



SAVAGE CREEK INTAKE PROJECT

Humboldt County Planning and Building Department Local Coastal Development Permit Application

ATTACHMENT 2—PROJECT DESCRIPTION

1. Savage Creek Intake Project

Purpose and Need

The California Department of Transportation (Caltrans) is proposing to upgrade an existing water intake at Savage Creek, and its associated infrastructure. The surface water diversion at Savage Creek supplies municipal water to both the Trinidad Southbound SRRA (Safety Roadside Rest Area) and the Seawood Estates Mutual Water Company (SEMWC). The purpose of the project is to upgrade the existing water supply intake system to be reliable and require less maintenance. The existing intake system currently requires frequent maintenance to meet demand primarily due to fine sediment accumulation in the existing diversion box which restricts flow.

Location

The proposed project includes work at two locations. One location is at the surface water intake facility at Savage Creek (PM R103.67), and the other location is at Seawood Drive (PM R103.39), adjacent to Highway 101, in Humboldt County.

Project Description

Caltrans is proposing the following retrofit/additions to the existing water diversion system:

- Retrofit the existing diversion structure by replacing the existing collection manifold, backfilling the diversion intake structure with graded media (sand, gravel, and rock), and installing a new fish friendly wedge-wire screen.
- Install a new well sump which includes new piping to connect to the intake, a new pump and new conduit.
- Install a backwashing system to tie in with existing water and electrical infrastructure at

the intersection of Seawood Drive and US 101 off-ramp. The backwash system would include the installation of additional pipe for water conveyance and conduit, construction of a concrete control pad, bollards for protection, a security enclosure, and a utility box. The use of a backwash system would also require new piping to the intake structure, bypassing the intake sump.

The proposed work would result in less maintenance than currently required by the existing intake facility, improve influent water quality, and incorporate design improvements for aquatic species. Rehabilitation of the existing intake would require a temporary creek diversion originating upstream of the work area. Other existing diversion infrastructure used to convey water to the Trinidad Safety Roadside Rest Area (SRRA) and Seawood Estates Mutual Water Co. (SEMWC) would remain in place.

Schedule

Construction is anticipated to start in summer 2024 and is estimated to take approximately 180, 8-hour working days to complete. All work is anticipated to be completed within one to two construction seasons.

The following seasonal restrictions are anticipated:

- To protect nesting or roosting northern spotted owl and marbled murrelet, suitable northern spotted owl or marbled murrelet nesting trees would be removed between September 16 and January 31. —tree and vegetation removal would occur outside of the bird breeding season. If vegetation removal cannot be done in this window, then nesting bird surveys by a qualified biologist would be required prior to the removal of any vegetation.
- June 15 to October 15—All work within waters of the U.S. and state would be limited to the low-flow period, June 15-October 15.
- No construction activities generating noise levels greater than 90 decibels (dB) (with the exception of backup alarms) or activities generating sound levels 20 or more dB above ambient sound levels would occur between February 1 and August 5. Between August 6 and September 15, work that generates noise levels greater than 10 dB above ambient sound levels or above 90 dB max would observe a daily work window beginning 2 hours

post-sunrise and ending 2 hours pre-sunset. Noise-related work windows would be lifted between September 16 and January 31. Further, no construction activities would occur within a visual line-of-sight of 328 feet or less from any known active nest locations for northern spotted owl or marbled murrelet.

Savage Creek (PM 103.67):

Existing Infrastructure

Currently, water passively percolates through the 4' wide x 6' long concrete instream intake structure, which is then gravity fed through an 8" diameter pipe to a well sump located off-stream. The well sump is located within a 30' wide x 5' long fiberglass enclosure on a concrete slab approximately 15' from the instream intake structure. A wooden shed is located on-site and houses a control cabinet for the sump. Water pumped from the well sump is conveyed through a 4" wide x 44' long pipe to the pump control cabinet, up the exiting access road adjacent to U.S. Highway 101 (US 101). The diverted water is directed to Seawood Drive to the SEMWC Treatment Plant.

The current intake structure, constructed in 2005, consisted of an instream, concrete diversion box (4' wide x 6' long), permeable membrane, graded media (sand, gravel, rock), and a pipe manifold of eight 4" wide slotted pipe laterals. The permeable membrane fabric within the concrete diversion box failed in 2006 due to biofilm growth and was removed, along with the graded media surrounding the intake pipes. As a result, the intake structure largely has filled with debris and does not operate as intended, thus requiring frequent maintenance. The existing intake system currently requires frequent maintenance, primarily due to fine sediment accumulation in the existing diversion box.

Proposed Infrastructure

The stream intake structure would largely remain as is. However, the existing 6' wide grate/manifold would be replaced with one consisting of openings of 3/32 inch openings. The contents of the intake structure would include graded media. The 8" wide pipe located inside the instream concrete box would consist of 4" wide openings (sand, gravel, rock). The pipe would be below the newly placed graded media. The existing well sump would be replaced and relocated approximately 15' closer to the west (towards the pump control cabinet), on a new 6'

wide x 6' long concrete slab. The old slab and fiberglass cabinet would be removed. The existing water lines would be replaced in-kind along the same alignment. Water would passively percolate through the intake structure through a pipe to a well sump located off stream.

Additional changes would include installation of a flow meter along the newly replaced water line for purposes of documenting the permitted water diversion. A stream gauge would be installed along Savage Creek's left bank. A three-way valve would be installed along the water line to allow the proposed backwash system to function. The new water line would be approximately 4" wide x 16' long.

The new intake structure is designed to be a reliable source of water for domestic users without clogging and requiring routine maintenance, manual or otherwise. However, if the diversion is clogged, thus requiring use of the proposed backwash system. The backwash system would reverse raw water from SEMWC's 5,000 raw water tank at a rate of 215 GPM back into the instream intake structure, dislodging sediment. Sediment that becomes entrapped within the intake structure would be suspended by backwashing, and carried downstream, always remaining in Savage Creek. The backwash system would reverse flow through one third of the total collection manifold at a time, through three manually operated valves adjacent to the intake at Savage Creek. Operation of the backwash system is anticipated to last approximately 5 minutes. Operating the backwash system would require two individuals, one at the Seawood Drive backwash control panel, and another at Savage Creek.

Savage Creek would need a temporary stream diversion for adequate construction access. A diversion would be installed approximately 80 feet upstream of the work area and water would be diverted through a pipe downstream through the existing culvert. To minimize disturbance to Savage Creek, stream diversion would take place during the low-flow period, June 15–October 15. All construction work would be completed in one to two seasons.

At all times, erosion/sediment control Best Management Practices (BMPs) would be employed to maintain high water quality in Savage Creek. Upon completion of construction, all disturbed areas would be returned to natural contours. The shoulder of US 101 and the area of proposed disturbance near the pumphouse is currently covered by ruderal herbaceous vegetation. Erosion control BMPs, such as mulching and hydroseeding, would be applied to disturbed areas upon completion of the project. These areas are expected to revegetate naturally.

Seawood Drive Location - PM R103.39

The corner of Seawood Drive and the southbound (SB) US 101 off-ramp is an existing vehicle turnout, consisting of a transformer and electrical service pedestal. The proposed backwash system would require installation of a 4” wide x 35' long water line to an existing water line conveying water diverted from Savage Creek. The backwash system would include installation of a 5-horsepower pump. A new 5' wide x 11' long concrete pad would be constructed for the new backwash pump and electrical service box. New electrical conduit would be installed to connect the new electrical control panel to the existing service pedestal.

1.1. Staging Areas

Potential staging areas would be limited to the existing gravel turnout at Savage Creek’s access road and within the mowed and maintained areas within the project limits. Staging areas within the project ESL have been surveyed for special status plants and habitat for special status animals.

1.2. Required Equipment

Below is a list of equipment that may potentially be used for the type of work to be performed under project EA: 01-0J360.

Equipment	Maximum Noise Level * (decibels [dBA] at 50 feet)
Backhoe	84
Front End Loader	85
Dump Truck	85
Concrete Mixer Truck	85
Mini Excavator	81
Trencher	85
Asphalt roller	85
Flat Bed Truck	84
Pickup Truck	71
Jackhammer	89
Pneumatic tools	85
Compactor	82
Generator	82
Saw (Concrete/Asphalt)	90

2. Supplemental Project Information

2.1. Biological Resources Impacts

The Biological Memo (Attachment 3) was prepared to identify existing biological resources, assess potential impacts, and identify permitting requirements for the Savage Creek Intake Project. The memo provides information about the existing environment within the project area, including special status botanical and wildlife species and their associated habitats and other sensitive habitats present in the vicinity of the project that could potentially be affected by the project.

The NES determined that this project would have no adverse effect on federally and state listed species, critical habitat, or sensitive natural communities. There would be 42 square feet of temporary impacts to Waters of the U.S. and State. The following permits would be required for this project:

- Wastewater Discharge Requirements permit from the North Coast Regional Water Quality Control Board (NCRWQCB)
- United States Army Corps of Engineers (USACE) 404 Permit
- Lake or Streambed Alteration Agreement (1602) from the California Department of Fish and Wildlife (CDFW)
- Coastal Development Permit (CDP) from the County of Humboldt

2.2. Air Quality & Greenhouse Gas Impacts

The Air Quality and GHG Environmental Analysis Memo (Attachment 3) determined the project would not change traffic volume, fleet mix, speed, or any other factor that would cause an increase in emissions relative to the No Build Alternative; therefore, this project would not cause an increase in operational emissions. However, during construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Standard minimization measures are applicable as detailed in Attachment 3.

The proposed project would result in generation of short-term construction-related GHG emissions. These emissions would be generated at different levels throughout the construction

phase. Standard minimization measures are applicable as detailed in Attachment 3.

2.3. Hazardous Waste Impacts

The Initial Site Assessment (ISA) (Attachment 3) determined that the project may have minor hazardous waste issues to address. Aerially Deposited Lead (ADL), which is commonly found in all highway shoulders, may be at a level that requires special handling of excess material within the project area. However, it is not anticipated ADL present at the project site is at a high enough concentration it would be subject to further requirements of the Caltrans/DTSC ADL agreement for handling ADL contaminated soils. As a contract item, a Lead Compliance Plan would be required for soil disturbance. The ISA found that the project work site is not on the Hazardous Waste and Substances Site List (Cortese List).

2.4. Visual Resource Impacts

The project would not result in substantial impacts to visual quality or visual character (Attachment 3 - Visual Impact Assessment Questionnaire). The proposed project would not result in negative visual changes or impact scenic resources.

2.5. Noise Impacts

The Noise Analysis Memo (Attachment 3) determined that any long-term effects (operational noise) and traffic volumes, composition and speeds would remain the same in the build and No-Build condition. Traffic noise impacts are not anticipated, and a detailed noise study report is not required. However, there would be short-term noise impacts as a result of the construction equipment. Noise associated with construction is addressed in Caltrans standard contract specifications which state:

- Control and monitor noise resulting from work activities.
- Do not exceed 86 dBA Lmax at 50' from the job site from 9 p.m. to 6 a.m.

2.6. Cultural Resource Impacts

The Cultural Screening Memo (Attachment 3) determined that the proposed project does not have the potential to affect any archaeological sites or other cultural resources. Based on this review, it is concluded that the proposed project has no potential to affect any historic properties

and that the project has no potential to affect state-owned historical resources.

2.7. Water Quality Resource Impacts

The Water Quality Assessment Memo (Attachment 3) determined that this project has the potential to both temporarily and permanently impact water quality. Caltrans Construction Site Best Management Practices (BMP) would be incorporated as applicable into the approved project to minimize potential temporary impacts to water quality. Permanent Impacts would be prevented by adhering to the required permits and incorporation of Design Pollution Prevention (DPP) BMP strategies. Permits that would be required for this project are:

- United States Army Corps of Engineers (USACE) 404 Permit
- North Coast Regional Water Quality Control Board (NCRWQCB) 401 Certification

It is anticipated that the inclusion of appropriate temporary and permanent Standard Measures and Best Management Practices (BMPs) would avoid potential impacts to water quality and meet the requirements of the Caltrans NPDES Permit, CGP, and North Coast Basin Plan.