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BIOLOGICAL RESOURCE ASSESSMENT
BIG PINE WASTEWATER TREATMENT PLANT EXPANSION

INYO COUNTY
APN: 018-090-19

Prepared For:
Big Pine Community Services District
P.O. Box 639
Big Pine, CA 93513

May 18, 2023

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APPENDICES

1.0 EXECUTIVE SUMMARY

The Big Pine Community Services District is seeking a Conditional Use Permit to utilize the property for an expansion of the existing wastewater treatment plant off of Highway 168 (APN:018-090-19) near the community of Big Pine in Inyo County (Figure 1). To assist the Inyo County Planning department with project permitting, TEAM Environmental (TEAM) has been retained to conduct a biological resource assessment of the subject parcel. This work has been requested in order to determine the potential impacts on any populations of federal or state-listed threatened, endangered or special status plant or wildlife species that may occur at the subject site, in support of California Environmental Quality Act (CEQA) compliance by the lead agency, the Inyo County Planning Department.

On April 26, 2023, TEAM conducted a scoping-level botanical and biological survey of the subject site. Work included evaluating the potential impacts on any populations of federally or state-listed threatened, endangered or special status plant, wildlife or invertebrate species that may occur at the subject site. Database research was conducted prior to conducting field surveys, and a list of all threatened, endangered and special status botanical and wildlife species which were determined to have the potential to occur within the project area was developed (Appendix A).

None of the special status plants identified in Appendix A were identified at the subject site during the April 26, 2023 site survey, conducted during the spring bloom when most would be expected to be actively growing and identifiable. It is unlikely that any of the threatened, endangered and special status plant species which have the potential to occur on the subject site listed in Appendix A would be impacted by the proposed project.

None of the special status wildlife species identified in Appendix A were identified at the subject site during the April 26, 2023 site survey. Of the ten wildlife species identified with the potential to occur in Appendix A, only one, the rufous hummingbird (*Selasphorus rufus*), was determined to have potential breeding habitat available which could be impacted by project construction at the subject site. There are also other birds protected under the migratory bird act which have the potential to find breeding habitat at the proposed project location. To avoid potential impacts to nesting birds, it is recommended that ground disturbing activities be conducted outside of the typical nesting period in the Owens Valley or conducting a pre-construction nesting bird survey if nesting season cannot be avoided (typically January 1 through September 15).

No federally or state-listed threatened, endangered or special status plant or wildlife species are expected to use habitat which is critical to their survival at the location of the proposed project. Potential impacts to biological resources in trees adjacent to the proposed disturbance area are not anticipated to be significant with the implementation of a pre-construction nesting bird survey or by limiting construction activities to the typical non-nesting season. This survey should be conducted no more than 3 days prior to the start of

construction activities. If nesting birds are observed the local CDFW office should be consulted to determine appropriate impact minimization measures.

2.0 INTRODUCTION

The subject site is located about a half mile northeast of the town of Big Pine, California in Inyo County (Figure 1). The project proponents propose to construct an infiltration/ percolation basin and installation of solar panels on an approximately 5 acre area to the north of the existing wastewater treatment facility. The Big Pine Community Services District are seeking a Conditional Use Permit (CUP) to allow the land to be used for a wastewater disposal basin. It was requested that TEAM conduct a biological resource assessment in order to assist the Inyo County Planning department with review and approval of the project.

This Biological Resource Assessment report has been prepared to present the results of the biological field survey that has been conducted for the proposed action and to assess the potential impacts on biological resources for California Environmental Quality Act (CEQA) compliance. It is anticipated that this information will be used by the Inyo County Planning Department to assist with CEQA compliance.

2.1 BACKGROUND

The proposed project area falls within the Big Pine 7.5-minute USGS quadrangle map. The proposed project tentative construction plan is shown on Figure 2, with the general boundaries of the biological resource field surveys conducted in late April 2023 shown on Figure 3.

TEAM's biological resource survey was conducted on April 26, 2023. The survey was conducted during the spring blooming period for many Owens Valley plants. This survey included evaluating the potential impacts of the proposed project on any populations of federal or state-listed threatened, endangered or special status plant, wildlife or invertebrate species. TEAM's biological resource survey included coordination and initial site overview with the project proponent, review of existing data including searches of the California Native Plant Society (CNPS) online inventory of Rare and Endangered Plants, California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), USFWS Information for Planning and Consultation (IPaC) website and a preliminary literature search.

The field survey was focused on the extent of the potential ground disturbance area of the approximately 5-acre lot. Tentative construction plans can be found on Figure 2.

2.2 BIOLOGICAL SETTING

The subject site is located about a half mile to the northeast of the town of Big Pine and is at approximately 3,940 feet above mean sea level (1,200 meters). State Highway 168 occurs to the north of the proposed project location. The existing wastewater treatment facility occurs to the south. The proposed project area is currently being used for livestock grazing and ranching operations. The project area and the surrounding land are owned by the City of Los Angeles Department of Water and Power which are used for livestock grazing. Numerous irrigation ditches which originate from the Big Pine Canal spread water to facilitate the

growth of livestock feed. There is also an access road for the existing plant bisecting the proposed project area and another road that follows the outside of the fence of the existing treatment plant. The subject property is currently zoned as OS-40.

The entire subject site is disturbed and no undisturbed natural habitat occurs at the proposed project area. Evidence of mechanical shrub clearing (spoils piles and shrub stumps) was present. Dominant vegetation at the project location is likely to be a Sarcobatus vermiculatus Alliance (Sawyer, 2009) consisting of *Sarcobatus vermiculatus* (Greasewood) and *Ericameria nauseosa* (rabbitbrush). However due to significant disturbance and clearing of vegetation this would not be considered a natural vegetation community. Most common species encountered include mostly invasive annuals including *Bassia hyssopfolia* (five-hook bassia) and *Salsola tragus* (tumbleweed). Two elm trees (*Ulmus pumila*) of over 4" diameter at breast height (DBH) occur at the proposed project location, two more occur just adjacent to the proposed project location in the band of willows (*Salix exigua*) to the north of the project site. None of the trees are proposed for removal in the Tentative Construction Plans. Other species encountered during the site visit can be found in Appendix B.

The primary soils on site consist of Shondow-Hessica association sandy clay loam. Shondow-hessica soils are derived from mixed material. Shondow soils are considered hydric with saline meadow ecological site rating. Hessica soils are considered non hydric, with a saline bottom ecological site rating (USDA 2023).

A USFWS National Wetland Inventory query shows no previously identified wetlands at the proposed project location, as shown on Figure 5. A wetland delineation was outside the scope of the current assessment.

3.0 METHODS

Prior to conducting field surveys, a table of endangered, threatened and special status species which have been known to occur near the subject site was compiled. This list was created from three sources: the United States Department of the Interior, Fish and Wildlife Service (USFWS) Information for Planning and Consultation–IPaC; the CDFW's CNDDB (CDFW, 2023); and the CNPS online inventory of Rare and Endangered Plants. The USFWS list was based on a subject site query and is not an official USFWS consultation. The USFWS list was located online (USFWS, 2023). The CNPS query was based on the Big Pine US Geological Survey (USGS) 7.5–minute quadrangle map. This query included all previously recorded plant observations with a California Rare Plant Rank listed for the Big Pine quadrangle map. The CNDDB query was also based on the Big Pine USGS 7.5–minute quadrangle map. Figure 3 depicts the CNDDB output for the proposed project area. A review of aerial photography was also conducted. These three lists, as well as the preferred habitat types and/or known ranges for the plant and wildlife species listed, are summarized in Appendix A.

The field survey was conducted on April 26, 2023 by TEAM Biologist Greg Foote. Prior to conducting field surveys the Tentative Construction Plan (Figure 2) and other project design documents were reviewed. This document provided the tentative project location and boundaries. These boundaries were also projected to an aerial photograph (Figure 3). The entire proposed project location was surveyed using meandering transects. Surveys were conducted on foot and all visible flora and fauna were identified to the lowest possible taxon. The survey and the subsequent report were prepared generally following CDFG and USFWS guidelines (CDFG, 2018; USFWS, 2000).

3.1 SPECIAL STATUS FLORA AND FAUNA

For the purpose of this assessment, special status species were defined as species which are one or more of the following: listed as endangered, threatened or are proposed to be listed by the Federal Endangered Species Act or the California Endangered Species Act; designated by the CDFW as a Species of Special Concern; or considered rare or endangered by the CNPS. This also includes species protected by the Migratory Bird Act.

3.1.1 Plants

After reviewing the lists of special status plant species known to occur near the subject site (Appendix A), ten special status plant species were considered to have the potential to occur at the subject site: *Aliciella triodon* (coyote gilia), Allium atrorubens var. atrorubens (Great Basin onion) *Astragalus serenoi var. shockleyi* (Shockley's milk-vetch), *Boechera dispar* (pinyon rockcress), *Calochortus excavatus* (Inyo County star-tulip), *Loeflingia squarrosa var. artemisiarum* (sagebrush loeflingia), *Phacelia inyoensis* (Inyo phacelia), Plagiobothrys parishii (Parish's popcornflower), Sidalcea covillei (Owens Valley checkerbloom) and *Suaeda occidentalis* (western seablight). These plants were determined to have the potential to occur based on previously known occurrences from CNDDB, CNPS and USFWS database searches as well as preferred habitat availability based on map and aerial photography review.

It is unlikely that any of the other special status plant species listed in Appendix A would rely on habitat at the subject site.

3.1.2 Wildlife

Special Status wildlife species were determined to have the potential to occur at the subject site based on previously known occurrences from CNDDB, CNPS and USFWS database searches and based on the potential for preferred habitat availability within the project area. Following a review of the lists of special status wildlife species (Appendix A) ten special status wildlife species were considered to have the potential to occur at the subject site: *Accipiter cooperii* (Cooper's hawk), *Athene cunicularia* (burrowing owl), *Buteo swainsoni* (Swainson's hawk), *Icteria virens* (yellow-breasted chat), *Piranga rubra* (summer tanager), *Selasphorus rufus* (rufous hummingbird), *Bombus morrisoni* (Morrison bumble bee), *Danaus plexippus* (Monarch butterfly), *Parnopes borregoensis* (Borrego parnopes cuckoo wasp) *Lasiurus cinereus* (hoary bat). There were no other wildlife species identified in database searches and listed in Appendix A that are likely to utilize habitat found at the location of the proposed project.

4.0 RESULTS

4.1 SPECIAL STATUS PLANTS

The botanical portion of the survey generally followed CNPS Botanical Survey Guidelines (CNPS, 2001). Plants encountered on the project site were identified to a taxonomic level.

Located in Appendix A is an analysis of the potential for any special status plants to occur at subject site based on aerial photo review as well as known occurrences in proximity to the subject site. Appendix B lists all plant species identified at the subject site during the April 26, 2023 field survey. The project location is a disturbed field, which shows evidence of vegetation removal and grazing impacts. The dominant plants at the project area include *Bassia hyssopfolia* (five-hook bassia), *Distichlis spicata* (saltgrass), *Helianthus annuus* (sunflower) and *Salsola tragus* (tumbleweed).

No special status plants were observed during the April 26, 2023 field event.

The survey was conducted during the Owens Valley spring bloom after one of the wettest winters on record in the region. Bishop area precipitation totals were recorded at 230% of normal for the 2022/2023 water year (LADWP, 2023). Below is an analysis of the ten Special Status plants identified in section 2.1.1 along with survey findings and recommendations:

Aliciella triodon (coyote gilia) is included in the CNPS Inventory of Rare and Endangered Plants on List 2B.2. Coyote gilia typically blooms from April to June and is generally found in open, sandy or rocky areas, sagebrush scrub or juniper woodland (CNDDB 2023). Coyote gilia was not identified during the site survey and is unlikely to occur at the subject site due to lack of preferred habitat and disturbed nature of the site.

Allium atrorubens var. atrorubens (Great Basin onion) is included in the CNPS Inventory of Rare and Endangered Plants on List 2B.3. Great Basin onion typically blooms in May or June and is generally found in Great Basin scrub, pinyon and juniper woodland. In sandy, rocky, gravelly, or sometimes clay soils at elevations ranging from 1235 to 2320 m (CNDDB 2023). Great Basin onion was not identified during the site survey and is unlikely to occur at the subject site due to lack of preferred habitat and disturbed nature of the site.

Astragalus serenoi var. shockleyi (Shockley's milk-vetch) is included in the CNPS Inventory of Rare and Endangered Plants on List 2B.2. Shockley's milk-vetch typically blooms from May to July and is generally found in chenopod scrub, pinyon and juniper woodland or Great Basin scrub in Coarse, granitic alluvium at elevations from 1185-2165 m (CNDDB, 2023). Shockley's milk vetch was not identified during the site survey and is unlikely to occur at the subject site due to lack of preferred habitat and disturbed nature of the site.

Boechera dispar (pinyon rockcress) is included in the CNPS Inventory of Rare and Endangered Plants on List 2B.3. Pinyon rockcress typically blooms from March to June and is generally found in joshua tree woodland, pinyon and juniper woodland, Mojavean desert scrub in granitic, gravelly slopes and mesas. Often under desert shrubs which support it as it grows and

occurs at elevations ranging from 1005 to 2805 m. Pinyon rockcress was not identified during the site survey and is unlikely to occur at the subject site due to lack of preferred habitat and disturbed nature of the site.

Calochortus excavatus (Inyo County star-tulip) is included in the CNPS Inventory of Rare and Endangered Plants on List 1B.1 and is also on the BLM list of sensitive species. The Inyo County star-tulip typically blooms from April to July and is generally found in chenopod scrub, meadows and alkaline seeps. It occurs mostly on fine, sandy loam soils with alkaline salts; grassy meadows in shadscale scrub at elevations ranging from 1150–2195 m.(CNDDB 2023). The Inyo star-tulip was not identified during the site survey and although marginal habitat on site exists for this species, it is not expected to occur at the subject site due to the disturbed nature, altered hydrology and active grazing practices.

Loeflingia squarrosa var. artemisiarum (sagebrush loeflingia) is included in the CNPS Inventory of Rare and Endangered Plants on List 2B.2. Sagebrush loeflingia typically blooms in April or May and is generally found in Great Basin scrub, Sonoran desert scrub, desert dunes. It occurs in sandy areas around clay slicks w/Sarcobatus, Atriplex, Tetradymia, etc. at elevations around 700–1615 m. (CNDDB 2023). Sagebrush loeflingia was not identified during the site survey and preferred habitat was not identified at the proposed project site. It is not expected to occur at the subject site.

Phacelia inyoensis (Inyo phacelia) is included in the CNPS Inventory of Rare and Endangered Plants on List 1B.2. Inyo phacelia typically blooms from April to August and is generally found in meadow and seep habitat and Alkaline meadows from elevations ranging from 910 to 2150 m. (CNDDB 2023). Inyo phacelia was not identified during the site survey and preferred habitat was not identified at the proposed project site. It is not expected to occur at the subject site.

Plagiobothrys parishii (Parish's popcornflower) is included in the CNPS Inventory of Rare and Endangered Plants on List 1B.1. Parish's popcornflower typically blooms from March to June and is generally found in Great Basin scrub and Joshua tree woodland in Alkaline soils and mesic sites at elevations from 515 to 2210 m. (CNDDB 2023). Parish's popcornflower was not identified during the site survey and although marginal habitat on site exists for this species, it is not expected to occur at the subject site due to the disturbed nature, altered hydrology and active grazing practices.

Sidalcea covillei (Owens Valley checkerbloom) is included in the CNPS Inventory of Rare and Endangered Plants on List 1B.1 and is also listed as endangered by the State of California. Owens Valley checkerbloom typically blooms from April to June in moist alkaline meadows and freshwater seeps in fine sandy loam soil at elevations ranging from 1090–1420 m. (CNDDB 2023). Owens Valley checkerbloom was not identified during the site survey and although marginal habitat on site exists for this species, it is not expected to occur at the subject site due to the disturbed nature, altered hydrology and active grazing practices.

Suaeda occidentalis (western seablight) is included in the CNPS Inventory of Rare and Endangered Plants on List 2B.3. Western seablight typically blooms from July to September and is generally found in Great Basin scrub with Alkaline soils in mesic sites at elevations ranging from 1205 to 2015 m. (CNDDB 2023). Although the survey was not conducted during the blooming period for this shrub, it would have been identifiable during the survey. Western seablight or any other *Suaeda* species were not identified during the site survey. Western seablight is unlikely to occur at the subject site due to lack of preferred habitat and disturbed nature of the site.

4.2 SPECIAL STATUS WILDLIFE

All wildlife encountered during the April 26, 2023 survey at the subject site were recorded and are listed in Appendix B.

Located in Appendix A is an analysis of the potential for any special status wildlife species to occur at the subject site. Appendix B lists all wildlife species observed and able to be identified at the proposed project area during the April 26, 2023 field event.

No federally or state-listed threatened or endangered wildlife species were observed within the project area.

Following the site visit and after further analysis of required reproductive habitat and foraging behaviors, it was determined that one of the ten species identified to have the potential to occur at the subject site in Appendix A could require project minimization measures to reduce potential impacts. A pre-construction nesting bird survey or avoidance of nesting bird season can reduce or eliminate impacts for the rufous hummingbird, and other bird species which could occur adjacent to the subject site and which are protected by the migratory bird act but were not specifically reviewed in this report. The remaining nine species were determined to be unlikely to occur or have breeding habitat available at or in close proximity to the subject site.

Preferred breeding habitat was not identified on the subject site for *Accipiter cooperii* (Cooper's hawk), a bird which is the CDFW Watch List. Cooper's Hawks mainly eat birds. Cooper's Hawks build nests in pines, oaks, Douglas-firs, beeches, spruces, and other tree species, often on flat ground rather than hillsides, and in dense woods. Nests are typically 25-50 feet high, often about two-thirds of the way up the tree in a crotch or on a horizontal branch. No preferred nesting habitat for Cooper's hawk was identified on site. No stick nests typical of a Cooper's hawk were observed at the subject site. This species has the potential to use areas at the proposed project location for foraging. Direct impacts to this species as a result of the proposed project are unlikely.

Preferred breeding habitat was not identified on the subject site for *Athene cunicularia* (burrowing owl) a bird which is listed as a species of special concern by the State of California. Burrowing owls live in flat open habitat with sparse vegetation, short grass, and bare soil such as prairies, grasslands, desert and sagebrush steppe environments. They live in burrows they dig themselves or take over from prairie dogs, ground squirrels and even tortoises, so they are

often associated with these burrowing animals (USFWS 2023). No burrows of any kind were observed during the site survey. The site is periodically cleared of vegetation, is used for cattle grazing and is in close proximity to the existing plant and Highway 168 making this site unsuitable for burrowing owl reproduction.

No nests were identified on the subject site for *Buteo swainsoni* (Swainson's hawk), a bird which is listed as threatened by the State of California. Swainson's hawks breed in grasslands with scattered trees, juniper–sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees (CNDDB 2023). A few trees occur on the property which would potentially be suitable habitat for a Swainson's hawk nest, however no nests were observed. Some potential foraging habitat also occurs at the site. Direct impacts as a result of the proposed project are not anticipated.

Preferred breeding habitat was not identified in the project footprint for *Icteria virens* (yellow–breasted chat), a bird which is listed as a species of special concern by the State of California. Some potential breeding habitat occurs to the north of the proposed project. Yellow–breasted chat inhabit riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground (CNDDB 2023). The proposed project footprint is just to the south of some riparian thickets of willow (*Salix exigua*). Periodic mowing and use for ranching operation and proximity to existing wastewater treatment plant diminish the quality of this habitat and make it unlikely that this species would find suitable breeding habitat at the proposed project site.

Preferred breeding habitat was not identified on the subject site for *Piranga rubra* (summer tanager), a bird which is listed as a species of special concern by the State of California. Summer tanager requires cottonwood–willow riparian for nesting and foraging; prefers older, dense stands along streams. No cottonwood trees were identified on site and willow habitat to the north of proposed project is small, isolated and disturbed making it unlikely that summer tanager would find suitable breeding habitat. Direct impacts as a result of the proposed project are not anticipated.

No hummingbird of any species were observed on site, however, breeding habitat which could be used by *Selasphorus rufus* (rufous hummingbird) was identified on site. The rufous hummingbird is a bird which is listed as a bird of conservation concern by the USFWS. They typically breed in open or shrubby areas. The female builds the nest alone using soft plant down held together with spider web, and camouflages the outside with lichen, moss, and bark. They put their nests up to 30 feet high in coniferous or deciduous trees, hidden in drooping branches (USFWS, 2023). Impacts to the potential breeding habitat at the proposed project location are not expected, however noise from construction activities have the potential to disturb nesting birds. Potential impacts could be mitigated by either implementing construction outside of normal breeding season or conducting a pre–construction nesting bird survey if nesting season cannot be avoided (typically January 1 through September 15 in the Owens Valley).

It is unlikely that *Bombus morisonii* (Morrison's bumblebee), would utilize habitat at the proposed project location for reproduction. Some forage species are present on the subject site in low densities (*Melilotus* and *Chrysothamnus*). Bumble bees require above and below-ground micro-sites for overwintering and nesting, including logs, stumps, and abandoned rodent and ground-nesting bird nests (Washington 2023). The disturbed nature and periodic clearing of vegetation at the subject site as well as lack of rodent holes identified on site make it unlikely that the subject site would utilize habitat at the subject site for breeding purposes. Impacts as a result of the proposed project, are not expected.

It is unlikely but unknown if the proposed project would cause impacts to *Parnopes borregoensis* (Borrego parnopes cuckoo wasp). While the exact host is not recorded for this nest parasite, it is virtually certain to be a ground nesting Bembicini "sand wasp" . Although they are solitary, as in no castes, generally each female tends her own larvae, bembicid nests are often (but not always) aggregated. Typically bembicids provision their nests with flies of various families which they often catch at flowers. The key to flourishing parnopine populations is therefore flourishing bembicine populations, which in turn are dependent on flies of some sort. Bemibicines also have other nest parasites, such as certain flies and velvet ants. There is no information regarding precise management needs for this species or genus. However, since it is basically a predator on other wasps that are probably predators on nectaring flies, management would probably involve maintaining diverse arrays of native flowers and suitable nesting habitat for the Bembicini. They probably nest in rather open sandy habitats near flowery places (Nature Serve 2023). Due to limited information about this species it can not be determined definitively whether the project will impact this species. The proposed project has limited vegetation removal associated with it, no open sandy habitat and the site is already impacted by human activity makes it unlikely that impacts to Borrego parnopes cuckoo wasp will occur as a result of the project.

Preferred breeding habitat was not identified on the subject site for *Danaus plexippus* (monarch butterfly), an insect which is a candidate for Federal Endangered Species protection. Adult monarchs feed on the nectar of many flowers, but they breed only where milkweeds are found. Milkweeds were not identified on site during the site visit. There are unlikely to be impacts to this species as a result of the proposed project because no breeding habitat was identified on site and no additional undisturbed vegetation is proposed to be removed.

It is unlikely that the proposed project will cause impacts to *Lasiurus cinereus* (hoary bat). Hoary bats roost in the open foliage of deciduous and coniferous trees. Unlike most bat species that aggregate in maternity colonies, females with young roost solitarily and select trees that provide shelter from wind, stable sunlight exposure, and are near a clearing (Washington 2023). There are two elm trees on site (and two adjacent to the project area) which would provide some breeding habitat however, the project does not propose any removal of trees on site thus impacts to this species are not expected. If trees are to be

removed, CDFW should be consulted with to determine appropriate mitigation to reduce potential impacts to this species.

5.0 REFERENCES

California Department of Fish and Wildlife, 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. March 20

California Natural Diversity Database (CNDDB), 2023. Biogeographic Data Branch, Department of Fish and Game, RareFind Version 5. Query for Big Pine 7.5 minute quadrangle map. April 25

California Native Plant Society, 2001. CNPS Botanical Survey Guidelines. California Native Plant Society. June 2

California Native Plant Society, Rare Plant Program. 2023. Inventory of Rare and Endangered Plants of California (online edition, v9.5). Website http://www.rareplants.cnps.org [accessed 24 April 2023]

California Native Plant Society, 2014a The California Rare Plant Ranking System http://www.cnps.org/cnps/rareplants/ranking.php

CNPS. [2022]. A Manual of California Vegetation, Online Edition. http://www.cnps.org/cnps/vegetation/ ; searched on [28, April, 2023]. California Native Plant Society, Sacramento, CA.

Cornell Lab of Ornithology, 2022, All About Birds (website). Accessed 12/8/2022 https://www.allaboutbirds.org/guide/Golden_Eagle/lifehistory

Hickman, J.C. (Ed.), 1993. The Jepson Manual, Higher Plants of California. University of California Press. Berkley, CA

Los Angeles Department of Water & Power. 2023. L.A Aqueduct Conditions Reports. Eastern Sierra Current Precipitation Conditions. Accessed 5/9/2023.

NatureServe Explorer, 2023. Borrego Parnopes Chrysidid Wasp. https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.793588/Parnopes_borregoensis

Sibley, D.A, 2003. The Sibley Field Guide to Birds of Western North America. Alfred A. Knopf Inc., New York, NY

Sawyer, J.O., Keeler-Wolf, T. 2009. A Manual of California Vegetation. Online version. http://davisherb.ucdavis.edu/cnpsActiveServer/index.html

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento

United States Department of Agriculture, Natural Resources Conservation Service, 2023. Custom Soil Resource Report using http://websoilsurvey.sc.egov.usda.gov/

United States Fish and Wildlife Service (USFWS). 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed Proposed and Candidate Plants. USFWS, January.

United States Fish and Wildlife Service. 2023. Information for Planning and Consultation (IPaC) resource list for subject site – not an official consultation. April 24. https://ecos.fws.gov/ipac/location/index

United States Fish and Wildlife Service. 2023. Species of Interest (webpage). Accessed 5/4/2023. https://www.fws.gov/species/burrowing-owl-athene-cunicularia

United States Fish and Wildlife Service. 2023. ECOS Environmental Conservation Online System. Rufous hummingbird (*Selasphorus rufus*). Accessed 5/4/23. https://ecos.fws.gov/ecp/species/8002

Vaughan, T., O. O' Shea. 1967. Roosting ecology of the pallid bat, *Antrozous pallidus*. Journal of Mammalogy, 67: 91–102

Washington Department of Fish & Wildlife. 2023. Species & Habitats: Morrison's bumble bee (*Bombus morrisoni*). Accessed 5/4/2023. https://wdfw.wa.gov/species-habitats/species/bombus-morrisoni

Washington Department of Fish & Wildlife. 2023. Species & Habitats: Hoary Bat (*Lasiurus cinereus*). Accessed 5/4/2023. https://wdfw.wa.gov/species-habitats/species/lasiurus-cinereus#desc-range

Wilson, D., S. Ruff. 1999. Smithsonian Book of North American Mammals. Washington: Smithsonian Institution Press.

6.0 GENERAL CONDITIONS

This report has been prepared according to generally accepted standards of environmental practice at the time this assessment was performed. TEAM Environmental, Inc. (TEAM) does not assume responsibility for conditions that did not come to its attention or for conditions not generally recognized as environmentally acceptable at the time this report was prepared.

Biology is an inexact science, and investigative data commonly contain uncertainties. Professional judgments contained in this report are based upon our education and experiences on similar projects. Services performed for this project by TEAM are in accordance with professional standards for biological assessments; no guarantees are either expressed or implied.

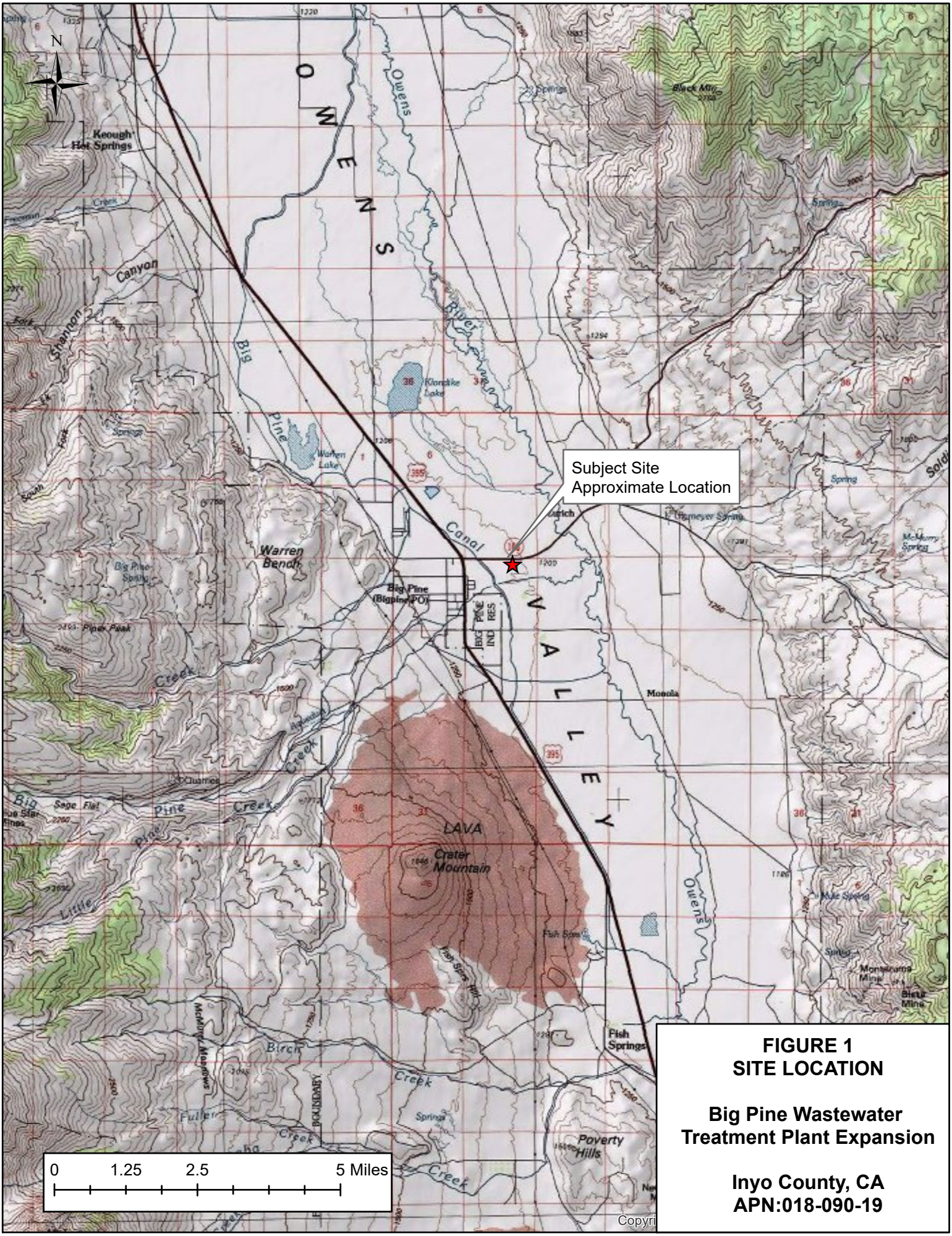


FIGURE 1
SITE LOCATION

Big Pine Wastewater Treatment Plant Expansion

Inyo County, CA
APN:018-090-19

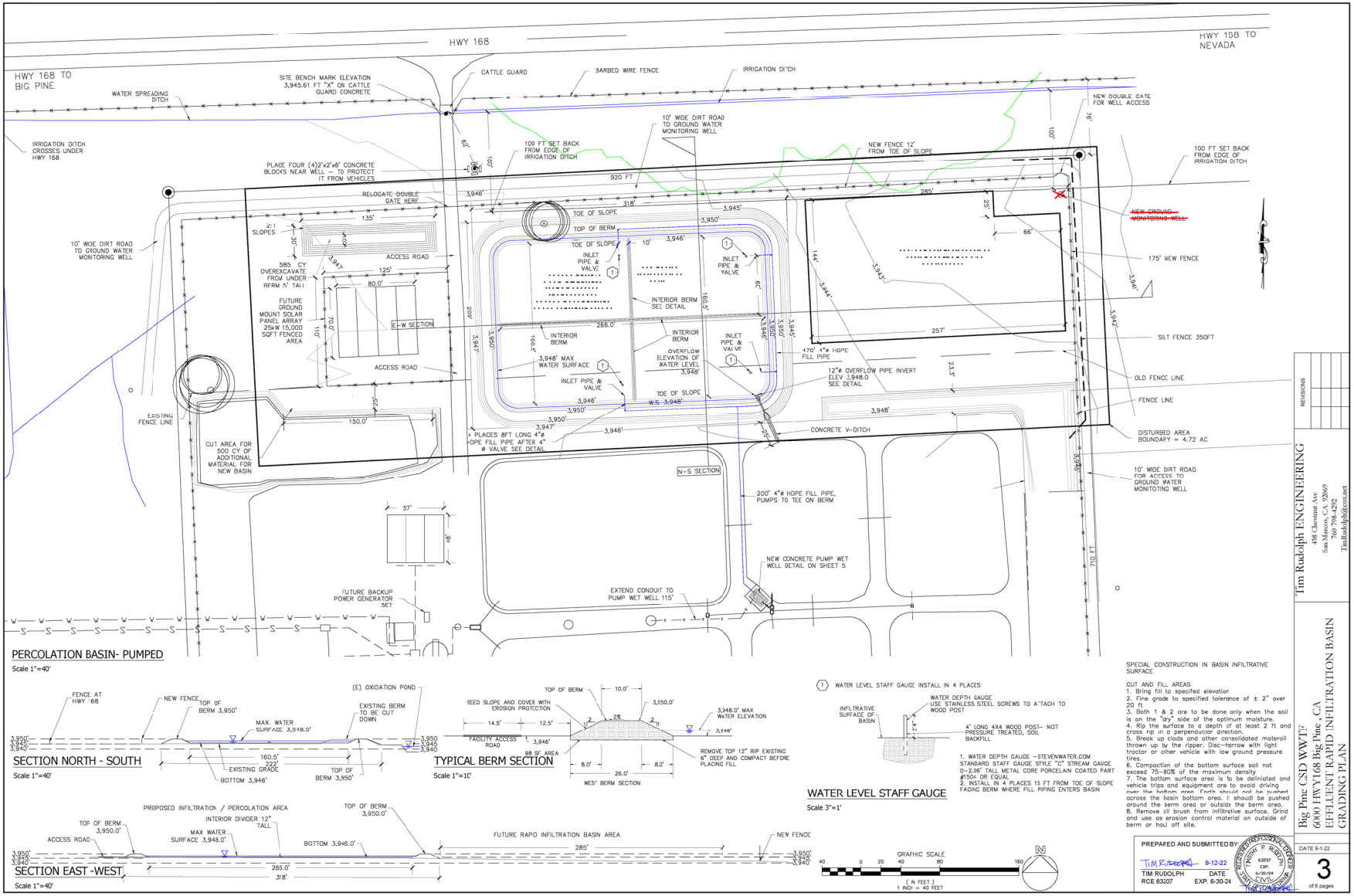


FIGURE 2
PROPOSED PROJECT TENTATIVE CONSTRUCTION PLAN

Big Pine Wastewater Treatment Plant Expansion

Inyo County, California
APN: 018-090-19

FIGURE 3
APPROXIMATE SURVEY AREA

Big Pine Wastewater Treatment Plant Expansion

Inyo County, CA
APN:018-090-19

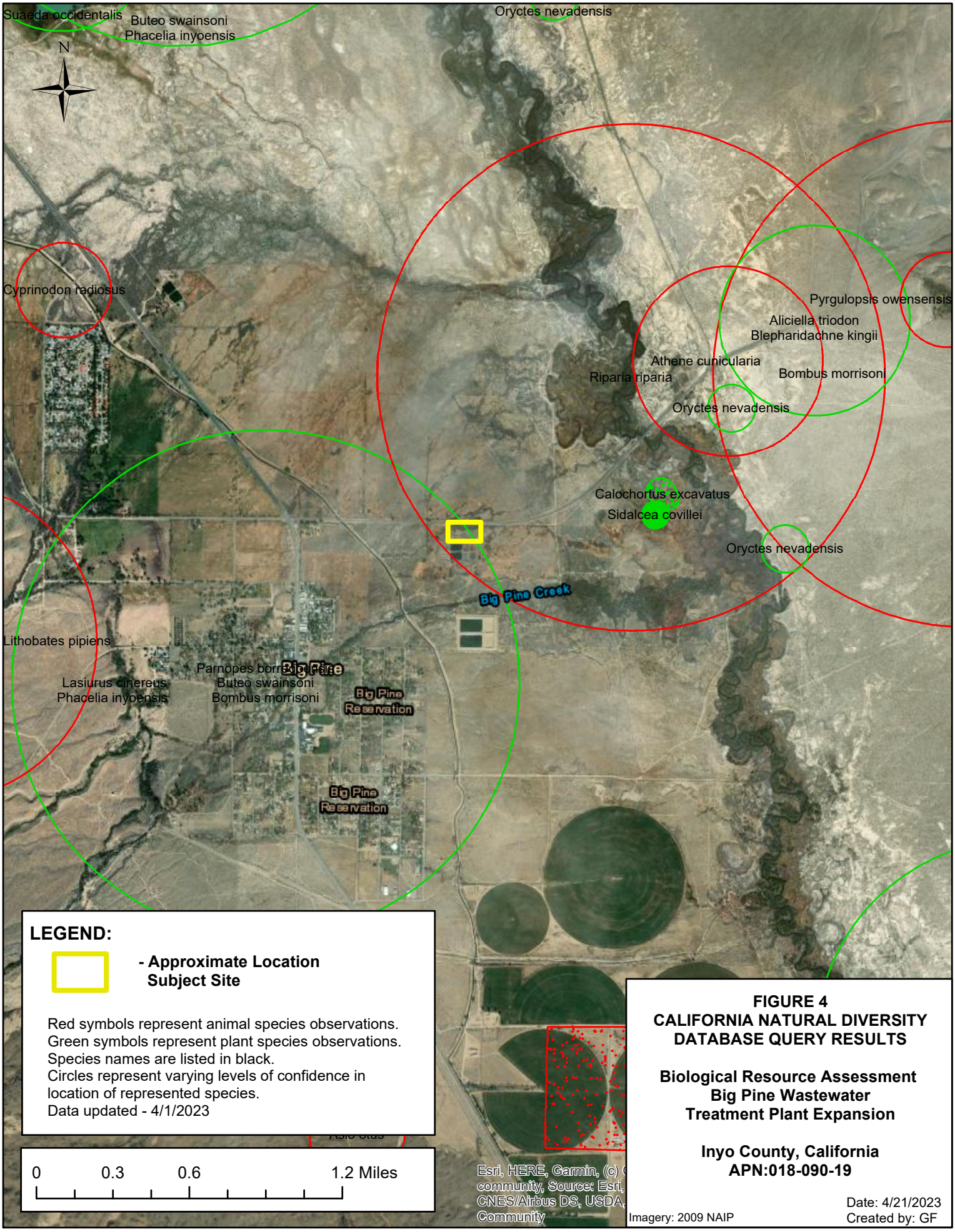


FIGURE 4
CALIFORNIA NATURAL DIVERSITY DATABASE QUERY RESULTS

Biological Resource Assessment
Big Pine Wastewater
Treatment Plant Expansion

Inyo County, California
APN:018-090-19

Date: 4/21/2023
Created by: GF

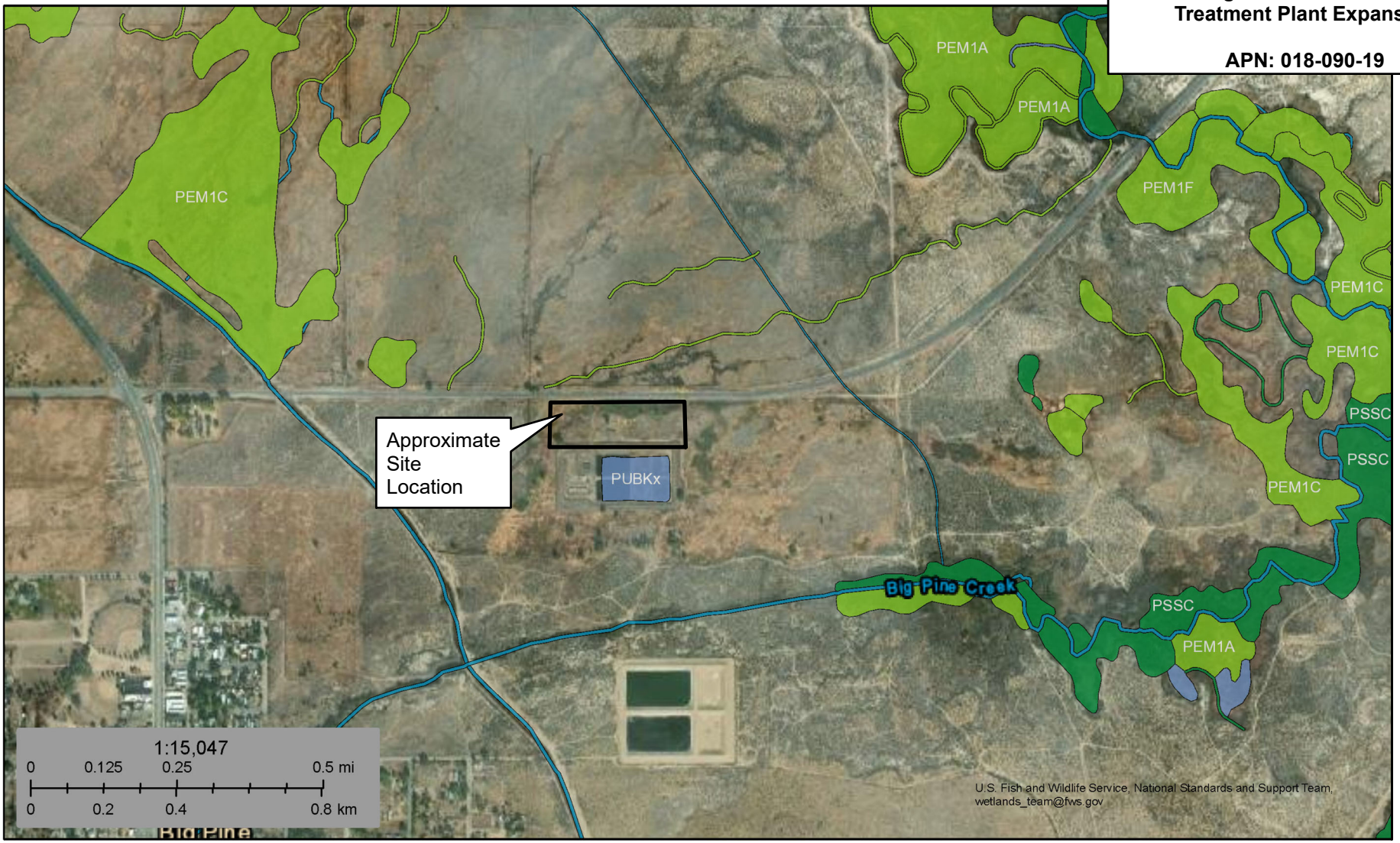
U.S. Fish and Wildlife Service
National Wetlands Inventory

Big Pine CSD

FIGURE 5
U.S. FISH & WILDLIFE SERVICE
NATIONAL WETLAND INVENTORY MAP

Big Pine Wastewater Treatment Plant Expansion

APN: 018-090-19



April 25, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Wetland data based on 1985 color imagery

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

APPENDIX A
Special Status Species - Potential to Occur at Big Pine Wastewater Treatment Plant Expansion Site
Inyo County, California
APN: 018-090-19

Scientific Name	Common Name	Status		Rare Plant Rank or Other Status	General Habitat	Potential to Occur at Project Location
		Federal	State			
Amphibians						
Lithobates pipiens	northern leopard frog			CDFW_SSC	Native range is east of Sierra Nevada-Cascade Crest. Near permanent or semi-permanent water in a variety of habitats.	Unlikely. No preferred habitat in project area.
Birds						
Accipiter cooperii	Cooper's hawk				Cismontane woodland, Riparian forest, Riparian woodland, Upper montane coniferous forest. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Possible. Preferred habitat could be available.
Aechmophorus clarkii	Clark's grebe			USFWS_BCC	Clark's Grebes build floating nests near the water's edge among emergent vegetation, usually rushes or reeds, less often in pondweed or milfoil.	Unlikely. No preferred habitat in project area.
Aechmophorus occidentalis	western grebe			USFWS_BCC	Nest on large freshwater lakes and marshes edged with reeds and rushes. Nesting in tidal areas is unusual	Unlikely. No preferred habitat in project area.
Asio otus	long-eared Owl			USFWS_BCC	Roost in dense vegetation and forage in open grasslands or shrublands. Typically use stick nests abandoned by other bird species. Less often, they raise their young in cavities in trees or cliffs, in abandoned squirrel nests, or on the ground	Unlikely. No preferred breeding habitat in project area.
Athene cunicularia	burrowing owl			BLM, CDFW_SSC, USFWS_BCC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Possible. Preferred habitat could be available.
Buteo swainsoni	Swainson's hawk		Threatened	BLM	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	Possible. Preferred habitat could be available.
Carpodacus cassinii	Cassin's finch			USFWS_BCC	Cassin's Finches breed throughout the conifer belts of North America's western interior mountains, from central British Columbia to northern New Mexico and Arizona.	Unlikely. No preferred breeding habitat in project area.
Chlidonias niger	black tern			USFWS_BCC	Nest in large freshwater wetlands, usually in dense marshes on the edges of shallow lakes of the open prairies or northern forests. Black Terns normally select marshes that are 50 acres or larger for nesting	Unlikely. No preferred breeding habitat in project area.
Circus hudsonius	northern harrier			CDFW_SSC, USFWS_BCC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas.	Unlikely. No preferred breeding habitat in project area.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened	Endangered		Use wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes	Unlikely. No preferred breeding habitat in project area.
Coccothraustes vespertinus	Evening grosbeak			USFWS_BCC	Evening Grosbeaks breed in mature and second-growth coniferous forests of northern North America and the Rocky Mountains, including spruce-fir, pine-oak, pinyon-juniper, and aspen forests. Less commonly, they nest in deciduous woodlands, parks, and orchards.	Unlikely. No preferred breeding habitat in project area.
Contopus cooperi	olive-sided flycatcher			USFWS_BCC	Breeds in montane and northern coniferous forests, at forest edges and openings, such as meadows and ponds	Unlikely. No preferred breeding habitat in project area.
Cypseloides niger	black swift				Black Swifts nest on cliff ledges behind or near waterfalls and sea caves. They forage over forests and open areas.	Unlikely. No preferred breeding habitat in project area.
Empidonax traillii extimus	southwestern willow flycatcher	Endangered	Endangered		For nesting, requires dense riparian habitats (cottonwood/willow and tamarisk vegetation)	Unlikely. No preferred habitat in project area.

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Inyo County, California

APN: 018-090-19

Scientific Name	Common Name	Status		Rare Plant Rank or Other Status	General Habitat	Potential to Occur at Project Location
		Federal	State			
Gymnorhinus cyanocephalus	Pinyon jay			USFWS_BCC	Pinyon Jays occupy pinyon-juniper woodlands, sagebrush, scrub oak, chaparral, and ponderosa pine forests year-round.	Unlikely. No preferred habitat in project area.
Haliaeetus leucocephalus	bald eagle			BGEPA	Typically nest in forested areas adjacent to large bodies of water, staying away from heavily developed areas when possible. Bald Eagles are tolerant of human activity when feeding, and may congregate around fish processing plants, dumps, and below dams where fish concentrate	Unlikely. No preferred breeding habitat in project area.
Icteria virens	yellow-breasted chat			CDFW_SSC	Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	Possible. Preferred habitat could be available.
Larus californicus	California Gull			USFWS_BCC	California Gulls primarily breed on sparsely vegetated islands and levees in inland lakes and rivers, but they also breed in salt ponds in the San Francisco Bay, California. Breeding colonies range from sea level to 9,000 feet elevation and are usually surrounded by water to prevent predators from reaching the nests.	Unlikely. No preferred habitat in project area.
Leucophaeus pipixcan	Franklin's gull			USFWS_BCC	Franklin's Gulls nest in freshwater marshes with abundant emergent vegetation and patches of open water. Here, they form large colonies of hundreds or thousands of birds, often nesting less than 2 feet from neighbors	Unlikely. No preferred habitat in project area.
Limosa fedoa	marbled godwit			USFWS_BCC	Breeds in marshes and flooded plains, in migration and winter also on mudflats and beaches	Unlikely. No preferred habitat in project area.
Melanerpes lewis	Lewis's Woodpecker			USFWS_BCC	Lewis's Woodpeckers frequently breed in open ponderosa pine forests and burned forests with a high density of standing dead trees (snags). They also breed in woodlands near streams, oak woodlands, orchards, and pinyon-juniper woodlands.	Unlikely. No preferred habitat in project area.
Oreoscoptes montanus	sage trasher			USFWS_BCC	Breeds exclusively in shrubsteppe habitats. Expanses of dense sagebrush provide concealment, while bare ground provides foraging opportunities	Unlikely. No preferred habitat in project area.
Pelecanus erythrorhynchos	American white pelican			USFWS_BCC	American White Pelicans breed mainly on isolated islands in freshwater lakes or, in the northern Great Plains, on ephemeral islands in shallow wetlands	Unlikely. No preferred habitat in project area.
Piranga rubra	summer tanager			CDFW_SSC	Requires cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.	Possible. Preferred habitat could be available.
Riparia riparia	bank swallow		Threatened	BLM	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert.	Unlikely. No preferred breeding habitat in project area.
Selasphorus rufus	rufous hummingbird			USFWS_BCC	Rufous Hummingbirds typically breed in open or shrubby areas, forest openings, yards, and parks, and sometimes in forests, thickets, swamps, and meadows from sea level to about 6,000 feet.	Possible. Preferred habitat could be available.
Tringa flavipes	lesser yellowlegs			USFWS_BCC	Nest is placed on the ground, typically within 200 meters of a water source and next to fallen branches, logs, or underneath low shrubs	Unlikely. No preferred habitat in project area.
Tringa semipalmata	willet			USFWS_BCC	Nest inland on the ground along pond edges and other seasonal wetlands, or on raised sites near water, often in native grasslands. In the Great Basin, nests are often built at the edge of sagebrush near ponds	Unlikely. No preferred habitat in project area.
Fishes						
Cyprinodon radiosus	Owens pupfish	Endangered	Endangered	CDFW_FP	Shallow water habitats in the Owens Valley.	Unlikely. No preferred habitat in project area. No aquatic resources present in project footprint.

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		Federal	State			
Gila bicolor ssp. snyderi	Owens tui chub	Endangered	Endangered		restricted currently to six isolated sites, all of which have been artificially created or altered in some fashion.	Unlikely. No preferred habitat in project area. No aquatic resources present in project footprint
Insects						
Bombus morrisoni	Morrison bumble bee				Food plant genera include Cirsium, Cleome, Helianthus, Lupinus, Chrysothamnus, and Melilotus.	Possible. Preferred habitat could be available.
Danaus plexippus	Monarch butterfly	Candidate			Adult monarchs feed on the nectar of many flowers, but they must have milkweed to breed and develop into a butterfly.	Possible. Preferred habitat could be available.
Parnopes borregoensis	Borrego parnopes cuckoo wasp				While the exact host is not recorded for this cuckoo wasp, it is virtually certain to be a ground nesting "sand wasp" in the Bembicini. Although they are solitary, as in no castes, generally each female tends her own larvae, bembicid nests are often (but not always) aggregated.	Possible. Preferred habitat could be available.
Mammals						
Lasiurus cinereus	hoary bat				Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Possible. Preferred habitat could be available.
Microtus californicus vallicola	Owens Valley vole			BLM, CDFW_SSC	Found in wetlands and lush grassy ground in the Owens Valley.	Unlikely. No preferred habitat in project area.
Mollusks						
Pyrgulopsis wongi	Wong's springsnail			USFS	Springs and streams below 7,500 feet east of the Sierra Nevada, primarily near Owens Valley, but including areas near Bridgeport Valley, Adobe Valley, Long Valley, and Deep Springs Valley.	Unlikely. No preferred habitat in project area. No aquatic resources present in project footprint
Plants						
Aliciella triodon	coyote gilia			2B.2	Great Basin scrub, Pinyon and juniper woodland	Possible. Preferred habitat could be available.
Allium atrorubens var. atrorubens				2B.3	Great Basin scrub, Pinyon and juniper woodland	Possible. Preferred habitat could be available.
Astragalus serenoi var. shockleyi	Shockley's milk-vetch			2B.2	Chenopod scrub, Great Basin scrub, Pinyon and juniper woodland	Possible. Preferred habitat could be available.
Blepharidachne kingii	King's eyelash grass			2B.3	Rocky benches and alluvial fans. Usually on limestone. 485-2135 m.	Unlikely. No preferred habitat in project area.
Boechera dispar	pinon rockcress			2B.3	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland	Possible. Preferred habitat could be available.
Calochortus excavatus	Inyo County star-tulip			1B.1, BLM	Chenopod scrub, meadows and seeps (alkaline).	Possible. Preferred habitat could be available.
Loeflingia squarrosa var. artemisiarum	sagebrush loeflingia			2B.2, BLM	Sandy flats and dunes. Sandy areas around clay slicks w/Sarcobatus, Atriplex, Tetradymia, etc. 700-1615 m.	Possible. Preferred habitat could be available.
Lupinus pusillus var. intermontanus	intermontane lupine			2B.3	Great Basin scrub. Sandy soils. 1185-2060 m.	Unlikely. No preferred habitat in project area.
Oryctes nevadensis	Nevada oryctes			2B.1	Chenopod scrub, Mojavean desert scrub, sandy soils	Unlikely. No preferred habitat in project area.
Phacelia inyoensis	Inyo phacelia			1B.2, BLM, USFS	Meadows and seeps.	Possible. Preferred habitat could be available.

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Plagiobothrys parishii	Parish's popcornflower			1B.1, BLM, USFS	Great Basin scrub, Joshua tree woodland. Alkaline soils; mesic sites.	Possible. Preferred habitat could be available.
Sidalcea covillei			Endangered	1B.1, BLM	Meadows and seeps, chenopod scrub.	Possible. Preferred habitat could be available.
Suaeda occidentalis	western seablite			2B.3	Great Basin scrub. Alkaline soils; mesic sites. 1205–2015 m.	Possible. Preferred habitat could be available.

BGEPA = Bald & Golden Eagle Protection Act
BLM = Bureau of Land Management Sensitive Species
CDFW_SSC = California Department of Fish and Wildlife Species of Special Concern
CDFW_FP = California Department of Fish and Wildlife Fully Protected Species
MBA = Birds protected under Migratory Bird Act
USFS = United States Forest Service Sensitive Species
USFWS_BCC = United States Fish and Wildlife Service Bird of Conservation Concern

CNPS: 1B = Rare or Endangered in California and elsewhere
2B = Rare and Endangered in California, more common elsewhere
3 = Need more information
4 = Limited distribution or infrequent throughout a broader area in California.
0.1 = Seriously threatened in California (high degree/immediacy of threat)
0.2 = Fairly threatened in California (moderate degree/immediacy of threat)
0.3 = Not very threatened in California (low degree/immediacy of threats or no current threats known)

APPENDIX B
Plant/Animal Species Observed – April 26, 2023
Big Pine Wastewater Treatment Plant Expansion Project

PLANTS:

Amsinckia tessellata; fiddleneck
Atriplex torreyi; Torrey's saltbush
Bassia hyssopifolia; fivehook basia
Bromus tectorum; cheatgrass
Chenopodium album; goosefoot
Convolvulus arvensis; field bindweed
Ericameria nauseosus; rabbitbrush
Erodium cicutarium; redstem filaree
Descurainia pinnata; tansy mustard
Distichlis spicata; saltgrass
Gilia sp.; gilia
Glycyrrhiza lepidota; wild licorice
Helianthus annuus; sunflower
Juncus balticus; Baltic rush
Lepidium latifolium; perennial pepperweed
Malva neglecta; common mallow
Melilotus sp.; sweet clover
Mentzelia albicaulis; white-stemmed stick- leaf
Phacelia fremontii; yellow throats
Polygonum aviculare; prostrate knotweed
Rosa woodsii; Woods' rose
Rumex crispus; curly dock
Salix exigua; sandbar willow
Salsola tragus; tumbleweed
Sarcobatus vermiculatus; greasewood
Sporobolus airoides; alkali sacaton
Typha latifolia; broadleaf cattail
Ulmus pumila; Siberian elm
Xanthium strumarium; common cocklebur

ANIMALS:

Agelaius phoeniceus; red-winged blackbird
Anas platyrhynchos; mallard
Bos taurus; Cow (sign)

APPENDIX B

Plant/Animal Species Observed – April 26, 2023

Big Pine Wastewater Treatment Plant Expansion Project

Buteo jamaicensis; red-tailed hawk
Cervus canadensis nannodes; tule elk (sign)
Molothrus ater; brown-headed cowbird
Petrochelidon pyrrhonota; cliff swallow
Plegadis chihi; white-faced ibis
Setophaga coronata; yellow-rumped warbler
Turdus migratorius; American robin

APPENDIX C

Site Photos – Big Pine Wastewater Treatment Plant Expansion Project

Inyo County, California

APN: 018-090-19

Eastern side of subject site, looking west. Showing greasewood and rabbitbrush area and woody debris indicative of previous mowing.

Photo from central area looking northwest. Showing cattle trails and willow area to the north.

Central location looking northeast to preliminary site for proposed project.

Central location looking west at concrete debris and spoils piles.

Looking north at cattle ranching equipment on western portion of the subject site

Entry road to existing facility looking south. Mowed vegetation consisting of invasive vegetation bassia and tumbleweeds.

BIOLOGICAL RESOURCE ASSESSMENT
BIG PINE WASTEWATER TREATMENT PLANT EXPANSION

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