notify contractors immediately if there is a noncompliance issue and will require compliance.

The federal reportable spill quantity for petroleum products, as defined in 40 CFR 110, is any oil spill that:

- violates applicable water quality standards;
- causes a film or sheen on, or discoloration of, the water surface or adjoining shoreline; or
- causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

If a spill is reportable, the proposed project site's superintendent shall notify NID immediately, and NID shall take action to contact the appropriate safety and clean-up crews to ensure the spill prevention and control program is followed. A written description of reportable releases must be submitted to the Central Valley Regional Water Quality Control Board (Central Valley Water Board) and the State Department of Toxics and Substance Control (DTSC). This submittal must contain a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.

If an appreciable spill has occurred and results determine that project activities have adversely affected surface water or groundwater quality, a detailed analysis will be performed to the specifications of DTSC to identify the likely cause of contamination. This analysis will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, NID will select and implement measures to control contamination, with a performance standard that surface and/or groundwater quality must be returned to baseline conditions.

Mitigation Measure HWQ-3: Prepare and Implement a Frac-Out Contingency Plan.

If microtunneling is used, NID or its contractors will prepare and implement a Frac-Out Contingency Plan to minimize the potential for a frac-out associated with microtunneling activities; provide for the timely detection of frac-outs; and ensure an organized, timely, and "minimum-impact" response in the event of a frac-out and release of drilling mud. The contingency plan will require, at a minimum, the following measures.

- A full-time monitor shall attend all drilling to look for observable frac-out conditions or lowered pressure readings on drilling equipment.
- If a frac-out is identified, all work shall stop, including the recycling of drilling mud/lubricant. In the event of a frac out into water, the pressure of water above the tunnel shall keep excess mud from escaping through the fracture. The location and extent of the frac-out shall be determined, and the frac-out shall be monitored for 4 hours to determine whether the drilling mud congeals (bentonite will usually harden, effectively sealing the frac-out location).
- If the drilling mud congeals, no other actions shall be taken that would potentially suspend sediments in the water column.
- Surface releases of bentonite shall be allowed to harden, and shall be removed.
- The contingency plan shall identify additional measures to be taken to contain or remove the drilling mud if it does not congeal.

Mitigation Measure HWQ-4: Implement BMPs to Control Discharges of Operation-Related Pollutants

NID shall implement best management practices (BMPs) for dewatering of the storage tank and water mains and discharges from the pressure-reducing stations to protect beneficial uses of surface waters. BMPs may include containing the water on site such that there is no discharge to surface waters and/or discharging the water to the sanitary sewer. If discharge to surface waters is unavoidable, then BMPs to prevent degradation of the receiving water would be implemented. Those BMPs shall include use of the existing abandoned reservoir at the old treatment plant site, dechlorination, and measures to control the discharge rate to prevent erosion of the receiving water. NID will conduct water quality monitoring to ensure adequate dechlorination and record management practices.

Implementation of appropriate BMPs, which may include onsite containment, discharge to the sanitary sewer, and/or dechlorination of the discharge, will ensure that dewatering and discharge activities will not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.

Mitigation Measure HWQ-5: Implement Stormwater BMPs to Prevent Flooding and Water Quality Degradation

During project design, NID shall estimate the quantity of runoff generated from new impervious facilities and design stormwater facilities to receive and convey runoff in a manner that utilizes the most feasible and best available technology to prevent flooding and water quality degradation. Use of existing roadside drainages, use of existing reservoirs, and construction of new runoff detention/retention facilities are potential options for stormwater management, if adequate for the estimated quantity of runoff generated from new impervious facilities. Design of the selected stormwater management facility shall incorporate measures to ensure groundwater quality is protected, if the facility incorporates infiltration, and provide adequate protection against erosion at discharge locations, if captured storm water is released at a reduced rate. NID shall annually inspect and manage the selected stormwater management facility to ensure long-term prevention of storm runoff-related impacts to surface waters.

Mitigation Measure NOI-1: Employ Measures To Reduce Airblast and Vibration from Blasting.

NID shall retain a qualified blasting specialist to develop a site-specific blasting program report to assess, control, and monitor airblast and ground vibration from blasting. The report shall include, at minimum, the following measures:

- The contractor shall use current state-of-the-art technology to keep blast-related vibration at offsite residential and other occupied structures as low as possible, consistent with blasting safety. In no instance shall blast vibration, measured on the ground adjacent to a residential or other

occupied structure, be allowed to exceed the frequency-dependent limits specified in the Alternative Blasting Level Criteria contained in U.S. Bureau of Mines Report of Investigations 8507.

- The project contractor shall use current state-of-the-art technology to keep airblast at offsite residential and other occupied structures as low as possible. In no instance shall airblast, measured at a residence or other occupied structure, be allowed to exceed the 0.013-psi (133-dB) limit recommended in U.S. Bureau of Mines Report of Investigations 8485.
- Where residences and other occupied structures are within 1,000 feet of a blast, the project contractor shall monitor and record airblast and the vibration of the blasts to verify that measured levels are within the recommended limits at those locations. Monitoring shall take place at the residence or occupied structure that is nearest the blast. The contractor shall use blasting seismographs containing three channels that record in three mutually perpendicular axes and which have a fourth channel for recording airblast. The frequency response of the instrumentation shall be from 2 to 250 Hz, with a minimum sampling rate of 1,000 samples per second per channel. The recorded data must be such that the frequency of the vibrations can be determined readily. If blasting is found to exceed specified levels, blasting shall cease, and alternative blasting or excavation methods that result in the specified levels not being exceeded shall be employed.
- The contractor shall hire a qualified firm to perform pre- and post-construction inspection of residences and other occupied structures within 500 feet of the blast site. The qualified firm shall prepare a report of pre- and post-blast condition of the residence or other structure. The contractor shall repair all damage identified in the report that is the result of blasting.
- Airblast and vibration monitoring shall take place at the nearest offsite residential or other occupied structure. If vibration levels are expected to be lower than those required to trigger the seismograph at that location, or if permission cannot be obtained to record at that location, recording shall be accomplished at some closer site in line with the structure. Specific locations and distances where airblast and vibration are measured shall be documented in detail along with measured airblast and vibration amplitudes.

Mitigation Measure NOI-2. Design Project Facilities to Meet Nevada County Noise Standards.

NID shall design the exhaust fans, pump house, and emergency generator enclosure/soundwall such that sound levels do not exceed County standards (Table 8) at the property line of the nearest noise-sensitive land use. Treatments to reduce noise include, but are not limited to: employing exhaust muffling devices, constructing enclosures around equipment, installation of noise absorptive treatments and other noise insulating materials, and locating equipment away from noise sensitive uses. NID shall retain a qualified acoustical professional to

determine that the treatments are sufficient to reduce sound levels below County standards at the property line.

Mitigation Measure TR-1: Utilize Safety Regulations on Private Roads during Pipeline Construction.

The following requirements shall apply to private roads where pipelines are to be installed:

- Trenches shall be covered at the end of each working day so that there are no open trenches when work is not going on.
- All traffic control, including devices and personnel requirements, shall be as required by the current State of California Manual of Traffic Controls for Construction and Maintenance Work Zones.
- Traffic shall be permitted to pass with no more than 20-minute delays during work hours.
- One-way traffic may be maintained in the area of work only during daylight hours.
- Two-way traffic shall be maintained at all times during hours of darkness and, where practical, during daylight hours.
- Any barricades shall be fitted with lights at night.
- During construction, any potential hazard, such as mud or gravel, shall be removed immediately, and in no case may material be allowed to remain on the surface at the end of the working day.

Table 1 Mitigation and Monitoring Program, Nevada Irrigation District Cement Hill Pump Zone

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
|---|---------------------|-------------------------------|----------------------------|------------------|
| <p>Mitigation Measure AIR-1. Implement Construction Emissions Control Technology. The project construction contractor (or contractors) shall provide a plan, for approval by NID and NSAQMD, demonstrating that any heavy-duty (> 50 hp) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent ARB fleet average at time of construction. Control measures available to achieve emissions reductions include, but are not limited to, use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology (e.g., diesel particulate matter filters and lean-NO_x or diesel oxidation catalysts) after-treatment products, and/or other options as they become available.</p> | During Construction | Construction Contractor | Nevada Irrigation District | |
| <p>Mitigation Measure AIR-2. Require the Large Diesel-powered Off-road Equipment such as the Excavator, Crane, and Backhoe/Loader to Meet Federal Emissions Standards for Tier 1 or Tier 2. The terms of the NID contract will provide that the construction contractor (or contractors) shall use off-road equipment that meets federal diesel particulate emissions standards for Tier 1 or Tier 2 or use DPM filters and/or diesel oxidation catalysts to reduce DPM emissions.</p> | During Construction | Construction Contractor | Nevada Irrigation District | |
| <p>Mitigation Measure AIR-3. Implement ARB Airborne Toxic Control Measure (ATCM) for Naturally Occurring Asbestos. If naturally occurring asbestos is found, the project proponent shall implement all feasible control measures required by the NSAQMD to comply with the requirements listed in the ARB’s Asbestos Airborne Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations. Such measures include, but are not limited to, the following:</p> <ol style="list-style-type: none"> 1) The NSAQMD is to be notified in writing at least fourteen (14) days before the beginning of the activity or in accordance with a procedure approved by the air district. 2) All the following dust control measures are implemented during any road construction or maintenance activity: <ol style="list-style-type: none"> a. Unpaved areas subject to vehicle traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 % asbestos; b. The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 mph unless the road surface and surrounding area is sufficiently stabilized | During Construction | Construction Contractor | Nevada Irrigation District | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>to prevent vehicles and equipment traveling more than 15 mph from emitting dust that is visible crossing the project boundaries;</p> <p>c. Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 % asbestos; and</p> <p>d. Activities must be conducted so that no track-out from any road construction project is visible on any paved roadway open to the public.</p> <p>e. Equipment and operations must not cause the emission of any dust that is visible crossing the project boundaries.</p> | | | | |
| <p>Mitigation Measure BIO-1: Conduct Focused Surveys for Special-Status Plant Species. A qualified biologist shall be engaged to conduct a focused survey for the following potentially occurring special-status plant species during the appropriate blooming season prior to initial ground disturbance to determine presence or absence of the following species in the proposed project area.</p> <ul style="list-style-type: none"> ■ Butte County fritillary—March through May ■ Brandegee’s clarkia and Cantelow’s lewisia—May through July ■ Red-anthered rush, brownish-beaked rush, and bog club-moss—July | <p>Before Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure BIO-2: Avoid and Minimize Impacts on Special-Status Plant Species. If the special status-status plant species are present in the proposed project area, the biologist shall implement the following measures to avoid or minimize impacts on special-status plant species.</p> <ul style="list-style-type: none"> ■ Redesign or modify the project to avoid direct and indirect impacts on special-status plant species, if feasible. ■ Protect special-status plant species in and near the proposed project area by installing environmentally sensitive area fencing (orange construction barrier fencing) around special-status plant populations. The environmentally sensitive area fencing shall be installed at least 20 feet from the edge of the population where feasible. Where special-status plant populations are located in wetlands, silt fencing shall also be installed. The location of the | <p>Before and During Contraction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>fencing shall be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications shall contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.</p> | | | | |
| <p>Mitigation Measure BIO-3: Compensate for Impacts on Special-Status Plant Species. If avoidance is not feasible, NID shall compensate for the loss of area occupied by special-status plants. NID will coordinate with the appropriate resource agencies and local experts to determine whether transplantation of special-status plant species is feasible. If the agencies concur that it is a feasible mitigation measure, NID will retain a qualified restoration ecologist to work closely with resource agency specialists and knowledgeable individuals to identify a transplantation area and ensure that the area can be managed and protected in-perpetuity. Transplantation of the plants that would be affected by the proposed project would involve: 1) identifying a suitable transplant site; 2) moving the plant material to the transplant site; and 3) monitoring the transplant sites to document recruitment and ensure survival.</p> <p>The restoration ecologist will develop a detailed transplantation and monitoring plan that provides information on:</p> <ul style="list-style-type: none"> ■ coordination efforts with agencies and knowledgeable individuals; ■ methods for collecting plant material from the affected populations; ■ storage and transplantation methods; ■ planting plan and specifications (including planting locations and densities and irrigation system, if needed); ■ measurable success criteria that can be achieved within a 5-year period; ■ monitoring and reporting methods and schedule; ■ funding source and responsible party; and ■ adaptive management measures to ensure that the desired success criteria are achieved. | <p>During and after Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>The transplantation populations will be monitored to document the survival and recruitment rates over a period of time established through consultation with the resource agencies, but not less than 5 years. The populations would be monitored annually to document success rates and</p> | | | | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>identify remedial actions and ensure transplantation success. The detailed transplant and monitoring plan would provide specific monitoring protocol and documentation process. A copy of the annual monitoring reports and the final monitoring report would be provided to the appropriate agencies, for their review.</p> | | | | |
| <p>Mitigation Measure BIO-4: Determine Whether CRLFs Occur in the Proposed Project Area. NID shall retain a qualified biologist to prepare a site assessment and, if deemed necessary by the USFWS, the biologist will conduct protocol-level surveys to document the presence or absence of CRLF before implementation of the proposed project. The biologist shall implement USFWS’ Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog—August 2005 in all suitable aquatic habitat and surrounding areas.</p> <p>The biologist shall first prepare and submit a site assessment for USFWS to determine whether there is potential for CRLFs to occur in aquatic and upland habitat in the proposed project area. If USFWS determines that suitable habitat for CRLF does occur in the proposed project area, NID can either assume presence or conduct protocol-level surveys to determine presence or absence.</p> <p>If NID decides to pursue protocol-level surveys, they must conform to USFWS guidelines. The guidelines recommend that up to eight surveys be conducted to determine the presence of CRLF in the proposed project area. Two day surveys and four night surveys are recommended during the breeding season (January through June); and one day and one night survey is recommended during the non-breeding season (July 1 through September 30). Each survey must take place at least 7 days apart and at least one survey must be conducted prior to August 15. The survey period must conducted be over a minimum period of 6 weeks. If CRLF are identified at any time during the survey, no additional surveys will be necessary. Any CRLF identified during the survey will be mapped and documented as part of the public record.</p> <p>If NID assumes presence of CRLF or CRLF are identified during protocol-level surveys, NID will apply for take authorization through USFWS through Section 7 or 10 prior to the start of construction activities.</p> <p>Mitigation Measure BIO-5: Avoid or Minimize Impacts to CRLFs by Protecting Frog Populations during Construction. If CRLF are determined or assumed to be present, NID or its contractor shall implement the following measures before and during construction activities occurring within suitable habitat to</p> | <p>Before Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>minimize both direct and indirect impacts on CRLFs. USFWS may determine additional avoidance, minimization, and compensation requirements during the Section 7 or 10 process.</p> <ul style="list-style-type: none"> ■ Obtain a USFWS-approved biologist to conduct a preconstruction survey immediately preceding any construction activity that occurs in CRLF habitat or any activity that may result in take of the species. The USFWS-approved biologist will carefully search all obvious potential hiding spots for CRLFs and the perimeter of any aquatic habitat. In the event that a CRLF is found during the preconstruction survey, the biologist will implement minimization and avoidance measures identified in the Biological Opinion or Habitat Conservation Plan. ■ Prepare an erosion and sediment control plan that will include measures to prevent impacts wetlands and aquatic habitat outside of the proposed project area. Tightly woven natural fiber netting or similar material will be used for erosion control or other purposes in the proposed project site to ensure that CRLFs are not trapped. This limitation will be communicated to the contractor through use of special provisions included in the bid solicitation package. Coconut coir matting is an acceptable erosion control material. No plastic monofilament matting will be used for erosion control. ■ Limit access routes to proposed project area and the size of staging and work areas to the minimum necessary to achieve the project goals. Clearly mark routes and boundaries of the access roads prior to initiating construction/grading. ■ Enclose all food and food-related trash in sealed trash containers at the end of each workday and remove it completely from the construction site once every 3 days. ■ No pets will be allowed on the construction site. ■ Maintain a speed limit of 15 mph on dirt roads. ■ Maintain all equipment so that there will be no leakage of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly. ■ Store all hazardous materials such as fuels, oils, solvents, etc., in sealable containers in a designated location that is at least 200 feet from the drainages or other aquatic habitats. All fueling and maintenance of vehicles and other equipment will occur at least 200 feet these areas. | | | | |

Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas and temporary roads, will be recontoured, if necessary, and revegetated

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>to promote restoration of the area to preproject conditions. An area subject to “temporary” disturbance means any area that is disturbed during the project but that after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with revegetation experts.</p> | | | | |
| <p>Mitigation Measure BIO-6: Conduct Tree and Shrub Trimming and Removal Activities during the Non-breeding Season for Cooper’s Hawk, Sharp-Shinned Hawk, and Non-Special-Status Migratory Birds and Raptors or Retain a Qualified Biologist to Conduct a Nesting Bird Survey before Tree Removal Activities.</p> <p>To avoid removing any active Cooper’s hawk, sharp-shinned hawk, or other non-special status bird and raptor nests, tree and shrub trimming and removal activities shall be conducted during the non-breeding season for these species (generally between August 16 and February 28).</p> <p>If tree and shrub trimming and removal activities are conducted during nesting season (generally between March 1 and August 15), a preconstruction survey shall be conducted by a qualified biologist retained by NID to determine if there are active nests present. The survey will be conducted no more than 14 days prior to construction. If the biologist determines that the area surveyed does not contain any active nests, then trimming and removal activities can commence without any further mitigation.</p> <p>If an active migratory bird or raptor nest is discovered during the nesting survey, a no-disturbance buffer will be established around the nest to avoid disturbance or destruction of the nest. The distance around the no-disturbance buffer will be determined by the biologist in coordination with California Department of Fish and Game and will depend on the level of noise or construction activity, the level of ambient noise in the vicinity of the nest, and line-of-sight between the nest and disturbance. The no-disturbance buffer will remain in place until after the nesting season (March 1 through August 15) or until the biologist determines that the young have fledged.</p> | <p>Before Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure BIO-7: Implement Avoidance Measures on Drainage.</p> <p>Prior to beginning construction, NID will retain a qualified biologist to delineate Environmentally Sensitive Areas (ESAs) for limiting work areas near potential waters of the United States to the minimum possible area. The ESAs will be delineated on the ground prior to construction with temporary orange safety fencing. The fencing will include signs that clearly identify the habitat as an ESA.</p> | <p>Before Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>Mitigation Measure BIO-8: Install Temporary Construction Fencing or Flagging to Protect Landmark Trees. NID will require the contractor to install a 1.2-meter (4-foot) tall, brightly colored (usually yellow or orange), synthetic mesh high visibility exclusionary fence surrounding the trees’ root zone. The fence shall be staked 10 feet on center maximum spacing, with 5-foot steel “T” posts, 2” by 2” square or greater than 2” diameter wood posts. The exclusionary area shall be under the tree’s branched canopy and extending out to the tree’s longest dripline radius as a circle. NID will avoid trenching within the dripline of landmark trees whenever practical. However, when it is not practical, and where excavation will be within the root protection zone, the fencing shall be 2 feet from the trench and extend around the rest of the canopy of the tree from that point. The fencing shall be maintained and not removed until the completion of excavation. The fencing may be removed once the NID completes the pipeline installation and backfills the trenches. If fencing is not practical because of access or traffic limitations, orange flagging around landmark tree trunks will act as a visual indicator for tree protection.</p> <p>No construction activity, including grading, shall be allowed until this condition is satisfied. The fencing or flagging indicates the need for the contractor to exercise caution in those areas.</p> <p>The fencing or flagging does not ensure the survival of the tree.</p> <p>Efforts shall be made to save landmark trees where feasible.</p> <p>The temporary construction fencing or flagging for landmark trees, and a note reflecting this condition, shall be shown on the design plans.</p> | <p>Before and During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure BIO-9: Where Practical, Avoid Large Trees During the Design Process. Where practical design the project such that it will avoid removing large trees during construction. Use the following tree-sensitive design protocol. Preserve as many large trees as practicable during the design process while considering: 1) the specie of the tree (a cedar tree is not deemed as desirable as a pine tree or oak tree), 2) abundance of a particular specie within the immediate area (removing one pine tree from a group of six or seven large pine trees would not have as great an impact as removing one large solitary cedar), 3) apparent health of the tree (given the choice between removing a large healthy tree or one or more large diseased or otherwise impaired or disfigured tree or trees; save the healthy tree), proximity of a large tree to other large trees (attempt to avoid the single solitary large tree in favor of taking one or two trees that are close to and which loss will be otherwise somewhat compensated for by the remaining</p> | <p>Before Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>large trees), proximity of large trees to homes or that are part of a developed landscaped area (avoid trees close to homes that provide shade, and other aesthetic value to landscaped areas), the general aesthetic value of the large tree to the overall area (avoid specific large trees that provide unique aesthetic value).</p> | | | | |
| <p>Mitigation Measure BIO-10: Where Practical, Hand Dig or Bore under the Roots to Save Larger Trees. Where practical, boring might be utilized to lessen the impact to the root systems and/or to save landmark or other native trees. Boring might be done by machine or hand digging. Roots larger than 1 inch in diameter shall be clean cut with pruners, loppers, or handsaws after the trenching. If any construction equipment cuts any roots larger than 3 inches in diameter, the root should be cut squarely to remove any scraps, rips, or breaks.</p> | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure BIO-11: Mulch below Landmark or Other Native Trees after Trenching. NID will require the contractor to mulch the area under trees that occur outside of road cross-sections (top of cut to toe of fill) that have been stripped of natural mulch with pine needles or a fine shredded redwood bark (up to 4-6 inches) to hold moisture in the root system. Mulching right up to the trunks should be avoided, as this will cause the trunks to be more prone to rot.</p> | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure CR-1: Conduct Built Environment Historical Resource Studies. If the proposed project physically alters or causes the destruction of any built environment resources, then prior to construction, NID would ensure that an inventory and evaluation is conducted for buildings, structures, and/or linear features (canals) that are 50 years old or older (including any associated features) and are in close proximity (approximately 30 feet) to proposed construction. The inventory and evaluation would include a field survey, background research on the history of the project area, and property specific research. Based on this research, the significance of built environment resources located in the project area would be evaluated using criteria for listing in the CRHR. Additionally, the buildings, structures, or linear features would be recorded on the appropriate Department of Parks and Recreation (DPR) 523 forms, photographed, and mapped. The DPR forms would be produced and forwarded to the NCIC. For linear features, mitigation such as boring under may be suggested. It should be recognized, however, that if the project results in the substantial loss of historic integrity to character-defining features of, or the demolition or destruction of a historically significant built environment resource that it cannot be mitigated to a less-than-significant impact, and</p> | <p>Before Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>subsequent CEQA analysis may be necessary to make such a finding.</p> | | | | |
| <p>Mitigation Measure CR-2: Conduct Archaeological Resource Studies. NID would ensure that an archaeological inventory of the proposed project area is conducted as indicated in Implementation Measure CR-I. This study would include contacting Native American representatives and other interested parties, conducting background research, and conducting a pedestrian inventory of the proposed project area. All resources located as a result of a survey would be recorded on the appropriate Department of Parks and Recreation (DPR) 523 forms, photographed, and mapped. Archaeological resources would be plotted on a 7.5-minute U.S. Geological Survey (USGS) topographic map using data collected with a GPS receiver. Site records would be produced and forwarded to the Central California Information Center. The significance of resources would be evaluated using criteria for listing in the CRHR. Impacts to historical resources located as a result of a survey would be analyzed and mitigated if they cannot be avoided. Mitigation measures may include archaeological excavation or monitoring.</p> | <p>Before Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure CR-3: Implement Plan to Address Discovery of Unanticipated Buried Cultural or Paleontological Resources. If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, or paleontological resources are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the NID and other appropriate agencies.</p> | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure CR-4: Implement Plan to Address Discovery of Human Remains. If remains of Native American origin are discovered during proposed project construction, it shall be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the NAHC. If any human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <ul style="list-style-type: none"> ■ the County coroner has been informed and has determined that no investigation of the cause of death is required; and ■ if the remains are of Native American origin: | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <ul style="list-style-type: none"> ❑ the most likely descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or ❑ the NAHC has been unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified. | | | | |
| <p>According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.</p> | | | | |
| <p>Mitigation Measure HWQ-1: Implement BMPs to Control Discharge of Construction-Related Pollutants to Surface Waters.</p> <p>Because project construction will cover an area greater than 1 acre, a SWPPP will be prepared by NID or its contractors, as required by the State Water Resources Control Board (SWRCB) under the statewide <i>NPDES General Permit for Discharges of Storm Water Associated with Construction Activity</i> (National Pollutant Discharge Elimination System Permit No. CAS000002). The SWPPP shall meet the requirements of the SWRCB, as well as any requirements of the County.</p> <p>The discharger (NID) will submit a Notice of Intent (NOI) to the SWRCB and obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit prior to any soil disturbance. Coverage under this permit would not commence until the discharger develops an adequate SWPPP for the project. The SWPPP must be implemented at the appropriate level to protect water quality at all times throughout the life of the proposed project. The SWPPP’s major objectives are to:</p> <p>Identify all pollutant sources, including sources of sediment, from the construction site as follows:</p> <ul style="list-style-type: none"> ■ identify non-storm water discharges; ■ construct and implement BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges; and | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <ul style="list-style-type: none"> ■ develop a maintenance schedule for all post-construction BMPs designed to reduce or eliminate pollutants. <p>The NPDES General Construction Permit requires development and implementation of a monitoring program. The program must be implemented at the start of construction activity and include inspections that:</p> <ul style="list-style-type: none"> ■ identify areas contributing to stormwater discharge; ■ evaluate whether BMPs identified in the SWPPP are adequate and functioning properly; ■ evaluate whether additional control practices or corrective maintenance activities are needed; and ■ develop a sampling and analysis plan that accurately identifies potential sources of pollutants and the locations where these pollutants have the potential to discharge off site. ■ When construction is complete, NID will submit a Notice of Termination (NOT) to the SWRCB to revoke coverage under the NPDES General Construction Permit. The NOT form will certify that: <ul style="list-style-type: none"> ■ construction activities have been completed; ■ all elements of the site specific SWPPP have been completed; ■ construction materials and waste have been disposed of properly; ■ the site is in compliance with all local stormwater management requirements; and ■ a post-construction stormwater operation and management plan is in place. | | | | |
| <p>Mitigation Measure HWQ-2: Implement a Hazardous Spill Prevention and Control Program.</p> <p>In addition to BMP Numbers 9 and 10 included in the <i>Project Description</i> of the IS/MND, and as part of requiring compliance with the NPDES General Construction Permit, NID or its contractors shall develop and implement a spill prevention and control program to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities. The plan shall be completed before any construction activities begin, and shall include provisions for preventing, containing, and reporting spills of hazardous materials. NID or its contractors shall</p> | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

| Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Monitoring Notes |
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| <p>be responsible for training workers regarding the sensitivity of creeks in the proposed project area. Fueling and equipment maintenance will be prohibited in these areas.</p> <p>NID shall review and approve the spill prevention and control program before onset of construction activities. NID shall routinely inspect the construction area to verify that the measures specified in the spill prevention and control program are properly implemented and maintained. NID shall notify contractors immediately if there is a noncompliance issue and will require compliance.</p> <p>The federal reportable spill quantity for petroleum products, as defined in 40 CFR 110, is any oil spill that:</p> <ul style="list-style-type: none"> ■ violates applicable water quality standards; ■ causes a film or sheen on, or discoloration of, the water surface or adjoining shoreline; or ■ causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines. <p>If a spill is reportable, the proposed project site’s superintendent shall notify NID immediately, and NID shall take action to contact the appropriate safety and clean-up crews to ensure the spill prevention and control program is followed. A written description of reportable releases must be submitted to the Central Valley Regional Water Quality Control Board (Central Valley Water Board) and the State Department of Toxics and Substance Control (DTSC). This submittal must contain a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.</p> <p>If an appreciable spill has occurred and results determine that project activities have adversely affected surface water or groundwater quality, a detailed analysis will be performed to the specifications of DTSC to identify the likely cause of contamination. This analysis will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, NID will select and implement measures to control contamination, with a performance standard that surface and/or groundwater quality must be returned to baseline conditions.</p> | | | | |

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| <p>Mitigation Measure HWQ-3: Prepare and Implement a Frac-Out Contingency Plan. If microtunneling is used, NID or its contractors will prepare and implement a Frac-Out Contingency Plan to minimize the potential for a frac-out associated with microtunneling activities; provide for the timely detection of frac-outs; and ensure an organized, timely, and “minimum-impact” response in the event of a frac-out and release of drilling mud. The contingency plan will require, at a minimum, the following measures.</p> <ul style="list-style-type: none"> ■ A full-time monitor shall attend all drilling to look for observable frac-out conditions or lowered pressure readings on drilling equipment. ■ If a frac-out is identified, all work shall stop, including the recycling of drilling mud/lubricant. In the event of a frac out into water, the pressure of water above the tunnel shall keep excess mud from escaping through the fracture. The location and extent of the frac-out shall be determined, and the frac-out shall be monitored for 4 hours to determine whether the drilling mud congeals (bentonite will usually harden, effectively sealing the frac-out location). ■ If the drilling mud congeals, no other actions shall be taken that would potentially suspend sediments in the water column. ■ Surface releases of bentonite shall be allowed to harden, and shall be removed. <p>The contingency plan shall identify additional measures to be taken to contain or remove the drilling mud if it does not congeal.</p> | <p>Before and During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure HWQ-4: Implement BMPs to Control Discharges of Operation-Related Pollutants. NID shall implement best management practices (BMPs) for dewatering of the storage tank and water mains and discharges from the pressure-reducing stations to protect beneficial uses of surface waters. BMPs may include containing the water on site such that there is no discharge to surface waters and/or discharging the water to the sanitary sewer. If discharge to surface waters is unavoidable, then BMPs to prevent degradation of the receiving water would be implemented. Those BMPs shall include use of the existing abandoned reservoir at the old treatment plant site, dechlorination, and measures to control the discharge rate to prevent erosion of the receiving water. NID will conduct water quality monitoring to ensure adequate dechlorination and record management practices.</p> | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

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| <p>Implementation of appropriate BMPs, which may include onsite containment, discharge to the sanitary sewer, and/or dechlorination of the discharge, will ensure that dewatering and discharge activities will not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.</p> | | | | |
| <p>Mitigation Measure HWQ-5: Implement Stormwater BMPs to Prevent Flooding and Water Quality Degradation. During project design, NID shall estimate the quantity of runoff generated from new impervious facilities and design stormwater facilities to receive and convey runoff in a manner that utilizes the most feasible and best available technology to prevent flooding and water quality degradation. Use of existing roadside drainages, use of existing reservoirs, and construction of new runoff detention/retention facilities are potential options for stormwater management, if adequate for the estimated quantity of runoff generated from new impervious facilities. Design of the selected stormwater management facility shall incorporate measures to ensure groundwater quality is protected, if the facility incorporates infiltration, and provide adequate protection against erosion at discharge locations, if captured storm water is released at a reduced rate. NID shall annually inspect and manage the selected stormwater management facility to ensure long-term prevention of storm runoff-related impacts to surface waters.</p> | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |
| <p>Mitigation Measure NOI-1: Employ Measures To Reduce Airblast and Vibration from Blasting. NID shall retain a qualified blasting specialist to develop a site-specific blasting program report to assess, control, and monitor airblast and ground vibration from blasting. The report shall include, at minimum, the following measures: The contractor shall use current state-of-the-art technology to keep blast-related vibration at offsite residential and other occupied structures as low as possible, consistent with blasting safety. In no instance shall blast vibration, measured on the ground adjacent to a residential or other occupied structure, be allowed to exceed the frequency-dependent limits specified in the Alternative Blasting Level Criteria contained in U.S. Bureau of Mines Report of Investigations 8507.</p> <ul style="list-style-type: none"> ■ The project contractor shall use current state-of-the-art technology to keep airblast at offsite residential and other occupied structures as low as possible. In no instance shall airblast, measured at a residence or other occupied structure, be allowed to exceed the 0.013-psi (133-dB) limit recommended in U.S. Bureau of Mines Report of Investigations 8485. | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

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| <ul style="list-style-type: none"> ■ Where residences and other occupied structures are within 1,000 feet of a blast, the project contractor shall monitor and record airblast and the vibration of the blasts to verify that measured levels are within the recommended limits at those locations. Monitoring shall take place at the residence or occupied structure that is nearest the blast. The contractor shall use blasting seismographs containing three channels that record in three mutually perpendicular axes and which have a fourth channel for recording airblast. The frequency response of the instrumentation shall be from 2 to 250 Hz, with a minimum sampling rate of 1,000 samples per second per channel. The recorded data must be such that the frequency of the vibrations can be determined readily. If blasting is found to exceed specified levels, blasting shall cease, and alternative blasting or excavation methods that result in the specified levels not being exceeded shall be employed. ■ The contractor shall hire a qualified firm to perform pre- and post-construction inspection of residences and other occupied structures within 500 feet of the blast site. The qualified firm shall prepare a report of pre- and post-blast condition of the residence or other structure. The contractor shall repair all damage identified in the report that is the result of blasting. | | | | |
| <p>Airblast and vibration monitoring shall take place at the nearest offsite residential or other occupied structure. If vibration levels are expected to be lower than those required to trigger the seismograph at that location, or if permission cannot be obtained to record at that location, recording shall be accomplished at some closer site in line with the structure. Specific locations and distances where airblast and vibration are measured shall be documented in detail along with measured airblast and vibration amplitudes.</p> | | | | |
| <p>Mitigation Measure NOI-2. Design Project Facilities to Meet Nevada County Noise Standards. NID shall design the exhaust fans, pump house, and emergency generator enclosure/soundwall such that sound levels do not exceed County standards (Table 8) at the property line of the nearest noise-sensitive land use. Treatments to reduce noise include, but are not limited to: employing exhaust muffling devices, constructing enclosures around equipment, installation of noise absorptive treatments and other noise insulating materials, and locating equipment away from noise sensitive uses. NID shall retain a qualified acoustical professional to determine that the treatments are sufficient to reduce sound levels below County standards at the property line.</p> | <p>Before Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |

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| <p>Mitigation Measure TR-1: Utilize Safety Regulations on Private Roads during Pipeline Construction. The following requirements shall apply to private roads where pipelines are to be installed:</p> <ul style="list-style-type: none"> ■ Trenches shall be covered at the end of each working day so that there are no open trenches when work is not going on. ■ All traffic control, including devices and personnel requirements, shall be as required by the current State of California Manual of Traffic Controls for Construction and Maintenance Work Zones. ■ Traffic shall be permitted to pass with no more than 20 minute delays during work hours. ■ One-way traffic may be maintained in the area of work only during daylight hours. ■ Two-way traffic shall be maintained at all times during hours of darkness and, where practical, during daylight hours. ■ Any barricades shall be fitted with lights at night. ■ During construction, any potential hazard, such as mud or gravel, shall be removed immediately, and in no case may material be allowed to remain on the surface at the end of the working day. | <p>During Construction</p> | <p>Construction Contractor</p> | <p>Nevada Irrigation District</p> | |