Biotic Resources Group
Biotic Assessments ◆ Resource Management ◆ Permitting

January 28, 2022

Carly Blanchard
Environmental Programs Manager
San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006

RE: Huckleberry Island Water Main Repair, Biological Review

Dear Ms. Blanchard,

The Biotic Resources Group documented and evaluated the biotic resources of a water main repair project at the terminus of Pacific Avenue and of Huckleberry Island Road in the unincorporated Brookdale area of Santa Cruz County. Specific tasks conducted for this review included a characterization of the plant communities within the proposed project area; identification of sensitive biotic resources, including habitats, plant or wildlife species of concern (i.e., riparian woodland, steelhead); and an evaluation of the potential effects of the proposed project activities on sensitive biotic resources.

PROPOSED PROJECT

The project is located just northwest of the junction of State Highway 9 and Pacific Avenue in the community of Brookdale, in Santa Cruz County. The proposed project is the repair of a water main that crosses the San Lorenzo River. On September 6, 2021 the San Lorenzo Valley Water District (SLVWD or District) suffered a major break of a 12-inch main between the District's Felton wells and its Boulder Creek system. This main, generally referred to as the "HUD main", is the primary backbone used to move well water north in the summer and treated surface water south in the winter. After the 2020 CZU Complex Fires the HUD main is the only potable water source into the District's north system (Ben Lomond, Brookdale and Boulder Creek). A single 6-inch connection to the HUD main also provides the residents of Huckleberry Island with potable water. The HUD main suffered a failure attributed to excess shear stress imposed on the main by soil movement. District staff responded and installed a temporary pipe coupling to restore service prior to storage tanks running out of water for the north system.

The project is to implement permanent repairs to the water main to ensure potable water supply for these communities. The alignment of the new 12-inch main will make connection to the existing main east of Huckleberry Island and north of Pacific Street, run southward to Pacific Street (a private ROW) to the eastern corner of the Huckleberry Island bridge. The new main will cross the San Lorenzo River on the Huckleberry Island bridge, then run north and east to the existing 12-inch main, where it will make connection to the existing 12-inch main north and west of the recent break location.

The District will conduct all construction outside of top of bank, riparian habitat, and out of the stream (San Lorenzo River). The alignment will affect some mitigation plantings installed in 2018 completed as part of the Huckleberry Island Bridge Replacement Project. The water main repair project includes replanting the affected mitigation vegetation at a 1:1 ratio. Work is expected to take 30 days. Project plan were prepared by MME, Civil and Structural Engineering, dated 1/22; the site layout is shown on Figure 1.

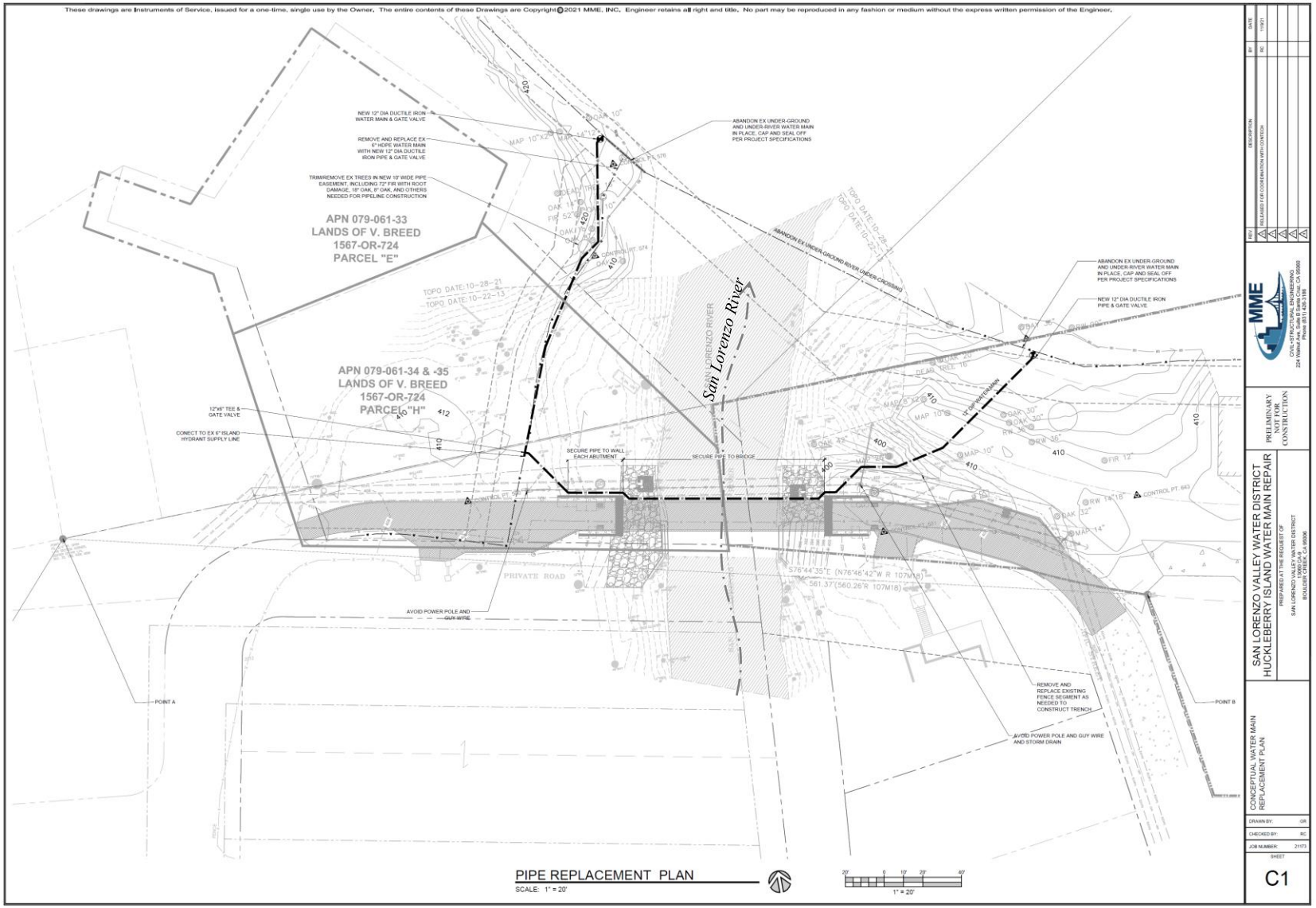

Figure 1. Site Layout Plan, Water Main Repair Project Plan, dated January 2022

EXISTING BIOTIC RESOURCES

The biotic resources of the project site were assessed through literature review and field observations. Site observations were made on October 20 and 26, 2021 and January 18, 2022 by Kathleen Lyons (plant ecologist). A previous biotic report, riparian mitigation plan and resource agency permits for the completed Huckleberry Island Bridge Replacement Project were also reviewed. This letter report summarizes the findings of the biotic assessment for the proposed project.

The project is located on the Felton USGS quadrangle (Section 32, R2W, T9S). The project is located near the San Lorenzo River; residential development and forest lands surround the site. San Lorenzo River is a perennial waterway, which empties into the Monterey Bay in Santa Cruz, approximately 18 miles downstream of the project site. The project area supports upland coast redwood forest and riparian mitigation (planted) areas.

The upland coast redwood forest occurs along the pipeline route east and west of the San Lorenzo River. Coast redwoods (*Sequoia sempervirens)*, intermix with Douglas fir (*Pseudostuga menziesii)*, tanoak (*Notholithocarpus densiflorus)*, big leaf maple (*Acer macrophyllum)*, California bay (*Umbellularia californica)*, and coast live oak (*Quercus agrifolia)*. The understory consists of young native trees, as well as non-native locust (*Robinia sp.)*, French broom (*Genista monspessulana)*, and English ivy (*Hedera helix)*.

Immediately adjacent to the bridge abutments are riparian mitigation plantings. Installed as part of the Huckleberry Island Bridge Replacement Project, these 3-year old plantings include willow (*Salix* spp.), big leaf maple, coast live oak, thimbleberry (*Rubus parviflorus)*, coffee berry (*Frangula californica)*, California rose (*Rosa californica)*, and sword fern (*Polystichum munitum)* Some plantings are shown in Figure 2. The location of the plantings in the water main repair work is shown on Figure 3.

Figure 2. View westward of riparian mitigation plantings adjacent to existing bridge, October 2021

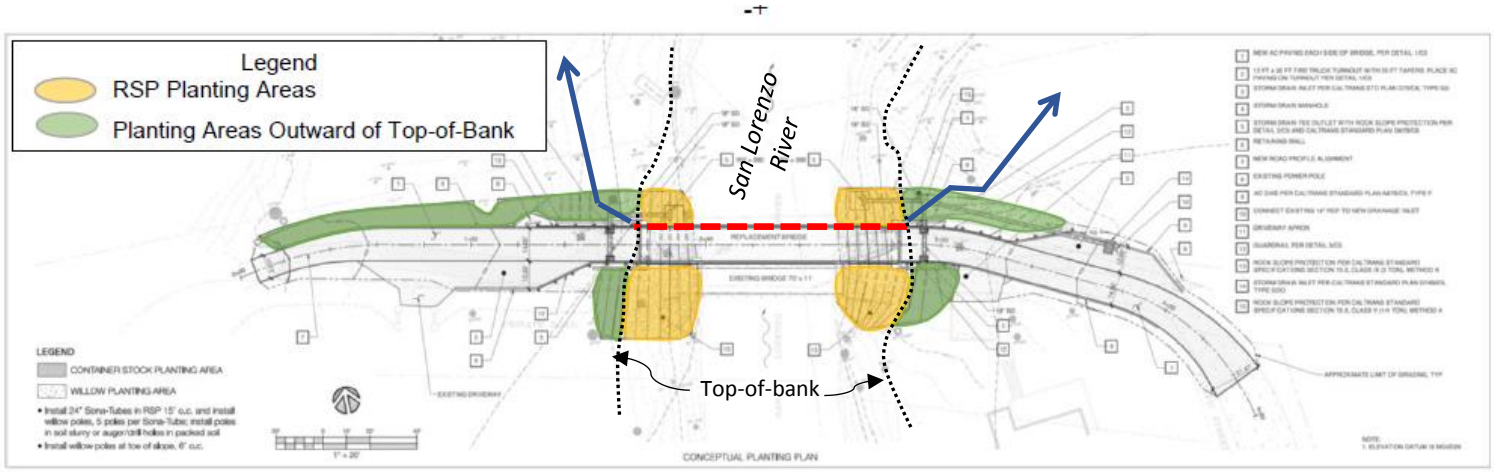

Figure 3. Distribution of Vegetation in Project Area, including Location of Top of Bank

Figure 4. View of west side of bridge, January 2022

The trees and shrubs adjacent to the project site provide nesting, roosting, and foraging habitat for numerous birds and mammals. Common wildlife expected to occur in this habitat include Pacific chorus frog (*Pseudacris regilla*), red-shouldered hawk (*Buteo lineatus*), chestnut-backed chickadee (*Poecile rufescens*), dark-eyed junco (*Junco hyemalis*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe *(Sayornis nigricans*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*). The wildlife value of the area may be moderated by the close proximity of a road and residences (i.e., human disturbance). The San Lorenzo River watershed supports the central California coast ESU for steelhead and the Central California Coast Coho Salmon ESU. Steelhead are known from the river, using this section of the river as a movement corridor to upstream spawning areas; however, coho have been presumed to be extirpated from the main stem of the river since the drought of the late 1980s.

Regulated Habitats

California Department of Fish and Wildlife (CDFW) is a trustee agency that has jurisdiction under Section 1600 et seq. of Sections 1600-1603 of the California Fish and Game Code. CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake which supports fish or wildlife. CDFW also regulates alterations to ponds and impoundments; CDFW jurisdictional limits typically extend to the top of bank or to the edge of riparian habitat if such habitat extends beyond top of bank (outer drip line), whichever is greater. The project is located outside of CDFW jurisdiction as trenching will occur outward of top-of-bank and outside the riparian woodland.

The US Army Corps of Engineers (USACE) regulates activities within waters of the United States pursuant to congressional acts: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (1977, as amended). Section 10 of the Rivers and Harbors Act requires a permit for any work in, over, or under navigable waters of the United States. Navigable waters are defined as those waters subject to the ebb and flow of the tide to the Mean High Water mark (tidal areas) or below the Ordinary High Water mark (freshwater areas). The proposed project is located outside (above) the Ordinary High Water Mark (OHWM), as all work will occur above the 382-foot elevation. No in-stream wetlands were observed in the project area.

Water quality in California is governed by the Porter-Cologne Water Quality Control Act and certification authority under Section 401 of the Clean Water Act, as administered by the Regional Water Quality Control Board (RWQCB). The Section 401 water quality certification program allows the State to ensure that activities requiring a Federal permit or license comply with State water quality standards. Water quality certification must be based on a finding that the proposed discharge will comply with water quality standards which are in the regional board's basin plans. The Porter-Cologne Act requires any person discharging waste or proposing to discharge waste in any region that could affect the quality of the waters of the state to file a report of waste discharge. The RWQCB issues a permit or waiver that includes implementing water quality control plans that take into account the beneficial uses to be protected. Waters of the State subject to RWQCB regulation extend to the top of bank, as well as isolated water/wetland features and saline waters. Should there be no Section 404 nexus (i.e., isolated feature not subject to USACE jurisdiction); a report of waste discharge (ROWD) is filed with the RWQCB. The RWQCB interprets waste to include fill placed into water bodies. The proposed project is located outside of RWQCB jurisdiction as trenching will occur outward of top-of-bank and outside the riparian woodland.

Special Status Species

Plant species of concern include those listed by either the Federal or State resource agencies as well as those identified as rare by CNPS (List 1B). The search of the CNPS and CNDDB inventories, as well as a review of the biotic report for the Huckleberry Island Bridge Replacement Project failed to identify any special status

plant species within in the project area. No special status plant species have been recorded in the CNDDB as occurring within the immediate project area, although occurrences of species are known from chaparral habitats within the greater Felton and Boulder Creek region. The creek environment and redwood forest lack specialized micro habitats (e.g., sandhills substrate) conducive to the occurrence of special status plant species.

Special status wildlife species include those listed, proposed or candidate species by either the Federal or the State resource agencies as well as those identified as State species of special concern. In addition, all raptor nests are protected by Fish and Game Code, and all migratory bird nests are protected by the Federal Migratory Bird Treaty Act. Special status wildlife species were evaluated for their potential presence in the project area based on a review of the biotic report for the Huckleberry Bridge and field observations. That review concluded the site was suitable for one species: steelhead. Steelhead are known to occur in the San Lorenzo River. No houses of the San Francisco dusky-footed woodrat were observed in the project area.

IMPACT AND MITIGATION DISCUSSION

The thresholds of significance presented in the CEQA Guidelines were used to evaluate project impacts and to determine if implementation of the proposed project would pose significant impacts to biological resources. For this analysis, significant impacts are those that substantially affect either:

a) A species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
b) Riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
c) State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation plan, or other approved local, regional, or state habitat conservation plan.

The water main repair project was evaluated for its potential direct and indirect impacts to biotic resources. Impacts to sensitive habitats/resources were considered potentially significant. Measures to reduce significant impacts to a level of less-than-significant are recommended, as applicable.

Impacts to Riparian Woodland. None, trenching for the water main repair will occur outward of the riparian woodland.

Impacts to Upland Redwood Forest. Project work will impact upland redwood forest which is located outward of the riparian woodland. Approximately 3,600 square feet of forested land will be temporarily impacted during trenching and placement of the water main. On the west end of the project, existing trees within a new 10-foot wide pipe easement will be removed, including a 72-inch Douglas fir (with root damage), an 18-inch oak, and an 8-inch oak. Other trees may require limb trimming to accommodate construction. Due to prevalence of these common forest trees, this vegetation removal is not a significant impact to regional botanical resources. As the project is located outside the coastal zone and outside sensitive habitat, the County's significant tree ordinance is not applicable to this project. A tree removal permit is not required.

Impacts to Mitigation Plantings. Project work will impact 3-year old mitigation plantings installed as part of the Huckleberry Island Bridge Replacement Project. Table 1 lists the plants to be affected by the project. In addition, willows on each end of the bridge abutments may need to be trimmed to accommodate the water main; however, these trees will be allowed to re-grow. The project plans depict a 1:1 replacement of mitigation plantings affected by the project with establishment monitoring; therefore, this vegetation removal is not a significant impact to the forest/riparian woodland. regional botanical resources.

Table 1. Mitigation Plantings to be Removed and Replaced

Common Name	Scientific Name	Number to be Removed	Replacement Plantings
Coast Live Oak	*Quercus agrifolia*	2	2
Big Leaf Maple	*Acer macrophyllum*	2	2
Sword Fern	*Polystichum munitum*	1	1*
California Rose	*Rosa californica*	4	4*
Coffee Berry	*Frangula californica*	2	2
TOTAL		**11**	**11**

* Plants to be salvaged and replanted on-site

The SLVWD intends to salvage some the plantings from the impact area (i.e., roses and fern). These plants will be re-installed on-site after project construction. The replacement plantings are specified in the Revegetation Plan and are in addition to other site erosion control seeding which are specified in the Erosion Control Plan. As specified in the Revegetation Plan, SLVWD will provide yearly monitoring of the replacement plantings (including replaced salvaged plants) and achieve 80% plant survival of the plantings in Years 1-5. The SLVWD will install replacement plantings if plant survival rates are not achieved each year. The SLVWD will also control invasive plant species such that cover by non-native invasive plant species provides less than 5% plant cover each year.

Impacts to Nesting Birds. Nesting birds may occur in the forest vegetation adjacent to the project site. Because most nesting birds are protected by the Migratory Bird Treaty Act, the SLVWD has included measures for a pre-construction bird nest survey if construction occurs between March 1 and September 1. If an active bird nest is found during surveys, the active nest site shall be designated and protected (while occupied) with a buffer area during project construction with the establishment of a fence barrier surrounding the nest site. The SLVWD's biologist shall designate a suitable buffer, based on the bird species, site conditions, and construction activities, and monitor the behavior of the birds (adults and young, when present) at the nest site to ensure that they are not disturbed by project-related activities. Nest monitoring shall continue during project-related construction work until the young have fully fledged, are no longer being fed by the parents and have left the nest site, as determined by a qualified biologist.

LITERATURE CITED AND REFERENCES

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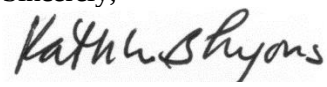
Please let me know if you have questions on this letter report.

Sincerely,



Kathleen Lyons
Plant Ecologist