



Attachment A
Biological Assessment Report

31 January 2020

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**Re: Biological Resources Assessment for the Covelo Community Services District
Wastewater Treatment Plant Improvement Project in Mendocino County, California**

This report summarizes the results of a site visit and desktop review of biological resources and jurisdictional waters conducted by Wood Environment & Infrastructure (Wood) for the Covelo Community Services District (CSD) Wastewater Treatment Plant (WWTP) Improvements Project, (Project) survey area in Mendocino County, California. The purpose of this work was to identify and record biological and aquatic resources including wetlands and riparian habitats, under jurisdiction of federal and/or state resource agencies within the survey area and to evaluate potential impacts that may result from Project related activity. Site photographs are provided as Attachment A, sensitive plant species occurring or potentially occurring in the vicinity of the survey area are included as Attachment B, special-status wildlife species occurring or potentially occurring in the region of the survey area are included as Attachment C, and report figures are provided as Attachment D.

1.0 INTRODUCTION

The Covelo CSD operates a WWTP pursuant to Waste Discharge Requirement Order No. R1-2017-004 adopted by the North Coast Regional Water Quality Control Board on February 2, 2017. The WWTP has a facility design flow of 0.057 million gallons per day (average dry weather treatment capacity), and discharges secondary treated wastewater to on-site percolation ponds, and to Grist Creek. The CSD's collection system collects wastewater from about 430 residents and some commercial dischargers. The Plant uses gravity flow to collect wastewater from the collection system which leads to an influent well. An influent aboveground life station conveys wastewater from the influent well through a horizontal grit channel for solids removal followed by treatment in primary and secondary oxidation ponds. These ponds then discharge to a lined, wetland treatment system for nitrate removal. Ultimate disposal is through an arrangement of percolation ponds; however, occasional overflow discharges to Grist Creek can occur due to various factors that are commonly attributed to high influent flows. The WWTP was upgraded in 2011 to line the three existing ponds and provide ozone disinfection. The 2011 upgrades did not adequately address all WWTP issues and additional mechanical upgrades are needed to replace the influent well, install a trash screen, and install a new pump switch system. The proposed Project will address the WWTP issues through various upgrades.

1.1 Project Location and Setting

The Covelo Community Services District (CSD) Plant is located in northeastern Mendocino County in the unincorporated town of Covelo, located in a large intermountain coastal valley known as Round Valley (Figure 1). The Covelo CSD wastewater service area is centrally located in Round Valley and is comprised of approximately 150 acres within a commercial, residential, ranching and agricultural setting. The valley is bound on all sides by relatively steep, forested slopes that can be characterized as a mix of conifer and hardwood forests. Dingman Ridge is located to the east and Poonkinny Ridge is located to the west. The Middle Fork Eel River is located west of Dingman Ridge. Round Valley is primarily drained by Mill Creek, a tributary of the Middle Fork of the Eel River. The existing WWTP is located adjacent to Town Creek, a tributary of Mill Creek. The confluence of Town Creek and Grist Creek, another local tributary of Mill Creek, is located approximately 500 feet southeast of WWTP (Figure 2). Water flows in Town Creek are seasonal, with Covelo CSD WWTP staff reporting that it began to flow in November 2019 for the current water year (Dennis 2020).

The Project would be entirely confined within the grounds of the existing 22.5-acre Covelo CSD WWTP Project Site (Figure 3). The proposed Project would occur encompass approximately 0.25-acres within the larger 22-5 acre Project Site. There is one area in the southwest corner of the 0.25-acre portion of the Project Site, where project work related activities may occur underneath the riparian canopy of the adjacent Town Creek. For purposes of this report, the biological resources survey area encompasses the Project Site plus a 250 buffer zone as shown on Figure 3.

The topography of the Project Site is relatively flat, with surface elevations on the order of 1,380 feet above mean sea level. The typical climate for the community of Covelo, is Mediterranean-like weather with warm, dry summers and cool, relatively wet winters. January is the coolest month with an average high temperature of 53 degrees Fahrenheit (°F). July and August are the warmest months with an average of 88°F. Average precipitation is approximately 42.42 inches per year (U.S. Climate Data 2020). Immediately surrounding lands are non-native grassland pastures with cattle grazing, oak savanna/woodlands, and the rural community/development associated with the town of Covelo.

1.2 Project Description

The Covelo CSD is proposing improvements to the WWTP to address issues associated with aging infrastructure and poor operating conditions. The proposed Project includes the following proposed improvements:

- Installation of two manholes (15- to 18-feet below ground surface [bgs]);
- Installation of an 8-inch sewer line connecting the replacement manholes (approximately 15-feet long and 15- to 18-feet bgs);
- Installation of a trash screen chamber (15-feet long, 8-feet wide, and 18-feet bgs);
- Installation of a 12-inch sewer line connecting one of the replacement manholes to the

trash screen chamber (approximately 18-feet long and 18-feet bgs);

- Installation of a replacement underground wet well (influent well) (6-feet in diameter and 22-feet bgs);
- Replacement of an aboveground lift station on top of the wet well;
- Installation of a 12-inch sewer line connecting the proposed trash screen chamber to the replacement underground wet well (approximately 3-feet long and 18-feet bgs);
- Temporary relocation of the existing force main while the permanent force main is installed adjacent to the proposed lift station;
- Undergrounding of existing overhead communication cables;
- Installation of electrical and control systems (approximately 53-feet long);
- Installation of a 20-foot tall aluminum light pole;
- Demolition and removal of the existing wet well and aboveground lift station;
- Equipment and construction vehicle staging; and
- Abandonment and capping of the existing force main and adjacent sewer lines.

Ground disturbances associated with the proposed Project will extend up to 22 feet below the existing ground surface and will disturb intact, native soil. In addition to the above listed improvements, the proposed Project incorporates monitoring by a Round Valley Reservation/Covelo Indian Community representative during ground disturbing construction activities.

2.0 METHODS

2.1 Biological Resources Assessment

Prior to compiling this report, Wood biologists conducted a search of the California Natural Diversity Database (CNDDDB), the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation System (IPAC System), and California Native Plant Society (CNPS) Inventory Database encompassing lands within five miles of the survey area to identify species that could potentially occur on site. The biologists also reviewed available aerial photographs, topographic surveys, and information on vegetation/habitat types to develop a potentially occurring sensitive species list. Identified records were further filtered based on habitat types within the survey area to evaluate the likelihood of occurrence. Senior Biologist Angie Harbin-Ireland conducted a site reconnaissance on January 9, 2020 to map vegetation communities and assess wildlife habitats within the survey area. On the day of the morning site visit, conditions were foggy and cold with temperatures ranging from 33 to 45 degrees Fahrenheit. Fog cleared to sunny skies by the end of the site reconnaissance. Snow was present on the surrounding mountains from the previous night's storm event. Photos of vegetation communities and habitats are provided in Attachment A.

2.2 Delineation of Jurisdictional Waters

Wood biologists and environmental scientists reviewed background information relating to jurisdictional waters from the following sources:

- Aerial photographs of the study area;
- USGS topographic maps to determine mapped water features;
- USDA soil mapping data; and
- USFWS National Wetlands Inventory (NWI) Wetlands Mapper (USFWS 2019)

A delineation of jurisdictional waters was conducted to identify potentially jurisdictional waters of the U.S. (WUS) under the jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA, and California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game (CDFG) Code.

Wood Environmental Scientists Juliana Prosperi and Jason Erlich conducted a field survey on January 9, 2020 to identify and delineate potentially jurisdictional water features. The field survey included searching for indications of potentially jurisdictional waters while walking the survey area. Presence of potentially jurisdictional waters were field verified within the survey area by identifying the presence of ordinary high water mark (OHWM), defined bed and bank, and riparian vegetation along Town Creek. Data associated with jurisdictional waters was collected on a Global Positioning System (GPS). Field collected data was used in combination with field notes and aerial imagery to delineate jurisdictional boundaries. The GPS collected data was overlaid onto aerial photographs with the use of a Geographic information system (GIS). GIS was used to calculate areas and create report figures.

3.0 RESULTS

3.1 Vegetation Communities and Habitats

Vegetation communities and habitats within the survey area include disturbed/ruderal, freshwater marsh, open water, pasture, and riparian woodland, as shown on Figure 4 of Attachment D. The proposed work area is primarily disturbed/ruderal lands, including buildings and facilities surrounded by weedy vegetation that is regularly mowed, along with maintained roads that are gravel and rock based. There are four ponds at the facility, including three open water ponds in the survey area. The two open water ponds on the north side of the facility are plastic lined, and a wildlife fence was recently installed around the open water pond located on the southwestern portion of the facility. The southeastern pond is characterized by freshwater marsh vegetation. Vegetation typically covers 70 percent of the surface area and water depth ranges from 2.5-5.0 feet deep. Town Creek and the associated riparian woodland vegetation runs along the western portion of the survey area from north to south. The areas surrounding the survey area can be

characterized as non-native grasslands, pastures with cattle grazing, and oak savannah/woodland habitats.

A summary of vegetation communities and acreage within the survey area is provided below in Table 1. Most vegetation was dormant and lacking leaves during the January 2020 site survey. Species identifications had to be inferred from standing dead biomass, dropped leaves, and/or minor amounts of remaining stems/leaves. Thus, the plant species list is much shorter than would be likely from a spring/summer site reconnaissance. Photographs of the vegetation communities are provided in Attachment A.

Table 1.
Vegetation Communities in the Survey Area

Vegetation Community	Approximate Acres
Disturbed/Ruderal	1.95
Freshwater Marsh	1.01
Open Water	3.06
Pasture	0.04
Riparian Woodland	2.35
Total	8.41

Disturbed/Ruderal

Disturbed/ruderal includes those parts of the survey area that are developed with buildings, facilities, and maintained gravel roads. The vegetation community is characterized by weedy vegetation that is maintained at a short length. This habitat totals 1.95 acre in the survey area and it is the predominant land cover type within the proposed work area. Wildlife species observed during the site visit include black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo jamaicensis*), and common raven (*Corvus corax*).

Freshwater Marsh

Emergent, mature freshwater marsh vegetation covers much of the southeastern most pond within the survey area. Predominant species are tule (*Schoenoplectus acutus*) and California bulrush (*Schoeneoplectus californicus*) that form dense, mixed stands. Very minor amounts of cattail (*Typha spp.*) were observed on the fringes of the ponds. Ruderal and non-native grassland species are present along the peninsula (just east of the survey area) that partly bisects the pond, including curly dock (*Rumex crispus*), cocklebyrr (*Xanthium strumarium*), yellow star thistle (*Centaurea solstitialis*), and pennyroyal (*Mentha pulegium*). The freshwater marsh habitat totals 1.01 acre in the survey area. Wildlife species observed during the site visit include black phoebe, red-winged blackbirds (*Agelaius phoeniceus*), and white-crowned sparrows (*Zonotrichia leucophrys*).

Open Water

The three open water ponds within the survey area encompass 3.06 acres. While these are man-made, lined ponds, they offer value as habitat for birds, mammals, reptiles, and other wildlife. A

large stand of Himalayan blackberry borders the north shore of the eastern pond. Wildlife species observed during the site visit include American coots (*Fulica americana*), mallards (*Anas platyrhynchos*), Brewer's blackbirds (*Euphagus cyanocephalus*), Canada geese (*Branta canadensis*), green-winged teal (*Anas carolinensis*), tree swallows (*Tachycineta bicolor*), American crow (*Corvus brachyrhynchos*), northern flicker (*Colaptes auratus*), and common goldeneye (*Bucephala clangula*).

Pasture

There is a small area of pasture in the southwest corner of the survey area where cattle grazing was observed at the time of the site visit. In the survey area, pasture covers 0.04 acre and is composed of non-native grass species.

Riparian Woodland

Town Creek is vegetated by riparian woodland and runs along the western side of the survey area. This vegetation community accounts for 2.35 acres and contains large, mature valley oaks (*Quercus lobata*), cottonwoods (*Populus fremontii*), and black walnuts (*Juglans nigra*). Understory is primarily composed of Himalayan blackberry (*Rubus armeniacus*), poison oak (*Toxicodendron diversilobum*), and minor amounts of non-native grasses. The riparian corridor within the survey area is characterized by a tall overstory of trees (over 40 feet in height), some of which are snags, with a moderately dense shrub and grass understory that only includes a few species. A middle strata of shorter trees is absent from the habitat at this location along the Creek. Wildlife species observed during the site visit include scrub jay (*Aphelocoma californica*), northern mockingbird (*Mimus polyglottos*), red-shouldered hawk (*Buteo lineatus*), and turkey vulture (*Cathartes aura*).

3.2 Special Status Species

Special-status species are defined as any plant or animal species that have been listed as threatened or endangered by the USFWS or CDFW; recognized as a CDFW species of special concern (SSC); or are included in the California Rare Plant Rank (CRPR) inventory, which is maintained by the California Native Plant Society (CNPS). Table 2 provides a summary of the CNPS CRPR categories and their descriptions.

Table 2.
California Rare Plants Rankings and Threat Ranks

California Rare Plant Ranking (CRPR)	Description
1A	Plants presumed extirpated in California and either rare or extinct elsewhere
1B	Plants that are rare, threatened, or endangered in California and elsewhere
2A	Plants presumed extirpated in California but common elsewhere
2B	Plants that are rare, threatened, or endangered in California but are more common elsewhere
3	Plants about which more information is needed- a review list
4	Plants of limited distribution- a watch list

Threat Ranks	Description
0.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

3.2.1 Special-Status Plants

Most special-status plant species occurring in the region are found in chaparral, marshes and swamps, vernal pools, meadow, chaparral, valley and foothill grassland, upland broad-leaved and cismontane woodland and habitats. All special-status plant species that are either known to occur or have potential to occur in the region of the survey area are listed in Attachment B. Due to the disturbance associated within the Covelo CSD WWTP, most of the suitable habitat for sensitive plant species within the survey area would have been removed as part of facility installation and the continued maintenance activities. Thus, special-status plant species are not expected to occur on most of the site. Those species that are not expected to occur on the site are addressed in Attachment C but are not discussed further in this document. Marginally suitable areas for sensitive plant growth include the adjacent Town Creek riparian corridor, and the freshwater marsh ponds. One of the special-status plant species, Milo Baker's Lupine which has been documented in the vicinity of the survey area, per the background review, is considered to have a very low potential to occur on site. This species is discussed in more detail below.

Milo Baker's Lupine (*Lupinus milo-bakeri*)

Milo Baker's Lupine is recognized as a CRPR 1B.1 species and a California SSC. Milo Baker's lupine is a tall annual plant with blue/lavender flowers that bloom from June through September and turn yellow with age. Milo Baker's lupine is only found in Round Valley in Mendocino County, near the community of Covelo. There are eleven occurrences of Milo Baker's lupine documented in the CNDDDB; however, surveys in 2018 only documented three subpopulations and a total of 37 Milo Baker lupine plants. Milo Baker's lupine has been found in roadside ditches, dry gravelly areas along roads, and along small streams. The natural microhabitat conditions that supported Milo Baker's lupine before agricultural use of Round Valley are not known. This species was documented in the CNDDDB search within a quarter mile of the Project Site and suitable habitats are present on the margins of the WWTP facilities. Given the site maintenance regime, this species is considered to have a low potential to be found along the roadways near Town Creek on the western side of the survey area. It was not detected during the recent survey; however, the timing occurred outside of the species' blooming season. It cannot be presumed absent based on negative findings of the recent survey given that it is an annual plant and most vegetation was dormant during the winter survey effort. The elevation range of this species is 1,295 to 1,410 feet.

Nuttall's ribbon-leaved pondweed (*Potamogeton epihydrus*)

Nuttall's ribbon-leaved pondweed is recognized as a CRPR 2B.2 species. This plant is a perennial rhizomatous herb (aquatic) found in marshes and swamps (assorted shallow

freshwater). It blooms from June to September. This species has been documented within a mile of the Project Site. There is a low potential for it to be present within the WTP percolation ponds that are maintained with freshwater marsh vegetation.

3.2.2 Special-Status Wildlife

Special-status wildlife species include those listed by USFWS under the federal Endangered Species Act and by CDFW under the state Endangered Species Act. The USFWS officially lists species as either threatened, endangered, or as candidates for listing and gives some species designation as Birds of Conservation Concern (BCC). Additional species receive federal protection under the Bald Eagle Protection Act, the Migratory Bird Treaty Act (MBTA) and state consideration under the California Environmental Quality Act (CEQA). Many other species are considered by CDFW to be California Fully Protected Species (FP) under the CDFG Code, SSC, or species on their Watch List (WL).

In addition, the CDFW's CNDDDB tracks species within California for which there is conservation concern, including many that are not formally listed, and assigns them a CNDDDB Rank. Although California SSC, CDFW WL species, and species that are tracked by the CNDDDB are not formally listed and are afforded no official protection status (with the exception of birds covered under laws listed above), they may receive special consideration during the CEQA review process.

Several special-status wildlife species have been documented within a five-mile radius of the survey area. Based on the literature review and field surveys some are considered to have potential to occur within the vicinity of the survey area. The Town Creek riparian corridor and freshwater and open ponds offer foraging and potential nesting opportunities for wildlife. Those species that occur in the region but are not expected to occur on the Project Site are addressed in Attachment C and are not discussed further in this document with the exception of those that are of particular regulatory concern.

3.2.3 Amphibians

The California red-legged frog (*Rana draytonii*) is a listed Federally threatened species, and a California Species of Concern. The California red-legged frog requires a variety of habitat elements with aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Breeding sites of the California red-legged frog are in aquatic habitats, including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons. Additionally, California red-legged frogs frequently breed in artificial impoundments such as stock ponds. The California red-legged frog range does not include the northeastern portion of Mendocino County where the project lies. The closest part of the range is to the east in Glenn and Tehama counties. Based on this information, California red-legged frog is not expected to occur on the Project Site.

The Northern red-legged frog (*Rana aurora*) is a California Species of Special Concern and is native from southwest British Columbia, including Vancouver Island, south along the Pacific Coast to Mendocino County, California. The range extends eastward to the western foothills of the

Cascades. The frog ranges from sea level to about 8000 ft (2438.4 m) in elevation. The community of Covelo is located in between the range of the Northern and California red-legged frog, with the Northern species restricted to the more coastal portion of Mendocino County. Thus, this species is not expected to be present on the Project Site.

The foothill yellow-legged frog (*Rana boylei*) is a California Species of Special Concern and state threatened candidate species. It was also Listed as a State Candidate for Threatened Species on June 27, 2017. It inhabits rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. This species was documented from the CNDDB approximately two miles south of the Project Site. Suitable habitat is found within the adjacent Town Creek.

3.2.4 Reptiles

The Western pond turtle (*Actinemys marmorata*), a California Species of Concern, has been documented historically to the north of the survey area. This species prefers sheltered aquatic habitats, like undercut banks, submerged vegetation, rocks, logs, and mud banks, but can adapt to many other kinds of habitats, including slow-moving rivers and streams, lakes, wetlands, ponds, and even sewage treatment plants, especially during summer and winter. There is a moderate potential for this species to occur in the adjacent Town Creek when water is present and the freshwater marsh ponds within the survey area. Both provide aquatic habitat for foraging and banks with openings in the vegetation for basking. Given the permanent nature of the water and lack of flow, the freshwater marsh pond within the facility is highly suitable however the water treatment use may affect survivability.

3.2.5 Fish

The adjacent Town Creek is federally designated critical habitat for steelhead (*Oncorhynchus mykiss*), which has been detected in the past within Mill Creek, Town, and Grist Creeks. Steelhead trout are a unique species. Individuals develop differently depending on their environment. All steelhead trout hatch in gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Some stay in fresh water all their lives and are called rainbow trout. Steelhead trout that migrate to the ocean typically grow larger than the ones that stay in freshwater. They then return to freshwater to spawn. Steelhead trout have historically occurred in Town Creek, and further downstream in its tributaries within Mill and Grist Creeks, which eventually meet up to the Eel River. Because Steelhead trout have been observed in the past in the downstream portions of Mill and Grist Creeks, the species is expected to occur in the portion of Town Creek adjacent to the Project Site.

Coho Salmon (*Oncorhynchus kisutch*) have been detected in the past within Mill Creek, Town, and Grist Creeks. Critical habitat for this species is not designated within the portion of Town Creek adjacent to the project site. Coho salmon are found throughout the North Pacific Ocean and in most coastal streams and rivers from Alaska to central California. Coho Salmon have historically occurred in Town Creek, and further downstream in its tributaries within Mill and Grist Creeks, which eventually meet up to the Eel River. Because this species has been detected

in the past in Town Creek and downstream in its tributaries, it is expected to occur in the portion of Town Creek adjacent to the Project Site.

3.2.6 Birds

The western snowy plover (*Charadrius nivosus nivosus*) Pacific coast population is listed as a federally threatened species and a California Species of Concern. The western snowy plover that nest at inland sites are not considered part of the Pacific coast population, although they may migrate to coastal areas during winter months. In the interior of California, snowy plovers breed on barren to sparsely vegetated flats and along shores of alkaline and saline lakes, reservoirs, ponds, braided river channels, agricultural wastewater ponds, and salt evaporation ponds. The Project Site is not located within the critical habitat for this species, no sightings were made during the survey, and no sightings are documented within the vicinity of the project area according to the CNDDDB. Therefore this species is not expected to occur on the Project Site.

Yellow-billed cuckoo (*Coccyzus americanus*) is listed as a federally threatened species, and is a California state endangered species. The yellow-billed cuckoo prefers densely foliaged, deciduous trees and shrubs, especially willows, required for roosting sites. It inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow is almost always a dominant component of the vegetation. These birds glean grasshoppers, cicadas, caterpillars and other larger insects from foliage. They occasionally prey on frogs or lizards, or feed on fruit. Dense lower story trees, shrubs, willows are lacking in the riparian woodland habitat. Given the lack of adequate structure and species composition of the riparian woodland habitat, this species is not expected to occur in the Project Site.

Northern spotted owl (*Strix occidentalis caurina*) is a federally and state threatened species. Northern spotted owls generally inhabit older forested habitats because they contain the structural characteristics required for nesting, roosting, and foraging. Specifically, they require a multi-layered, multi-species canopy with moderate to high canopy closure. The stands typically contain a high incidence of trees with large cavities and other types of deformities; large snags (standing dead trees); an abundance of large, dead wood on the ground; and open space within and below the upper canopy for spotted owls to fly. They are mostly nocturnal, but they may forage opportunistically during the day. Northern flying squirrels (*Glaucomys sabrinus*) and woodrats (*Neotoma spp.*) are usually the predominant prey. Other prey species, such as the red tree vole (*Arborimus longicaudus*), red-backed voles (*Clethrionomys gapperi*), mice, rabbits and hares, birds, and insects may be seasonally or locally important. The closest populations are documented in the conifer forest/hardwood woodlands on the mountains located approximately 2.5 miles to the west. Because there is no suitable forest habitat to provide the structure required by this species, northern spotted owl is not expected to occur in the Project Site.

The Project Site contains habitat that could be occupied by nesting birds. With an abundance of emergent vegetation in a portion of the ponds, and trees and shrubs in the riparian corridor, the survey area provides highly suitable potential nesting habitat for a diversity of avian species, including raptors. Nesting birds are protected by the MBTA and the CDFG Code. There is potential

for riparian songbird species, freshwater marsh songbird species, waterfowl, or species that nest in almost any environment including ruderal vegetation and bare ground (e.g. killdeer) to nest within the Project Site and the larger survey area. The nesting season extends from February 1 - August 31.

3.2.7 Mammals

California bats and bats in general are threatened by habitat destruction, especially since a wide variety of habitats are needed for different behaviors (roosting, foraging, drinking, hibernating, etc.) Many bat species roost in groups and use mature trees, snags, crevices and man-made structures for roosting, either for winter roosting (hibernacula) or for forming summer nursery colonies. Since some bats will roost in man-made structures such as the undersides of bridges and vacant buildings, they are particularly vulnerable to roost disturbance or destruction by humans (Currie 2000). Protecting established roost sites is of particular importance to the conservation of bats, and management of these sites is receiving increasing attention from the CDFW.

There are two special-status bat species that have been documented within approximately one mile of the Project Site and have a moderate potential to occur within the survey area for the purpose of foraging, drinking, roosting, and possibly hibernating. They are discussed below.

The western red bat (*Lasiurus blossevillei*) a California Species of Special Concern, is considered to have at least some potential to occur within the survey area. It roosts primarily in trees, and less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas. Preferred roost sites are protected from above, open below, and located above dark ground-cover. Such sites minimize water loss. Western red bats feed over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Potential bat roosting habitat is present in the Town Creek riparian corridor, and foraging may occur near the Creek and surrounding pastures and ponds.

The hoary bat (*Lasiurus cinereus*) a CNDDDB tracked species, is considered to have at least some potential to occur within the survey area. Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees near the end of the branches. Roosts are usually located at the edge of a clearing, utilized for foraging. Hoary bats are known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps- but have a strong preference for moths (Western Bat Working Group 2018). Potential bat roosting habitat in the survey area includes the trees within the site within and near Town Creek.

Other sensitive bat species occurring in the region that typically roost in structures or buildings, such as long-eared myotis (*Myotis evotis*), Townsend's big-eared bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*), have a low potential to utilize the WWTP out buildings and facilities on the Project Site.

3.3 Federally-Designated Critical Habitat

Section 7 of the Endangered Species Act requires that Federal agencies must ensure that any activities they authorize, fund or carry out are not likely to destroy or adversely modify the designated critical habitat of a listed species. Critical habitat is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. The portion of Town Creek adjacent to the survey area is designated as Steelhead trout critical habitat.

3.4 Jurisdictional Waters

The survey area lies within the Mill Creek watershed (Hydrologic Unit Code 10 [HUC10] 1801010403). Town Creek is an intermittent stream situated directly west of the WWTP Project Site. Town Creek flows north to south and is a tributary of Grist Creek, which flows into Mill Creek which is a tributary of the Middle Fork of the Eel River. The Middle Fork of the Eel River flows northwest for approximately 144 miles where it enters the Pacific Ocean. The entire section of Town Creek within the survey area would be considered Non-Wetland Waters of the U.S. and State and would likely be under jurisdiction of the USACE pursuant to Section 404 of the CWA, the RWQCB under Section 401 of the CWA, and CDFW under Section 1602 of the CDFG Code. CDFW jurisdiction would likely extend to the outer edge of the riparian habitat associated with the Creek. The portion of Town Creek within the survey area is approximately 598 linear feet and includes 0.24 acre of potential waters of the U.S. and State and 2.36 acres of strictly CDFW waters that extend from the top of the bank of Town Creek to the edge of the riparian woodland habitat near the edge of the Project Site work area (Attachment D Figure 5).

4.0 PROJECT IMPACTS

As currently proposed, the Project Site work area will impact approximately 0.49 acre of ruderal disturbed lands and 0.01 acre of riparian woodland habitat (Figure 6).

5.0 CONCLUSIONS AND RECOMMENDATIONS

The Project Site contains habitat that could be occupied by nesting birds. The nesting season extends from February 1 - August 31. Active nest sites would require protection during the construction. The site also supports potential roosting and foraging sites for bats. The Project Site includes a small portion of the Town Creek's riparian corridor. This area should be avoided by project operation activities and protected during construction to the extent feasible. A Biological Avoidance and Minimization Plan should be developed for implementation during construction. The goal of the plan should be to protect sensitive species and habitats during all work activities. The plan should include worker awareness training, pre-construction surveys, establishment of non-disturbance buffer zones, and monitoring.

There is a potential for two CRPR species to occur within the survey area, Nuttall's ribbon-leaved pondweed and Milo Baker's lupine. Only Milo Baker's lupine is considered to have potential to

occur in the Project Site work area as it grows in disturbed/ruderal habitats such as those within the facility areas. Therefore, a preconstruction survey during the target blooming period (June-September) is recommended.

Although the portion of the Town Creek that lies within the Project Site is not anticipated to be impacted by proposed Project related activities, it is designated as critical habitat for Steelhead trout (*Oncorhynchus mykiss*). Coho salmon (*Oncorhynchus kisutchdoes*) and steelhead trout occur historically in this creek, and further downstream in its tributaries within Mill and Grist Creeks, which eventually meet up to the Eel River.

The proposed Project is located in the Eel River basin. It covers approximately one million acres in the northeastern and north central portion of Mendocino County. This zone includes: (north to south) Leggett Valley; Round Valley in Covelo; Long Valley in Laytonville; and Sherwood and Little Lake Valleys in the Willits Area. Round Valley is located in the Upper Eel River Basin, which is defined as the area above the confluence of the North Fork Eel River with the Eel River. Round Valley is drained by Mill Creek, a tributary of the Middle Fork Eel River. Short, Town, Grist, and Tumer Creeks drain into Mill Creek.

The WWTP Project Site is located adjacent to Town Creek and includes a discharge pipe just downstream from the confluence of Grist and Town Creeks. The proposed Project should implement Best Management Practices during construction to ensure protection of water quality downstream. The habitat and water quality needs of local aquatic species should also be considered during construction activities. Given the Project goals, the proposed Project will presumably result in water quality improvements downstream.

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Wood Environmental and Infrastructure Solutions, Inc.



Angie Harbin-Ireland
Biology Group Manager



Jason Erlich
Biologist

Attachments:

Attachment A. Site Photographs

Attachment B. Sensitive Plant Species Occurring or Potentially Occurring in the Vicinity of the Survey Area

Attachment C. Special-Status Wildlife Species with Proximity (~2 miles) to the Project or with Potential Habitat Onsite

Attachment D. Figures

Figure 1. Regional Location

Figure 2. Vicinity Map

Figure 3. Site Overview

Figure 4. Vegetation Communities

Figure 5. Jurisdictional Wetlands and Waters

Figure 6. Project Impacts to Vegetation

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ATTACHMENT A

SITE PHOTOGRAPHS

ATTACHMENT A. PHOTOGRAPHIC LOG



Photograph 1. View facing west looking at the wastewater facility. Freshwater marsh habitat shown in foreground, with riparian corridor in the background.



Photograph 2. Photograph facing east toward the mountain range, from the edge of the freshwater marsh.



Photograph 3. Photograph depicting the riparian corridor sitting just west of wastewater facility buildings and structures.



Photograph 4. Photograph showing the southwestern most open water pond with riparian woodland in the background.



Photograph 5. Similar to Photograph 3, a view facing west of an open water pond near wastewater facility structures and riparian woodland in the background.



Photograph 6. Photograph showing large cottonwood trees along the edge of Town Creek.



Photograph 7. Photograph depicting Town Creek and bank vegetation. A partially submerged vehicle, lodged into the creek bank, is within view in the creek.



Photograph 8. View facing east of wastewater facility property, with the freshwater marsh pond on the right of the photograph.



Photograph 9. View facing northwest looking toward an open water pond.

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ATTACHMENT B




SENSITIVE PLANT SPECIES



Attachment B

Table 2.

Sensitive Plant Species Observed and Potentially Occurring in the Study Area

Scientific Name	Common Name	Status ¹ (Federal/ State/CRPR)	Potential for Occurrence
Plants			
<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	Konocti manzanita	- / - / 1B.3	<p><i>Not Expected</i> – This species is presumed extant in the vicinity. It is an evergreen shrub present in Chaparral, Cismontane woodland and Lower montane coniferous forest. Flowering February-May</p> 
<i>Calystegia collina</i> ssp. <i>tridactylosa</i>	three-fingered morning-glory	- / - / 1B.2	<p><i>Not Expected</i> – This species is presumed extant in the vicinity. Perennial rhizomatous herb serpentine, rocky, gravelly, openings. • Chaparral • Cismontane woodland Blooms April-June</p> 
<i>Lasthenia burkei</i>	Burke's Goldfields	FE/ SE/ 1B.1	<p><i>Not Expected</i>-annual herb Meadows and seeps (mesic) • Vernal pools Blooms April-June</p> 

Scientific Name	Common Name	Status ¹ (Federal/ State/CRPR)	Potential for Occurrence
<i>Lasthenia conjugens</i>	Contra Costa Goldfields	FE/ - / 1B.1	<p>Not Expected- annual herb mesic.</p> <ul style="list-style-type: none"> • Cismontane woodland • Playas (alkaline) • Valley and foothill grassland • Vernal pools <p>Blooms April-June</p> 
<i>Limnanthes bakeri</i>	Baker's meadowfoam	- / CR / 1B.1	<p><i>Not expected</i> – This species is presumed extant in the vicinity.</p> <p>Annual herb found in Meadows and seeps</p> <ul style="list-style-type: none"> • Marshes and swamps (freshwater) • Valley and foothill grassland (vernally mesic) • Vernal pools <p>Blooms April-May</p> 
<i>Lupinus milo-bakeri</i>	Milo Baker's lupine	- / CT / 1B.1	<p>Low – This species is presumed extant or in the vicinity.</p> <p>Annual herb</p> <p>Cismontane woodland (often along roadsides)</p> <p>Valley and foothill grassland</p> <p><i>Blooms June-September</i></p> 

Scientific Name	Common Name	Status ¹ (Federal/ State/CRPR)	Potential for Occurrence
<i>Potamogeton epiphydrus</i>	Nuttall's ribbon- leaved pondweed	- / - / 2B.2	Low– This species is presumed extant in the vicinity. perennial rhizomatous herb (aquatic) Marshes and swamps (assorted shallow freshwater) Blooms June-September 
<i>Trifolium amoenum</i>	Showy Indian Clover	FE/-/1B.1	Not expected- annual herb Coastal bluff scrub • Valley and foothill grassland (sometimes serpentinite) Blooms April-June 
	Valley Oak Woodland	- / - / -	Valley bottoms, lower slopes, summit valleys. Soils are alluvial or residual. The USFWS Wetland Inventory (2016 national list) recognizes <i>Quercus lobata</i> as a FACU plant. Stands occur in many of the larger valleys, such as Round Valley, and in Hopland and Laytonville areas containing <i>Pinus ponderosa</i> and <i>Q. garryana</i> trees (Allen et al. 1989, 1991). The tallest known living <i>Q. lobata</i> occurs in Round Valley near Covelo (www.americanforests.org/resources/bigtrees).

1 Status: Federal/State/CNPS List. **Federal:** FT = Federally Threatened, FE = Federally Endangered, BBC = Birds of Conservation Concern. **State:** SE = State Endangered, CSC = California Species of Special Concern, **California Rare Plant Rank (CRPR):** 1B.1 = plants rare, threatened, or endangered in California and elsewhere, seriously threatened in California; 2B.1 = plants rare, threatened or endangered in California, but more common elsewhere, seriously threatened in California; 2B.2 = plants rare, threatened or endangered in California, but more common elsewhere, fairly threatened in California; 4B.2 = plants of limited distribution, fairly threatened in California.

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ATTACHMENT C

SPECIAL-STATUS WILDLIFE SPECIES

Attachment C


Table 3.
Sensitive Wildlife Species Observed and Potentially Occurring in the Study Area

Scientific Name	Common Name	Status ¹ (Federal/ State)	Potential for Occurrence
Reptiles			
<i>Emys marmorata</i>	Western pond turtle	None/CSC	<p><i>Moderate</i> – Prefer sheltered aquatic habitats, like undercut banks, submerged vegetation, rocks, logs, and mud banks, but can adapt to many other kinds of habitats, including slow-moving rivers and streams, lakes, wetlands, ponds, and even sewage treatment plants, especially during summer and winter</p> 
Birds			
<i>Charadrius nivosus nivosus</i>	Western Snowy Plover	FT/CSC	<p><i>Not Expected</i>-Snowy plovers that nest at inland sites are not considered part of the Pacific coast population, although they may migrate to coastal areas during winter months. In the interior of California, Snowy Plovers breed on barren to sparsely vegetated flats and along shores of alkaline and saline lakes, reservoirs, ponds, braided river channels, agricultural wastewater ponds, and salt evaporation ponds.</p> 

Scientific Name	Common Name	Status ¹ (Federal/ State)	Potential for Occurrence
<i>Strix occidentalis caurina</i>	Northern Spotted Owl	FT/ST	<p><i>Not expected-</i> Northern spotted owls generally inhabit older forested habitats because they contain the structural characteristics required for nesting, roosting, and foraging. Specifically, they require a multi-layered, multi-species canopy with moderate to high canopy closure. The stands typically contain a high incidence of trees with large cavities and other types of deformities; large snags (standing dead trees); an abundance of large, dead wood on the ground; and open space within and below the upper canopy for spotted owls to fly. They are mostly nocturnal, but they may forage opportunistically during the day. Northern flying squirrels (<i>Glaucomys sabrinus</i>) and woodrats (<i>Neotoma</i> spp.) are usually the predominant prey. Other prey species such as the red tree vole (<i>Arborimus longicaudus</i>), red-backed voles (<i>Clethrionomys gapperi</i>), mice, rabbits and hares, birds, and insects may be seasonally or locally important.</p>
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo	FT/SE	<p>Not Expected - Prefers Densely foliated, deciduous trees and shrubs, especially willows, required for roosting sites. Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation. Gleans grasshoppers, cicadas, caterpillars and other larger insects from foliage. Occasionally preys on frogs or lizards, or feeds on fruit.</p> 

Scientific Name	Common Name	Status ¹ (Federal/ State)	Potential for Occurrence
Mammals			
<i>Antrozous pallidus</i>	Pallid Bat	None/CSC	Low -Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings . Roost must protect bats from high temperatures. Bats move deeper into cover if temperatures rise. Night roosts may be in more open sites, such as porches and open buildings . Few hibernation sites are known, but probably uses rock crevices. Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. This slow-flying, maneuverable species is adapted to feed on large, hard-shelled prey on the ground or in foliage. It is known to roost with a number of other bats, principally <i>Myotis</i> spp. and <i>Tadarida brasiliensis</i> . Owls and snakes are known predators.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/CSC	Low -Small moths are the principal food of this species. Beetles and a variety of soft-bodied insects also are taken. Captures their prey in flight using echolocation, or by gleaning from foliage. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting . May use separate sites for night, day, hibernation, or maternity roosts. Prefers mesic habitats. Gleans from brush or trees or feeds along habitat edges.

Scientific Name	Common Name	Status ¹ (Federal/ State)	Potential for Occurrence
<i>Erethizon dorsatum</i>	North American Porcupine	None	Not expected – Requires forest with a good understory of herbs, grasses, and shrubs. Prefers open stands of conifers. In spring and summer, uses meadows, brushy and riparian habitats for feeding. In winter, restricted to forests. In relatively arid regions, somewhat restricted to riparian habitats. In spring and summer, feeds on aquatic and terrestrial herbs, shrubs, fruits, leaves, and buds. Winter diet consists of twigs, bark, and cambium of trees, particularly conifers, and evergreen leaves. Trees utilized include yellow pines, Douglas-fir, pinyon pine, lodgepole pine, western white pine, limber pine, bristle-cone pine, firs, oaks, maple, cottonwood, willow, and elderberry.
<i>Lasiurus blossevillii</i>	western red bat	None/CSC	Moderate- Roosts primarily in trees, less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas . Preferred roost sites are protected from above, open below, and located above dark ground-cover. Such sites minimize water loss. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands.
<i>Lasiurus cinereus</i>	Hoary Bat	None	Moderate- The hoary bat is the most widespread North American bat. Generally roosts in dense foliage of medium to large trees. Preferred sites are hidden from above, with few branches below, and have ground cover of low reflectivity. Females and young tend to roost at higher sites in trees. Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Hoary bat feed primarily on moths, although various flying insects are eaten as well.
<i>Myotis evotis</i>	long-eared myotis	None	Low - This species roosts in buildings , crevices, spaces under bark, and snags. Caves are used primarily as night roosts. The long-eared myotis roosts singly, or is found in fairly small groups. Feeds on a variety of arthropods including beetles, moths, flies, and spiders.

Scientific Name	Common Name	Status ¹ (Federal/ State)	Potential for Occurrence
<i>Pekania pennanti</i>	Fisher	Proposed Threatened	<p>Not expected-</p> <p>Throughout their range fishers prefer closed canopy habitats and avoid open areas. Although fishers rest in many structures, they typically use downed logs, snags, or living trees.</p> <p>Fishers are opportunistic predators that hunt exclusively in forested habitats. Their diet includes birds, porcupines, snowshoe hare, squirrels, mice, shrews, voles, reptiles, insects, carrion, vegetation, and fruit.</p> 
Amphibians			
<i>Rana draytonii</i>	California Red-legged Frog	FT/CSC	<p>Not Expected-</p> <p>The California red-legged frog requires a variety of habitat elements with aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Breeding sites of the California red-legged frog are in aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons. Additionally, California red-legged frogs frequently breed in artificial impoundments such as stock ponds. Outside of range.</p>
<i>Rana boylei</i>	Foothill yellow legged	CSC	Moderate - inhabits rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools
<i>Rana aurora</i>	Northern red-legged Frog	CSC	Not Expected – Site is outside of range which is restricted to coastal portion of Mendocino County.
Fishes			
<i>Oncorhynchus kisutch</i>	Coho Salmon	FT/SE	<p>Present -</p> <p>Detected in the past within Mill Creek, Town and Grist Creeks.</p> <p>Critical Habitat is not in the project site.</p>

Scientific Name	Common Name	Status ¹ (Federal/ State)	Potential for Occurrence
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon	FT/SE	Not Expected - Critical Habitat is not in the project site. Nearby water drainages are not expected to have this species.
<i>Oncorhynchus mykiss</i>	Steelhead Trout	FT/None	Present - The adjacent Town Creek is designated Critical Habitat for this species. Detected in the past within Mill Creek, Town and Grist Creeks. Steelhead trout are a unique species. Individuals develop differently depending on their environment. All steelhead trout hatch in gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Some stay in fresh water all their lives, and are called rainbow trout. Steelhead trout that migrate to the ocean typically grow larger than the ones that stay in freshwater. They then return to freshwater to spawn.

1 Status: Federal/State/CNPS List. **Federal:** FT = Federally Threatened, FE = Federally Endangered, BBC = Birds of Conservation Concern. **State:** SE = State Endangered, ST= State Threatened, CSC = California Species of Special Concern, WL=Watch List

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ATTACHMENT D

FIGURES



Path: Q:\3551_Planning\Covelo_WWTP_Upgrades_SA19170680\MXD\ReportFigures\Bio\Fig1_Regional.mxd, chris.nixon 1/28/2020

1 inch = 1 miles
0 0.5 1 Miles



wood.


 Survey Area

FIGURE 1
Regional Location
Biological Resource Report
Covelo CSD WWTP Upgrades
Mendocino County, CA

1 inch = 2,000 feet

0 1,000 2,000 Feet



wood.



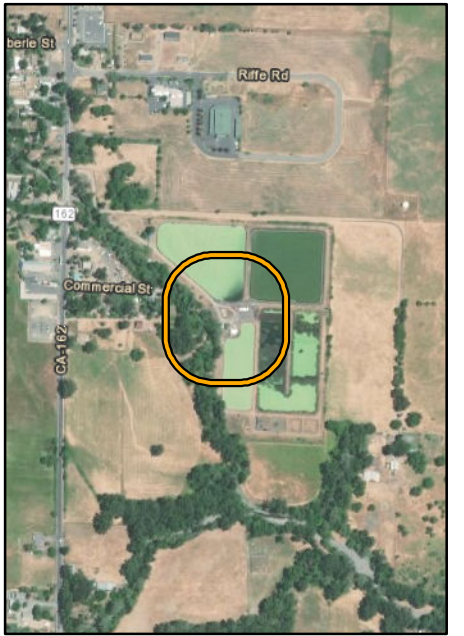
-  Survey Area
-  Work Area

FIGURE 2
Project Location on USGS Topo
Biological Resource Report
Covelo CSD WWTP Upgrades
Mendocino County, CA



Survey Area



Work Area



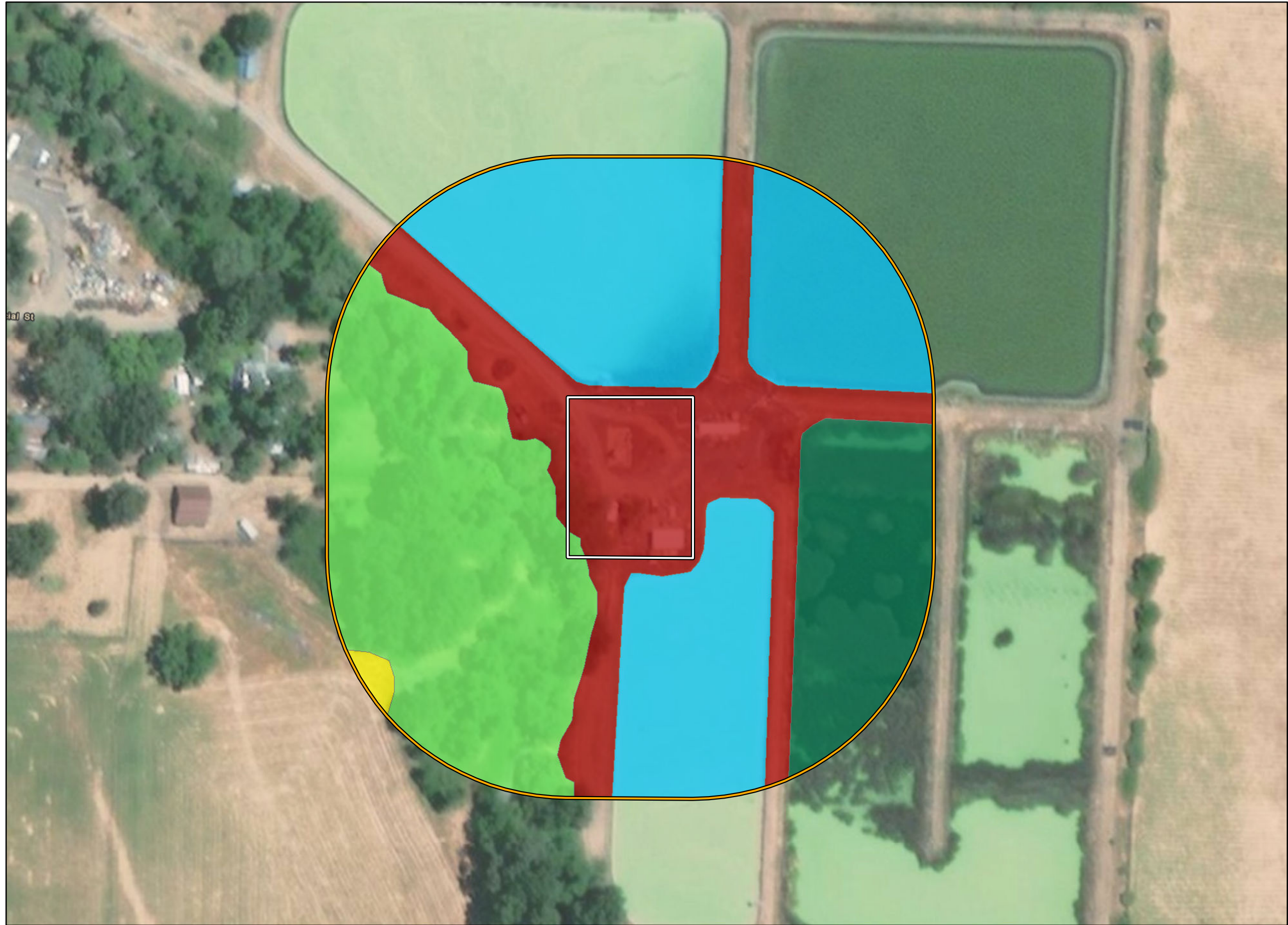
1 inch = 100 feet


0 100 Feet


FIGURE 3

Project Vicinity
Biological Resource Report
Covelo CSD WWTP Upgrades
Mendocino County, CA








 Survey Area


 Work Area

Vegetation Communities

 Disturbed/Ruderal

 Freshwater Marsh

 Open Water

 Pasture

 Riparian Woodland



1 inch = 100 feet

0 100 Feet


FIGURE 4

Vegetation Communities
Biological Resource Report
Covelo CSD WWTP Upgrades
Mendocino County, CA



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



 Survey Area

 Work Area

Jurisdictional Waters

 Non-Wetland Waters of the U.S. and State

 CDFW Jurisdiction

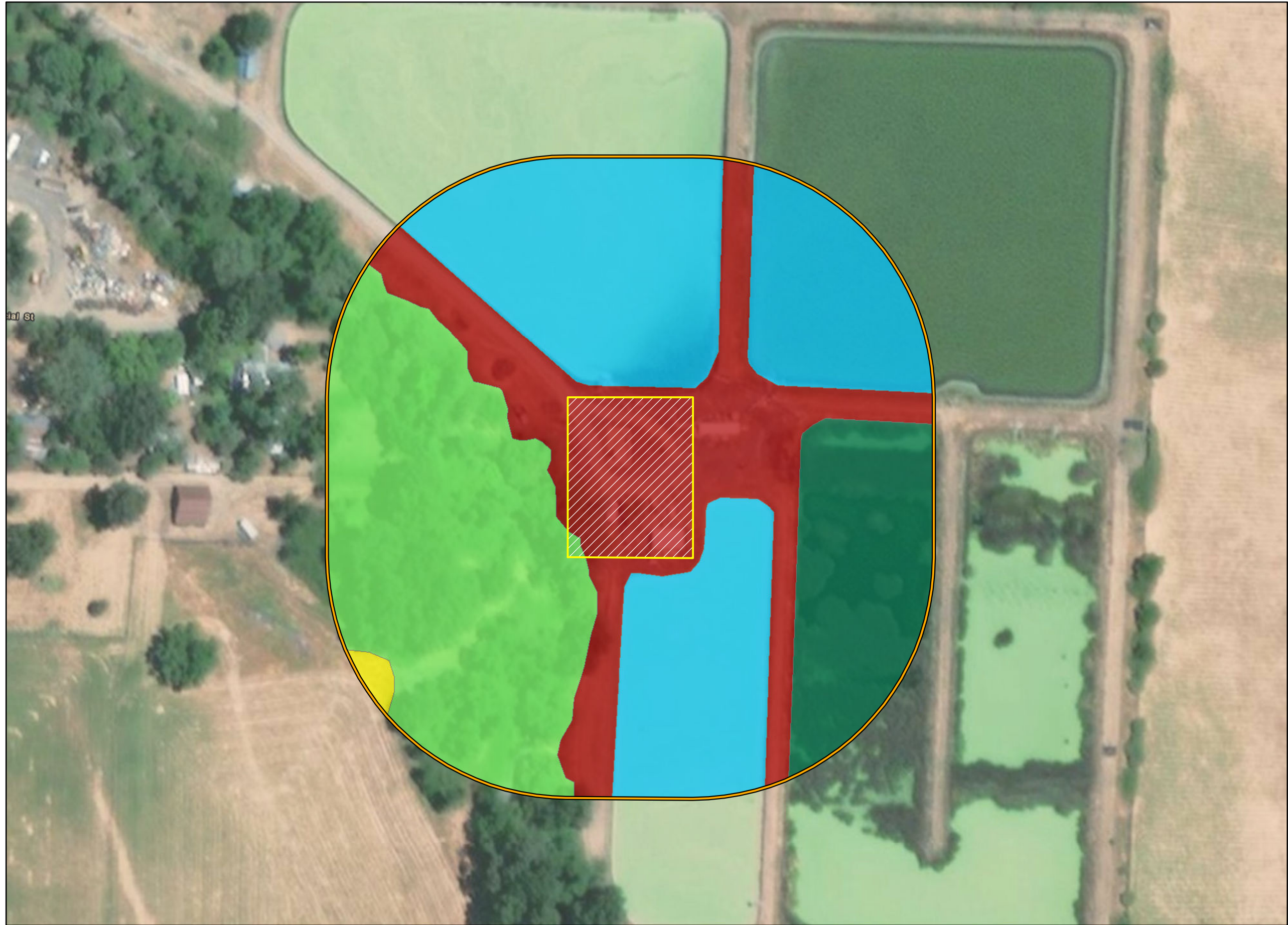








1 inch = 80 feet
0 80 Feet

FIGURE 5

Jurisdictional Waters
Biological Resource Report
Covelo CSD WWTP Upgrades
Mendocino County, CA





-  Survey Area
-  Project Impacts
- Vegetation Communities**
-  Disturbed/Ruderal
-  Open Water
-  Pasture
-  Riparian Woodland

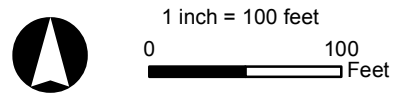


FIGURE 6

Vegetation Impacts
Biological Resource Report
Covelo CSD WWTP Upgrades
Mendocino County, CA



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Attachment B
Air Quality Technical Memorandum

TECHNICAL MEMORANDUM

DATE: February 4, 2020

TO: Manjit Saini, Brown & Caldwell, 75 East Santa Clara Street, San Jose, California 94085

FROM: Juliana Prosperi, Senior Environmental Scientist, Wood Technical Consulting Solutions, Inc.; Taylor Lane, CEQA Air Quality Specialist Wood Technical Consulting Solutions, Inc.

SUBJECT: Air Quality Technical Memorandum: Covelo Community Services District Wastewater Treatment Plant Improvements Project

1.0 Introduction

This air quality technical memorandum was prepared by Wood Environment & Infrastructure Solutions, Inc. (Wood) to support California Environmental Quality Act (CEQA) and Clean Air Act (CAA) conformity analysis for the Covelo Community Services District (District) Wastewater Treatment Plant Improvements Project (Project) located in the unincorporated community of Covelo in Mendocino County. The Project includes relocation and improvement of existing wastewater treatment plant infrastructure, including installation of new sewer transmission lines and a trash screen, replacement of an existing wet well and aboveground lift station, and relocation communication utilities at the District's existing wastewater treatment plant (WWTP). Proposed improvements would encompass approximately 0.25-acre within the 22.5-acre site. Construction activities are anticipated to begin in 2021 and last approximately 4 months.

2.0 Outline of This Report

The purpose of this technical memorandum report is to provide a detailed technical air quality analysis of the Project to support preparation of an Environmental Construction Package Application for the State Water Resources Control Board (SWRCB). The analysis was prepared in accordance with the *CEQA Air Quality Handbook* prepared by the South Coast Air Quality Management District (SCAQMD 1993). Regional climate and meteorology, air quality monitoring data, and the area's attainment status with respect to criteria air pollutants are discussed. The technical memorandum report includes a description of federal, state and local agencies that govern air quality and climate change, and their pertinent statutes and regulations. It identifies potential impacts of air pollutants of concern for this Project, including criteria pollutants (i.e., pollutants for which National Ambient Air Quality Standards [NAAQS] have been established by the U.S. Environmental Protection Agency (EPA), and their precursors) and mobile source air toxics. The report describes the analytical methodologies and assumptions used for this study as well as the results of these analyses and proposed mitigation measures.

3.0 Project Description

Introduction

The Project would involve WWTP improvements for better operations to minimize maintenance issues by eliminating trash build-up and increase reliability of the pumping system. The Project improvements are designed to address multiple facility condition issues due to aging infrastructure and poor operating conditions. These improvements would include the installation of a trash screen chamber and the replacement of the primary wet well and an aboveground lift station within the southwestern portion of the site. Additional improvements and replacement activities would include the installation of electrical and control systems; the replacement of the existing sewer line connections, manholes, force main and valve; and the undergrounding of communication utilities. No improvements are proposed for the oxidation or percolation ponds.

Project Location

The proposed Project is located along the east side of Covelo Road and Town Creek and north of Grist Creek in the unincorporated community of Covelo, California. The unincorporated community of Covelo is located along State Route 162 in northwestern Mendocino County. The community is within the southern portion of Round Valley approximately two miles east of the Round Valley Municipal Airport, 14 miles northeast of Laytonville, and 40 miles northeast of the City of Willits. The Project would be entirely confined within the existing Covelo WWTP site (Project site) within Assessor Parcel Number (APN) 034-210-25 (4 acres) and APN 034-210-32 (18.5 acres).

Description of Proposed Project

Proposed Improvements

The Project includes four major improvements. These include (1) installation of a trash screen chamber and replacement of sewer line connections, (2) replacement of the primary wet well and aboveground lift station, (3) relocation of force main and underground communication cables, and (4) removal of the existing wet well and above ground lift station. Each of these components is further described below.

Other proposed wastewater treatment infrastructure includes the installation of electrical system controls in the existing control and office building, and the replacement of the system's main circuit breakers and pump switch system. These control systems would be installed in a weather-proof receptacle located approximately 18 inches from the electrical panel housed in the existing controls and office building. Site improvements would also include the installation of one 20-foot tall aluminum pole light with a light-emitting diode fixture to illuminate the entrance road and a dumpster area.

Installation of Trash Screen Chamber and Replacement of Sewer Line Connections

An 8-inch sewer line would be installed between 15 to 18 feet below ground surface (bgs) and connected to a replacement manhole near an oxidation pond to the east. A 12-inch sewer line would be installed at a similar depth from the replacement manhole east of the existing aboveground lift station and would extend underground to a trash screen chamber. The trash screen chamber would be installed approximately 18 feet bgs. It would measure 15-feet long by 8-feet wide, and consist of an 18-inch flow channel, air scrubber, 24-inch manhole and cover, bar screen, and 3-foot by 4-foot hatch for maintenance access and routine cleaning.

Replacement Primary Wet Well and Aboveground Lift Station

From the trash screen chamber, a 12-inch sewer line would be installed approximately 18 feet bgs to the north to connect to a replacement underground wet well. The underground wet well would be constructed of pre-cast concrete and measure 6-feet in diameter by 22-feet deep, similar to the existing well as there is no future growth projected for the community. The wet well would be situated just north of the existing wet well and approximately 100 feet from the nearby creek. The proposed aboveground lift station would consist of an in-kind replacement fiberglass enclosure for two pumps and control valves, electrical control panel. The lift station will be designed for 300 gallons per minute. The lift station would be operated by two 7.5 horsepower motor pump that connects to 4-inch cast iron piping to the wet well.

Relocation of Force Main and Undergrounding of Communication Cables

An existing force main located to the north of the proposed concrete pad for the wet well and aboveground lift station would be temporarily relocated while a permanent force main would be re-installed adjacent to the proposed lift station. Existing overhead communication cables that connect to the existing controls and office building to the southeast would be relocated underground in the same vicinity. The existing force main line would be replaced and installed north of the proposed wet well and above-ground lift station; it would connect to the primary oxidation pond.

Removal of Existing Wet Well and Aboveground Lift Station

Once the proposed wet well and aboveground lift station are installed, connected to the proposed underground sewer lines and manholes, and under operation, the existing wet well and lift station located south and west of the oxidation and percolation ponds would be excavated, demolished, and removed from the Project site. Following construction and demolition activities, the existing force main and adjacent sewer lines would be abandoned and capped. Excavated soil would be backfilled into the removed wet well and aboveground lift station. The replaced wet well and aboveground lift station would then be re-graded, levelled, and covered with gravel.

4.0 Existing Conditions

Existing Air Quality

Air quality is affected by both the rate and location of pollutant emissions, and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The Project site is located in the North Coast Air Basin (NCAB or Basin), which includes coastal counties of Del Norte, Humboldt, Mendocino, Sonoma, and Trinity. Within the Basin, the Project site is located in what the Mendocino County Air Quality Management District (MCAQMD) considers Inland Rural Mendocino. This area of the County is designated as a non-attainment area for the state PM₁₀ standard. Some of the automobile emissions are the result of “pass-through” traffic on U.S. Highway 101 because of its nature as a major transportation corridor in the state. The primary man-made sources of PM-10 pollution in the area are wood combustion (woodstoves, fireplaces and outdoor burning), fugitive dust, and automobile traffic. Forest products and other resource industries are well established in the region.¹

The Project site is not located within an area that may contain Naturally Occurring Asbestos.²

Regulatory Setting

Pollutants of Concern

Criteria pollutants are air pollutants for which acceptable levels of exposure can be determined and an ambient air quality standard (AAQS) has been established by the U.S. EPA and/or the California Air Resources Board (ARB). The criteria air pollutants of concern are nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter (PM), sulfur dioxide (SO₂), lead (Pb), and ozone (O₃) and their precursors. Since the proposed Project would not generate appreciable SO₂ or Pb emissions, it is not necessary for the analysis to include those two pollutants.

Regional Attainment Status

Table 1 shows the area designation status of County for each criteria pollutant for both the NAAQS and California Ambient Air Quality Standards (CAAQS) as of October 2018. As discussed above, the NCAB is currently designated non-attainment for state PM₁₀ standard.

¹ MCAQMD. 2019. Air Quality Setting for Environmental Documents. Access on February 3, 2020 at http://www.co.mendocino.ca.us/aqmd/pdf_files/AQSetting.pdf.

² MCAQMD. 2005a. Map of Areas that May Contain Naturally Occurring Asbestos. Accessed on February 3, 2020 at http://www.co.mendocino.ca.us/aqmd/pdf_files/MCAQMDNOAPLS.pdf.

Table I
Federal and State Attainment Status

Pollutants	Federal Classification	State Classification
Ozone (O ₃)	Unclassified/Attainment	Attainment
Particulate Matter (PM ₁₀)	Unclassified	Non-attainment
Fine Particulate Matter (PM _{2.5})	Unclassified/Attainment	Attainment
Carbon Monoxide (CO)	Unclassified/Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO ₂)	Unclassified/Attainment	Attainment
Lead (Pb)	Unclassified/Attainment	Attainment
Sulfates (SO _x)	--	Attainment
Hydrogen Sulfide (H ₂ S)	--	Unclassified
Visibility Reducing Particulates	--	Unclassified

Sources: California Air Resources Board (CARB) Area Designation Maps / State and National. Accessed on February 3, 2020 at <https://ww3.arb.ca.gov/design/adm/adm.htm>.

Sensitive Receptors

Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, persons over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses identified to be sensitive receptors by the SCAQMD (1993) in its *CEQA Air Quality Handbook* include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors may be at risk of being affected by air emissions released from the construction and operation of the proposed Project.

The nearest sensitive receptors to the proposed Project site, with the highest potential to be impacted by the proposed Project, include private residences located along Commercial Street, east of the Project site, as close as 325 feet away.

5.0 Project Specific Impact Analysis

CEQA Impact Review Criteria

In accordance with *State CEQA Guidelines* Appendix G, implementation of the Project would result in a potentially significant impact if it were to:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Emission Thresholds for Regional Air Quality Impacts

MCAQMD has developed criteria for determining whether emissions from a project are regionally significant. They are useful for estimating whether a project is likely to result in a violation of the ambient air quality standards. MCAQMD's significance thresholds are summarized in **Table 2** for criteria pollutant emissions during construction activities and Project operation. A project is considered to have a regional air quality impact if emissions from its construction and/or operational activities exceed the corresponding significance thresholds.

Table 2
Emissions Thresholds for Significant Regional Impacts

Pollutant	Average Daily Construction Emissions (Pounds/Day)	Daily Operational Emissions (Pounds/Day)	
		Indirect	Stationary
Nitrogen Oxides (NO _x)	54	180	40
Reactive Organic Gases (ROG)	54	42	40
Respirable Particulate Matter (PM ₁₀)	82	82	15
Fine Particulate Matter (PM _{2.5})	54	54	10
Ozone (O ₃)	--	--	--
Sulfur Oxides (SO _x)	--	--	--
Carbon Monoxide (CO)	None	125	--
Lead	--	--	--

Source: MCAQMD. 2010. Adopted Air Quality CEQA Thresholds of Significance – June 2, 2010. Accessed on February 3, 2020 at http://www.co.mendocino.ca.us/aqmd/pdf_files/MCAQMDCEQARecomendations.pdf.

Methodology

Estimated regional air emissions from the Project's onsite and offsite construction activities were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (BREEZE Software 2016). CalEEMod is a planning tool for estimating emissions related to land use projects. The model incorporates EMFAC2014 emission factors to estimate on-road vehicle emissions; and emission factors and assumptions from the CARB's OFFROAD2011 model to estimate off-road construction equipment emissions. Model-predicted Project emissions are compared with applicable thresholds to assess regional air quality impacts. Use of CalEEMod for modeling emissions is approved by MCAQMD for all projects with applications dates after July 1, 2012.

CalEEMod uses many default assumptions based upon surveys of various types of construction projects. However, the user may override the default values where project-specific data are available. The Project Applicant provided a set of construction equipment assumptions for this Project, contained within the Project Description. Assumptions included:

- Total construction duration of 4 months.
- Three non-overlapping phases with no subphases.

- Total ground disturbance of 0.25-acre.
- Total 60 cubic yards (cy) of gravel to be imported to finish well pad area.
- Excavated material from new wet well construction to be balanced onsite to fill existing wet well.
- Total 80 cy of export of material from excavation of new trash screen.
- Approximately 10 construction workers onsite each day.

Table 3 lists the construction equipment types and characteristics used in the modelling, and **Table 4** shows the estimated timing of the main phases.

Table 3.
Construction Equipment Assumptions

Subphase	Equipment Type	Pieces	Hours/Day
Staging and Mobilization	Excavator	1	8
	Concrete Mixer Truck	1	8
	Concrete Pumper	1	8
	Tractors/Loaders/Backhoes	2	8
	Rubber Tired Dozer	1	8
	Trencher	1	8
Construction of Improvements	Excavator	1	8
	Concrete Mixer Truck	1	8
	Concrete Pumper	1	8
	Tractors/Loaders/Backhoes	2	8
	Trencher	1	8
Demolition and Grading	Rubber Tired Dozer	1	8
	Trencher	1	8

Table 4
Assumed Project Schedule

Phase	Starting Date	Ending Date	Duration (Days)
Staging and Mobilization	January 1, 2021	January 10, 2021	10
Grading	January 11, 2021	March 31, 2021	80
Building Construction	April 1, 2021	April 30, 2021	30

Air Quality Impacts

Construction Impacts

Project construction activities would generate short-term air quality impacts. Construction emissions occur both onsite and offsite. Onsite air pollutant emissions consist principally of exhaust emissions from off-road heavy-duty construction equipment, as well as fugitive particulate matter from earth working and material handling operations. Offsite emissions result from workers commuting to and from the job site, as well as from trucks hauling materials to the site and construction debris from the site for disposal.

Regional Impacts

Emissions of criteria pollutants during Project construction were estimated using the construction module of CalEEMod, Version 2016.3.2. Modeling output files and additional assumptions are provided in **Attachment 1**.

For the purpose of this analysis, it was estimated that the construction of the proposed Project would begin in early January 2021 and finish in late April 2021. Preliminary design and scheduling information from the Project Applicant was used in conjunction with CalEEMod to estimate the number of days to execute the following construction phases:

- Staging and Mobilization.
- Construction of Improvements
- Demolition and Grading

The types and numbers of construction equipment anticipated in each phase of construction were estimated using CalEEMod and experience with similar projects. With this information, a hypothetical but reasonable week-by-week construction schedule was developed and inputted to CalEEMod. Equipment exhaust emissions were determined using CalEEMod default values for horsepower and load factors. **Table 5** shows the model's estimates of maximum daily construction emissions for the proposed Project.

Table 5
Maximum Daily Unmitigated Regional Construction Emissions

Construction Activity	Maximum Emissions (lbs/day)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	3	30	24	19	6
MCAQMD Significance Thresholds	54	54	None	82	54
Exceeds Threshold?	No	No	N/A	No	No
Estimated Annual Construction Emissions (ton/year)	<1	2	1.5	2	<1

Source: Calculated by Wood with CalEEMod (Version 2016.3.2); see **Attachment 1**.

For each criteria pollutant, construction emissions would be below the pollutant's MCAQMD significance threshold. Therefore, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Construction emissions would be less than significant.

Impacts on Sensitive Receptors

Project construction would not generate substantial increases in emissions proximate to sensitive receptors. Construction activities would be confined primarily to the undeveloped, but disturbed land, would last up to 4 months, and would include limited construction traffic passing through developed rural areas and neighborhoods. Due to the limited duration of emissions and generation of emissions substantially below adopted thresholds for construction, emissions generated from Project construction are not anticipated to substantially adversely affect nearby sensitive receptors or cause increased health risk. Impacts would be less than significant.

Long-Term Impacts

Regional Impacts

The Project would replace or upgrade facilities at the existing WWTP, but it would not change the nature, intensity, or duration of operations, and would not introduce new emission sources. No new vehicle trips would be generated, and there would be no increase in mobile source emissions. The replacement pump for the new wet well would have similar specifications to the existing pump to be replaced, resulting in a negligible or no net change in operation emissions associated with the aboveground lift station. Furthermore, proposed improvements and equipment upgrades would minimize maintenance issues, thus reducing indirect emissions related to maintenance activities. Therefore, there would be no net increase in regional emissions of any criteria pollutant, and the impact would be less than significant.

Impacts on Sensitive Receptors

The proposed Project involves short duration construction activities to improve or replace existing equipment or infrastructure. The Project would not result in changes to existing operations or related emissions. Thus, the Project would not result in a considerable net change in long-term operational emissions affecting nearby sensitive receptors. Impacts would be less than significant.

Odor Analysis

The proposed Project involves short duration construction activities to improve or replace existing equipment or infrastructure. The proposed type of construction activities are not typically associated with generation of obnoxious odors. However, whatever odors may be generated by construction activities, they would be temporary and cease upon completion of construction. Though the Project involves improvements to a wastewater treatment plant, a facility or use which is commonly known for generating obnoxious odors, the Project would not substantially alter the operations of the facility or result in an increase in generation of odors. Therefore, odor impacts associated with the Project would be less than significant.

Conformity with Air Quality Plan

Given MCAQMD's nonattainment for the State PM₁₀ standard, the MCAQMD has prepared and adopted a Particulate Matter Attainment Plan (2005b) outlining measures to reduce PM₁₀ emissions and progress towards attaining the PM₁₀ standard at the earliest possible date. The plan outlines a total of six recommended measures applying to: 1) wood burning devices, 2) campground and campfire smoke, 3) fugitive dust from unpaved roads, 4) construction and grading activities, 5) new residential development, and 6) control of open burning emissions.

As previously discussed, the Project involves limited improvements and replacement of existing infrastructure for the existing WWTP which will require some construction and grading. Recommended Control Measure No. 4 is intended to reduce fugitive dust emissions from construction and grading activities by increasing enforcement of existing air quality regulations and requiring permits for project with over one acre of

disturbance. The Project, however, involves only limited construction and grading on an approximately 0.25-acre site. Given the limited area of disturbance and that estimated construction emissions would not exceed MCAQMD thresholds for PM₁₀, the Project would not be considered by MCAQMD to be a substantial source of PM₁₀ emissions and would not conflict with or obstruct the Particulate Matter Attainment Plan. Impacts would be less than significant.

6.0 Mitigation Measures

As discussed above, both the short-term and long-term air pollution impacts of the Project would be less than significant. Therefore, air quality mitigation measures are not necessary for the proposed Project.

7.0 References

BREEZE Software. 2016. California Emissions Estimator Model (CalEEMod). Accessed on February 3, 2020 at <http://www.caleemod.com/>.

California Air Resources Board (CARB). 2018. Area Designation Maps / State and National. Accessed on February 3, 2020 at <https://ww3.arb.ca.gov/design/adm/adm.htm>.

Mendocino County Air Quality Management District (MCAQMD). 2005a. Map of Areas that May Contain Naturally Occurring Asbestos. Accessed on February 3, 2020 at http://www.co.mendocino.ca.us/aqmd/pdf_files/MCAQMDNOAPLS.pdf.

MCAQMD. 2005b. Particulate Matter Attainment Plan. Accessed on February 3, 2020 at http://www.co.mendocino.ca.us/aqmd/pdf_files/Attainment%20Plan_DRAFT.pdf.

MCAQMD. 2010. Adopted Air Quality CEQA Thresholds of Significance – June 2, 2010. Accessed on February 3, 2020 at http://www.co.mendocino.ca.us/aqmd/pdf_files/MCAQMDCEQARecomendations.pdf.

MCAQMD. 2019. Air Quality Setting for Environmental Documents. Access on February 3, 2020 at http://www.co.mendocino.ca.us/aqmd/pdf_files/AQSetting.pdf.

South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook.

Attachment 1. CalEEMod Work Sheets

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project Mendocino-Rural Inland North County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.25	User Defined Unit	0.25	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	86
Climate Zone	1			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - User Defined Industrial used in-lieu of Public Facility/Wastewater Treatment Plan; Total Project area = 0.25 acre

Construction Phase - Estimated construction schedule based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Trips and VMT - A total of 10 construction workers onsite each day; vendor trips associated with equipment and material delivery; hauling trips reflect import and export based on 14 cy haul trucks

On-road Fugitive Dust - Road onto Project is unpaved, but remainder of roadways paved. Road onto Project accounts for approx. 2% of total trip length

Grading - Assumes 60 cy of gravel to fill around well pad and 80 cy of export from trash screen; total acres graded equates to total construction area

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	100.00	80.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	0.00	0.25
tblGrading	AcresOfGrading	0.00	0.25
tblGrading	MaterialExported	0.00	80.00
tblGrading	MaterialImported	0.00	60.00
tblLandUse	LotAcreage	0.00	0.25
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00

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tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	10.00	6.00
tblTripsAndVMT	HaulingTripNumber	8.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00

2.0 Emissions Summary

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1195	1.0822	1.0448	1.5900e-003	0.5927	0.0593	0.6520	0.1157	0.0546	0.1703	0.0000	139.6778	139.6778	0.0417	0.0000	140.7208
Maximum	0.1195	1.0822	1.0448	1.5900e-003	0.5927	0.0593	0.6520	0.1157	0.0546	0.1703	0.0000	139.6778	139.6778	0.0417	0.0000	140.7208

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1195	1.0822	1.0448	1.5900e-003	0.5927	0.0593	0.6520	0.1157	0.0546	0.1703	0.0000	139.6776	139.6776	0.0417	0.0000	140.7206
Maximum	0.1195	1.0822	1.0448	1.5900e-003	0.5927	0.0593	0.6520	0.1157	0.0546	0.1703	0.0000	139.6776	139.6776	0.0417	0.0000	140.7206

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.9854	0.9854
2	4-1-2021	6-30-2021	0.2182	0.2182
		Highest	0.9854	0.9854

2.2 Overall Operational

Unmitigated Operational

[illegible]

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition and Grading	Grading	4/1/2021	4/30/2021	7	30	
2	Site Preparation	Site Preparation	1/1/2021	1/10/2021	7	10	
3	Building Construction	Building Construction	1/11/2021	3/31/2021	7	80	

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Acres of Grading (Site Preparation Phase): 0.25**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Other Construction Equipment	2	8.00	172	0.42
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Trenchers	1	8.00	78	0.50
Building Construction	Excavators	1	8.00	158	0.38
Building Construction	Other Construction Equipment	2	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Trenchers	1	8.00	78	0.50
Demolition and Grading	Rubber Tired Dozers	1	8.00	247	0.40
Demolition and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	20.00	2.00	5.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition and Grading	2	20.00	0.00	6.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction**3.2 Demolition and Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0905	0.0000	0.0905	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0185	0.1930	0.0945	1.7000e-004		9.6600e-003	9.6600e-003		8.8900e-003	8.8900e-003	0.0000	15.3530	15.3530	4.9700e-003	0.0000	15.4771
Total	0.0185	0.1930	0.0945	1.7000e-004	0.0905	9.6600e-003	0.1001	0.0497	8.8900e-003	0.0586	0.0000	15.3530	15.3530	4.9700e-003	0.0000	15.4771

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	8.3000e-004	1.5000e-004	0.0000	1.4000e-003	0.0000	1.4000e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.2262	0.2262	1.0000e-005	0.0000	0.2264
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3800e-003	2.9500e-003	0.0241	4.0000e-005	0.1170	3.0000e-005	0.1170	0.0123	3.0000e-005	0.0123	0.0000	3.1771	3.1771	2.1000e-004	0.0000	3.1824
Total	3.4100e-003	3.7800e-003	0.0243	4.0000e-005	0.1184	3.0000e-005	0.1184	0.0124	3.0000e-005	0.0125	0.0000	3.4033	3.4033	2.2000e-004	0.0000	3.4087

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

3.2 Demolition and Grading - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0905	0.0000	0.0905	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0185	0.1930	0.0945	1.7000e-004		9.6600e-003	9.6600e-003		8.8900e-003	8.8900e-003	0.0000	15.3530	15.3530	4.9700e-003	0.0000	15.4771
Total	0.0185	0.1930	0.0945	1.7000e-004	0.0905	9.6600e-003	0.1001	0.0497	8.8900e-003	0.0586	0.0000	15.3530	15.3530	4.9700e-003	0.0000	15.4771

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	8.3000e-004	1.5000e-004	0.0000	1.4000e-003	0.0000	1.4000e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.2262	0.2262	1.0000e-005	0.0000	0.2264
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3800e-003	2.9500e-003	0.0241	4.0000e-005	0.1170	3.0000e-005	0.1170	0.0123	3.0000e-005	0.0123	0.0000	3.1771	3.1771	2.1000e-004	0.0000	3.1824
Total	3.4100e-003	3.7800e-003	0.0243	4.0000e-005	0.1184	3.0000e-005	0.1184	0.0124	3.0000e-005	0.0125	0.0000	3.4033	3.4033	2.2000e-004	0.0000	3.4087

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3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0303	0.0000	0.0303	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1460	0.1127	1.8000e-004		7.8700e-003	7.8700e-003		7.2400e-003	7.2400e-003	0.0000	15.6640	15.6640	5.0700e-003	0.0000	15.7906
Total	0.0144	0.1460	0.1127	1.8000e-004	0.0303	7.8700e-003	0.0381	0.0166	7.2400e-003	0.0238	0.0000	15.6640	15.6640	5.0700e-003	0.0000	15.7906

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	7.0000e-004	1.3000e-004	0.0000	1.1700e-003	0.0000	1.1700e-003	1.2000e-004	0.0000	1.3000e-004	0.0000	0.1885	0.1885	1.0000e-005	0.0000	0.1886
Vendor	5.0000e-005	1.1400e-003	3.6000e-004	0.0000	1.5400e-003	0.0000	1.5500e-003	1.6000e-004	0.0000	1.7000e-004	0.0000	0.2484	0.2484	1.0000e-005	0.0000	0.2487
Worker	1.1300e-003	9.8000e-004	8.0500e-003	1.0000e-005	0.0390	1.0000e-005	0.0390	4.0900e-003	1.0000e-005	4.1000e-003	0.0000	1.0590	1.0590	7.0000e-005	0.0000	1.0608
Total	1.2000e-003	2.8200e-003	8.5400e-003	1.0000e-005	0.0417	1.0000e-005	0.0417	4.3700e-003	1.0000e-005	4.4000e-003	0.0000	1.4959	1.4959	9.0000e-005	0.0000	1.4981

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3.3 Site Preparation - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0303	0.0000	0.0303	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1460	0.1127	1.8000e-004		7.8700e-003	7.8700e-003		7.2400e-003	7.2400e-003	0.0000	15.6640	15.6640	5.0700e-003	0.0000	15.7906
Total	0.0144	0.1460	0.1127	1.8000e-004	0.0303	7.8700e-003	0.0381	0.0166	7.2400e-003	0.0238	0.0000	15.6640	15.6640	5.0700e-003	0.0000	15.7906

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	7.0000e-004	1.3000e-004	0.0000	1.1700e-003	0.0000	1.1700e-003	1.2000e-004	0.0000	1.3000e-004	0.0000	0.1885	0.1885	1.0000e-005	0.0000	0.1886
Vendor	5.0000e-005	1.1400e-003	3.6000e-004	0.0000	1.5400e-003	0.0000	1.5500e-003	1.6000e-004	0.0000	1.7000e-004	0.0000	0.2484	0.2484	1.0000e-005	0.0000	0.2487
Worker	1.1300e-003	9.8000e-004	8.0500e-003	1.0000e-005	0.0390	1.0000e-005	0.0390	4.0900e-003	1.0000e-005	4.1000e-003	0.0000	1.0590	1.0590	7.0000e-005	0.0000	1.0608
Total	1.2000e-003	2.8200e-003	8.5400e-003	1.0000e-005	0.0417	1.0000e-005	0.0417	4.3700e-003	1.0000e-005	4.4000e-003	0.0000	1.4959	1.4959	9.0000e-005	0.0000	1.4981

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3.4 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0730	0.7288	0.7404	1.0800e-003		0.0417	0.0417		0.0383	0.0383	0.0000	95.2894	95.2894	0.0308	0.0000	96.0598
Total	0.0730	0.7288	0.7404	1.0800e-003		0.0417	0.0417		0.0383	0.0383	0.0000	95.2894	95.2894	0.0308	0.0000	96.0598

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0200e-003	7.8600e-003	0.0644	9.0000e-005	0.3119	9.0000e-005	0.3120	0.0327	8.0000e-005	0.0328	0.0000	8.4722	8.4722	5.6000e-004	0.0000	8.4863
Total	9.0200e-003	7.8600e-003	0.0644	9.0000e-005	0.3119	9.0000e-005	0.3120	0.0327	8.0000e-005	0.0328	0.0000	8.4722	8.4722	5.6000e-004	0.0000	8.4863

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3.4 Building Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0730	0.7288	0.7404	1.0800e-003		0.0417	0.0417		0.0383	0.0383	0.0000	95.2893	95.2893	0.0308	0.0000	96.0597
Total	0.0730	0.7288	0.7404	1.0800e-003		0.0417	0.0417		0.0383	0.0383	0.0000	95.2893	95.2893	0.0308	0.0000	96.0597

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0200e-003	7.8600e-003	0.0644	9.0000e-005	0.3119	9.0000e-005	0.3120	0.0327	8.0000e-005	0.0328	0.0000	8.4722	8.4722	5.6000e-004	0.0000	8.4863
Total	9.0200e-003	7.8600e-003	0.0644	9.0000e-005	0.3119	9.0000e-005	0.3120	0.0327	8.0000e-005	0.0328	0.0000	8.4722	8.4722	5.6000e-004	0.0000	8.4863

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.490499	0.044301	0.195407	0.131500	0.037493	0.006031	0.016825	0.067604	0.001624	0.001324	0.005274	0.001102	0.001014

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Mitigated

[illegible]

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

[illegible]

6.2 Area by SubCategory

Unmitigated

[illegible]

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

7.0 Water Detail**7.1 Mitigation Measures Water**

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project

Mendocino-Rural Inland North County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.25	User Defined Unit	0.25	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	86
Climate Zone	1			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - User Defined Industrial used in-lieu of Public Facility/Wastewater Treatment Plan; Total Project area = 0.25 acre

Construction Phase - Estimated construction schedule based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Trips and VMT - A total of 10 construction workers onsite each day; vendor trips associated with equipment and material delivery; hauling trips reflect import and export based on 14 cy haul trucks

On-road Fugitive Dust - Road onto Project is unpaved, but remainder of roadways paved. Road onto Project accounts for approx. 2% of total trip length

Grading - Assumes 60 cy of gravel to fill around well pad and 80 cy of export from trash screen; total acres graded equates to total construction area

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	100.00	80.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	0.00	0.25
tblGrading	AcresOfGrading	0.00	0.25
tblGrading	MaterialExported	0.00	80.00
tblGrading	MaterialImported	0.00	60.00
tblLandUse	LotAcreage	0.00	0.25
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	10.00	6.00
tblTripsAndVMT	HaulingTripNumber	8.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00

2.0 Emissions Summary

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.0940	29.7342	24.2430	0.0390	16.8935	1.5774	18.4709	4.4407	1.4513	5.8920	0.0000	3,789.0093	3,789.0093	1.1363	0.0000	3,817.4165
Maximum	3.0940	29.7342	24.2430	0.0390	16.8935	1.5774	18.4709	4.4407	1.4513	5.8920	0.0000	3,789.0093	3,789.0093	1.1363	0.0000	3,817.4165

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.0940	29.7342	24.2430	0.0390	16.8935	1.5774	18.4709	4.4407	1.4513	5.8920	0.0000	3,789.0093	3,789.0093	1.1363	0.0000	3,817.4165
Maximum	3.0940	29.7342	24.2430	0.0390	16.8935	1.5774	18.4709	4.4407	1.4513	5.8920	0.0000	3,789.0093	3,789.0093	1.1363	0.0000	3,817.4165

[illegible]

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000	0.0000	6.0000e-005

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000	0.0000	6.0000e-005

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition and Grading	Grading	4/1/2021	4/30/2021	7	30	
2	Site Preparation	Site Preparation	1/1/2021	1/10/2021	7	10	
3	Building Construction	Building Construction	1/11/2021	3/31/2021	7	80	

Acres of Grading (Site Preparation Phase): 0.25

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Other Construction Equipment	2	8.00	172	0.42
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Trenchers	1	8.00	78	0.50
Building Construction	Excavators	1	8.00	158	0.38
Building Construction	Other Construction Equipment	2	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Trenchers	1	8.00	78	0.50
Demolition and Grading	Rubber Tired Dozers	1	8.00	247	0.40
Demolition and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	20.00	2.00	5.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition and Grading	2	20.00	0.00	6.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

3.2 Demolition and Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0312	0.0000	6.0312	3.3112	0.0000	3.3112			0.0000			0.0000
Off-Road	1.2336	12.8671	6.2980	0.0116		0.6442	0.6442		0.5927	0.5927		1,128.2523	1,128.2523	0.3649		1,137.3748
Total	1.2336	12.8671	6.2980	0.0116	6.0312	0.6442	6.6755	3.3112	0.5927	3.9039		1,128.2523	1,128.2523	0.3649		1,137.3748

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7100e-003	0.0554	9.8200e-003	1.6000e-004	0.1212	2.5000e-004	0.1214	0.0127	2.3000e-004	0.0129		16.7708	16.7708	4.6000e-004		16.7824
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2078	0.1782	1.6046	2.4000e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		238.2419	238.2419	0.0156		238.6328
Total	0.2096	0.2337	1.6144	2.5600e-003	10.2619	2.5000e-003	10.2644	1.0662	2.3100e-003	1.0685		255.0128	255.0128	0.0161		255.4152

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

3.2 Demolition and Grading - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0312	0.0000	6.0312	3.3112	0.0000	3.3112			0.0000			0.0000
Off-Road	1.2336	12.8671	6.2980	0.0116		0.6442	0.6442		0.5927	0.5927	0.0000	1,128.2523	1,128.2523	0.3649		1,137.3748
Total	1.2336	12.8671	6.2980	0.0116	6.0312	0.6442	6.6755	3.3112	0.5927	3.9039	0.0000	1,128.2523	1,128.2523	0.3649		1,137.3748

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7100e-003	0.0554	9.8200e-003	1.6000e-004	0.1212	2.5000e-004	0.1214	0.0127	2.3000e-004	0.0129		16.7708	16.7708	4.6000e-004		16.7824
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2078	0.1782	1.6046	2.4000e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		238.2419	238.2419	0.0156		238.6328
Total	0.2096	0.2337	1.6144	2.5600e-003	10.2619	2.5000e-003	10.2644	1.0662	2.3100e-003	1.0685		255.0128	255.0128	0.0161		255.4152

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0493	0.0000	6.0493	3.3132	0.0000	3.3132			0.0000			0.0000
Off-Road	2.8723	29.1903	22.5466	0.0356		1.5736	1.5736		1.4478	1.4478		3,453.3157	3,453.3157	1.1169		3,481.2375
Total	2.8723	29.1903	22.5466	0.0356	6.0493	1.5736	7.6229	3.3132	1.4478	4.7609		3,453.3157	3,453.3157	1.1169		3,481.2375

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2800e-003	0.1386	0.0246	4.0000e-004	0.3029	6.1000e-004	0.3036	0.0317	5.9000e-004	0.0323		41.9271	41.9271	1.1600e-003		41.9560
Vendor	9.5300e-003	0.2271	0.0673	5.3000e-004	0.4006	9.1000e-004	0.4015	0.0423	8.7000e-004	0.0431		55.5246	55.5246	2.6200e-003		55.5902
Worker	0.2078	0.1782	1.6046	2.4000e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		238.2419	238.2419	0.0156		238.6328
Total	0.2217	0.5439	1.6964	3.3300e-003	10.8442	3.7700e-003	10.8480	1.1275	3.5400e-003	1.1310		335.6936	335.6936	0.0194		336.1790

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

3.3 Site Preparation - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0493	0.0000	6.0493	3.3132	0.0000	3.3132			0.0000			0.0000
Off-Road	2.8723	29.1903	22.5466	0.0356		1.5736	1.5736		1.4478	1.4478	0.0000	3,453.315 7	3,453.315 7	1.1169		3,481.237 5
Total	2.8723	29.1903	22.5466	0.0356	6.0493	1.5736	7.6229	3.3132	1.4478	4.7609	0.0000	3,453.315 7	3,453.315 7	1.1169		3,481.237 5

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2800e-003	0.1386	0.0246	4.0000e-004	0.3029	6.1000e-004	0.3036	0.0317	5.9000e-004	0.0323		41.9271	41.9271	1.1600e-003		41.9560
Vendor	9.5300e-003	0.2271	0.0673	5.3000e-004	0.4006	9.1000e-004	0.4015	0.0423	8.7000e-004	0.0431		55.5246	55.5246	2.6200e-003		55.5902
Worker	0.2078	0.1782	1.6046	2.4000e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		238.2419	238.2419	0.0156		238.6328
Total	0.2217	0.5439	1.6964	3.3300e-003	10.8442	3.7700e-003	10.8480	1.1275	3.5400e-003	1.1310		335.6936	335.6936	0.0194		336.1790

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

3.4 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8260	18.2190	18.5089	0.0271		1.0412	1.0412		0.9579	0.9579		2,625.9635	2,625.9635	0.8493		2,647.1958
Total	1.8260	18.2190	18.5089	0.0271		1.0412	1.0412		0.9579	0.9579		2,625.9635	2,625.9635	0.8493		2,647.1958

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2078	0.1782	1.6046	2.4000e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		238.2419	238.2419	0.0156		238.6328
Total	0.2078	0.1782	1.6046	2.4000e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		238.2419	238.2419	0.0156		238.6328

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

3.4 Building Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8260	18.2190	18.5089	0.0271		1.0412	1.0412		0.9579	0.9579	0.0000	2,625.9635	2,625.9635	0.8493		2,647.1958
Total	1.8260	18.2190	18.5089	0.0271		1.0412	1.0412		0.9579	0.9579	0.0000	2,625.9635	2,625.9635	0.8493		2,647.1958

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2078	0.1782	1.6046	2.4000e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		238.2419	238.2419	0.0156		238.6328
Total	0.2078	0.1782	1.6046	2.4000e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		238.2419	238.2419	0.0156		238.6328

4.0 Operational Detail - Mobile

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.490499	0.044301	0.195407	0.131500	0.037493	0.006031	0.016825	0.067604	0.001624	0.001324	0.005274	0.001102	0.001014

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Unmitigated	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Total	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Total	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project

Mendocino-Rural Inland North County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.25	User Defined Unit	0.25	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	86
Climate Zone	1			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - User Defined Industrial used in-lieu of Public Facility/Wastewater Treatment Plan; Total Project area = 0.25 acre

Construction Phase - Estimated construction schedule based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Off-road Equipment - Estimated construction equipment based on Applicant-provided construction details

Trips and VMT - A total of 10 construction workers onsite each day; vendor trips associated with equipment and material delivery; hauling trips reflect import and export based on 14 cy haul trucks

On-road Fugitive Dust - Road onto Project is unpaved, but remainder of roadways paved. Road onto Project accounts for approx. 2% of total trip length

Grading - Assumes 60 cy of gravel to fill around well pad and 80 cy of export from trash screen; total acres graded equates to total construction area

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	100.00	80.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	0.00	0.25
tblGrading	AcresOfGrading	0.00	0.25
tblGrading	MaterialExported	0.00	80.00
tblGrading	MaterialImported	0.00	60.00
tblLandUse	LotAcreage	0.00	0.25
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	HaulingPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	VendorPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00
tblOnRoadDust	WorkerPercentPave	30.00	98.00

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	10.00	6.00
tblTripsAndVMT	HaulingTripNumber	8.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00

2.0 Emissions Summary

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1407	29.7799	24.3104	0.0389	16.8935	1.5775	18.4710	4.4407	1.4514	5.8921	0.0000	3,779.2963	3,779.2963	1.1367	0.0000	3,807.7145
Maximum	3.1407	29.7799	24.3104	0.0389	16.8935	1.5775	18.4710	4.4407	1.4514	5.8921	0.0000	3,779.2963	3,779.2963	1.1367	0.0000	3,807.7145

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1407	29.7799	24.3104	0.0389	16.8935	1.5775	18.4710	4.4407	1.4514	5.8921	0.0000	3,779.2962	3,779.2962	1.1367	0.0000	3,807.7145
Maximum	3.1407	29.7799	24.3104	0.0389	16.8935	1.5775	18.4710	4.4407	1.4514	5.8921	0.0000	3,779.2962	3,779.2962	1.1367	0.0000	3,807.7145

[illegible]

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000	0.0000	6.0000e-005

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000	0.0000	6.0000e-005

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition and Grading	Grading	4/1/2021	4/30/2021	7	30	
2	Site Preparation	Site Preparation	1/1/2021	1/10/2021	7	10	
3	Building Construction	Building Construction	1/11/2021	3/31/2021	7	80	

Acres of Grading (Site Preparation Phase): 0.25**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Other Construction Equipment	2	8.00	172	0.42
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Trenchers	1	8.00	78	0.50
Building Construction	Excavators	1	8.00	158	0.38
Building Construction	Other Construction Equipment	2	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Trenchers	1	8.00	78	0.50
Demolition and Grading	Rubber Tired Dozers	1	8.00	247	0.40
Demolition and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	20.00	2.00	5.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition and Grading	2	20.00	0.00	6.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

3.2 Demolition and Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0312	0.0000	6.0312	3.3112	0.0000	3.3112			0.0000			0.0000
Off-Road	1.2336	12.8671	6.2980	0.0116		0.6442	0.6442		0.5927	0.5927		1,128.2523	1,128.2523	0.3649		1,137.3748
Total	1.2336	12.8671	6.2980	0.0116	6.0312	0.6442	6.6755	3.3112	0.5927	3.9039		1,128.2523	1,128.2523	0.3649		1,137.3748

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7800e-003	0.0563	0.0110	1.6000e-004	0.1212	2.5000e-004	0.1214	0.0127	2.4000e-004	0.0129		16.4173	16.4173	5.2000e-004		16.4302
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2536	0.2206	1.6580	2.3400e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		231.2275	231.2275	0.0157		231.6187
Total	0.2554	0.2769	1.6690	2.5000e-003	10.2619	2.5000e-003	10.2644	1.0662	2.3200e-003	1.0685		247.6448	247.6448	0.0162		248.0489

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

3.2 Demolition and Grading - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0312	0.0000	6.0312	3.3112	0.0000	3.3112			0.0000			0.0000
Off-Road	1.2336	12.8671	6.2980	0.0116		0.6442	0.6442		0.5927	0.5927	0.0000	1,128.2523	1,128.2523	0.3649		1,137.3748
Total	1.2336	12.8671	6.2980	0.0116	6.0312	0.6442	6.6755	3.3112	0.5927	3.9039	0.0000	1,128.2523	1,128.2523	0.3649		1,137.3748

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7800e-003	0.0563	0.0110	1.6000e-004	0.1212	2.5000e-004	0.1214	0.0127	2.4000e-004	0.0129		16.4173	16.4173	5.2000e-004		16.4302
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2536	0.2206	1.6580	2.3400e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		231.2275	231.2275	0.0157		231.6187
Total	0.2554	0.2769	1.6690	2.5000e-003	10.2619	2.5000e-003	10.2644	1.0662	2.3200e-003	1.0685		247.6448	247.6448	0.0162		248.0489

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0493	0.0000	6.0493	3.3132	0.0000	3.3132			0.0000			0.0000
Off-Road	2.8723	29.1903	22.5466	0.0356		1.5736	1.5736		1.4478	1.4478		3,453.3157	3,453.3157	1.1169		3,481.2375
Total	2.8723	29.1903	22.5466	0.0356	6.0493	1.5736	7.6229	3.3132	1.4478	4.7609		3,453.3157	3,453.3157	1.1169		3,481.2375

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.4400e-003	0.1406	0.0274	3.9000e-004	0.3029	6.3000e-004	0.3036	0.0317	6.1000e-004	0.0323		41.0433	41.0433	1.2900e-003		41.0755
Vendor	0.0103	0.2284	0.0784	5.1000e-004	0.4006	9.6000e-004	0.4016	0.0423	9.1000e-004	0.0432		53.7098	53.7098	2.9200e-003		53.7827
Worker	0.2536	0.2206	1.6580	2.3400e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		231.2275	231.2275	0.0157		231.6187
Total	0.2684	0.5897	1.7638	3.2400e-003	10.8442	3.8400e-003	10.8481	1.1275	3.6000e-003	1.1311		325.9805	325.9805	0.0199		326.4769

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

3.3 Site Preparation - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0493	0.0000	6.0493	3.3132	0.0000	3.3132			0.0000			0.0000
Off-Road	2.8723	29.1903	22.5466	0.0356		1.5736	1.5736		1.4478	1.4478	0.0000	3,453.3157	3,453.3157	1.1169		3,481.2375
Total	2.8723	29.1903	22.5466	0.0356	6.0493	1.5736	7.6229	3.3132	1.4478	4.7609	0.0000	3,453.3157	3,453.3157	1.1169		3,481.2375

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.4400e-003	0.1406	0.0274	3.9000e-004	0.3029	6.3000e-004	0.3036	0.0317	6.1000e-004	0.0323		41.0433	41.0433	1.2900e-003		41.0755
Vendor	0.0103	0.2284	0.0784	5.1000e-004	0.4006	9.6000e-004	0.4016	0.0423	9.1000e-004	0.0432		53.7098	53.7098	2.9200e-003		53.7827
Worker	0.2536	0.2206	1.6580	2.3400e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		231.2275	231.2275	0.0157		231.6187
Total	0.2684	0.5897	1.7638	3.2400e-003	10.8442	3.8400e-003	10.8481	1.1275	3.6000e-003	1.1311		325.9805	325.9805	0.0199		326.4769

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

3.4 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8260	18.2190	18.5089	0.0271		1.0412	1.0412		0.9579	0.9579		2,625.9635	2,625.9635	0.8493		2,647.1958
Total	1.8260	18.2190	18.5089	0.0271		1.0412	1.0412		0.9579	0.9579		2,625.9635	2,625.9635	0.8493		2,647.1958

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2536	0.2206	1.6580	2.3400e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		231.2275	231.2275	0.0157		231.6187
Total	0.2536	0.2206	1.6580	2.3400e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		231.2275	231.2275	0.0157		231.6187

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

3.4 Building Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8260	18.2190	18.5089	0.0271		1.0412	1.0412		0.9579	0.9579	0.0000	2,625.9635	2,625.9635	0.8493		2,647.1958
Total	1.8260	18.2190	18.5089	0.0271		1.0412	1.0412		0.9579	0.9579	0.0000	2,625.9635	2,625.9635	0.8493		2,647.1958

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2536	0.2206	1.6580	2.3400e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		231.2275	231.2275	0.0157		231.6187
Total	0.2536	0.2206	1.6580	2.3400e-003	10.1407	2.2500e-003	10.1430	1.0535	2.0800e-003	1.0556		231.2275	231.2275	0.0157		231.6187

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.490499	0.044301	0.195407	0.131500	0.037493	0.006031	0.016825	0.067604	0.001624	0.001324	0.005274	0.001102	0.001014

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Unmitigated	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Total	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Total	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Covelo Community Services District (CSD) Wastewater Treatment Plant Improvements Project - Mendocino-Rural Inland North County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation



Attachment C
Historic Property Identification Report

HISTORIC PROPERTY IDENTIFICATION REPORT

COVELO COMMUNITY SERVICES DISTRICT WASTEWATER TREATMENT PLANT IMPROVEMENT PROJECT 75997 COVELO ROAD COVELO, MENDOCINO COUNTY, CALIFORNIA

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