

## **APPENDIX E**

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### **Biological Resources Technical Information**

1. Biological Resources Technical Memorandum
2. California Natural Diversity Database Report
3. California Native Plant Society Plant List
4. U.S. Fish and Wildlife Service Species Lists
5. Table BIO-1: Potentially Occurring Special-Status Species within the Study Area

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Draft

# SAN JOSÉ–SANTA CLARA REGIONAL WASTEWATER FACILITY LEGACY BIOSOLIDS LAGOONS SITE CLEANUP PROJECT

Biological Resources Environmental Setting Technical  
Memorandum

Prepared for  
San José–Santa Clara Regional  
Wastewater Facility

February 2019





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February 2019

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### Attachments

- A. Figure 6 of Appendix J, *Biological Resources Existing Conditions*, of the Approved Plant Master Plan EIR
- B. Vegetation Communities within the Study Area (2019 Addendum)
- C. Figure 5-1, Aquatic Resources Delineation Map

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## Introduction

This technical memorandum has been prepared for the City of San José (City) and the San José-Santa Clara Regional Wastewater Facility (Facility) in regards to the Legacy Biosolids Lagoons Site Cleanup Project (Project). The purpose of this memorandum is to confirm whether or not the existing habitats and, by extension, potential for sensitive biological resources, within the Project study area,<sup>1</sup> are consistent with the existing habitats identified in Figure 6, *Habitats in the Project Area*, of Appendix J, *Biological Resources Existing Conditions* (Appendix J), of the approved Plant Master Plan EIR (see Attachment A).<sup>2</sup>

## Background

Appendix J identifies five vegetation communities within the current study area:

- Inactive biosolids lagoons and drying beds
- Disturbed/ruderal
- Non-tidal salt marsh
- Alkali grassland
- Open water

The five vegetation communities and their general distribution within the study area as originally described in Appendix J are summarized below.

### Inactive Biosolids Lagoons and Drying Beds

Appendix J characterizes the “inactive biosolids lagoons and drying beds” as supporting “predominantly disturbed/ruderal vegetation”, but also acknowledges that, “although many of the inactive basins consist of extensive bare ground, pickleweed (*Salicornia pacifica*), alkali heath (*Frankenia salina*), five horn bassia (*Bassia hyssopifolia*) and spearscale (*Atriplex* sp.) were also observed scattered in the bottom”. Appendix J also describes the dominant vegetation around the interior edges of the inactive biosolids lagoons and drying beds (hereafter referred to as “inactive lagoons”) as non-native weedy species, such as black mustard (*Brassica nigra*), poison hemlock (*Conium maculatum*), milk thistle (*Silybum marianum*), perennial pepperweed (*Lepidium latifolium*), prickly lettuce (*Lactuca serriola*) and stinkwort (*Dittrichia graveolens*). The inactive lagoons, including the basin bottoms, basin banks, and berms, which support ruderal and marsh vegetation, are uniformly mapped as “inactive biosolids lagoons and drying beds” in Figure 6, *Habitats in the Project Area*.

<sup>1</sup> The study area includes the project footprint, where project construction could potentially have indirect or direct impacts to biological resources, plus a 150-foot buffer, where project construction could potentially have indirect impacts to biological resources.

<sup>2</sup> City of San José, 2013. San José/Santa Clara Water Pollution Control Master Plan Environmental Impact Report; State Clearinghouse No. 2011052074; City of San José File Number PP11-403. November 19, 2013.

## Disturbed/Ruderal

Appendix J characterizes “disturbed/ruderal” as including many non-native grassland species, such as ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), wild oats (*Avena* sp.), foxtail barley (*Hordeum jubatum*), and Italian ryegrass (*Lolium multiflorum*), as well as heavy cover of weedy forbs including bristly oxtongue (*Helminthotheca exhioides*), Italian thistle (*Carduus pycnocephalus*), milk thistle, bull thistle (*Cirsium vulgare*), black mustard, yellow star thistle (*Centaurea solstitialis*), stinkwort and prickly lettuce. Within the current study area, disturbed/ruderal habitat is mapped in Figure 6, *Habitats in the Project Area*, on the levees surrounding the inactive lagoons complex (as opposed to the berms between individual lagoons), as well as the staging area.

## Alkali Grassland

Appendix J characterizes “alkali grassland” as including a mix of grasses and forbs. Dominant grasses include saltgrass and wild barley (*Hordeum murinum*, *H. marinum*). Other grasses include soft brome, ripgut brome, and Italian ryegrass. Forb species include alkali heath, pickleweed, spearscale (*Atriplex triangularis*), alkali mallow (*Malvella leprosa*) and perennial pepperweed. Within the current study area, alkali grassland is mapped in Figure 6, *Habitats in the Project Area*, near the central canal running north–south between the eastern and western inactive lagoons complexes, and between the inactive and active lagoons complexes.

## Non-tidal Salt Marsh

Appendix J characterizes “non-tidal salt marsh” as dominated by pickleweed, alkali heath and saltgrass, but also including spearscale, perennial pepperweed, five horn bassia, dodder (*Cuscuta* sp.), ripgut brome and soft brome. Within the current study area, non-tidal salt marsh is mapped in Figure 6, *Habitats in the Project Area*, between the private landfill and the inactive lagoons (adjacent to the open water canal), and between the inactive and active lagoons complexes. Within the current study area, non-tidal salt marsh is mapped in Figure 6, *Habitats in the Project Area*, between the private landfill and the inactive lagoons (adjacent to the open water canal), and between the inactive and active lagoons complexes.

## Open Water

Appendix J defines “open water” as creeks, irrigation canals, active biosolids lagoons and drying beds, and Pond A18. There is no vegetation associated with this habitat type. Open water within the inactive lagoons is captured in the definition of “inactive biosolids lagoons and drying beds”, as described above. Within the current study area, open water is mapped in Figure 6, *Habitats in the Project Area*, where a channel runs north–south between the private landfill and the inactive lagoons, as well as the central canal running north–south between the eastern and western inactive lagoons complexes.

## Methods

ESA biologists conducted a field reconnaissance survey on December 9, 2019. The field reconnaissance consisted of a pedestrian survey along the levees and berms,<sup>3</sup> a representative sample of the lagoon basins, and the staging area. The field survey focused on characterizing the current vegetation communities in the study area.

## Results

ESA created a habitat map for the Project (Figure 1, *Habitats within the Project Study Area*, in Attachment B) based on our reconnaissance survey. This map is also consistent with the mapping of wetland features within the inactive lagoons shown in Figure 5-1, *Aquatic Resources Delineation Map*, (refer to Attachment C) of the Legacy Lagoons Cleanup Project Aquatic Resources Delineation Report.<sup>4</sup> ESA mapped six habitats in the study area: alkali grassland, developed, non-tidal salt marsh, open water, ruderal, and unvegetated salt panne.

### Alkali Grassland

Vegetation within alkali grassland is as described above. Within the study area, ESA observed approximately 1.5 acres of alkali grassland in the center of the site, in an area otherwise dominated by non-native grasses. No wildlife was observed in this patch of alkali grassland, but wildlife likely to use this area include wildlife that use the surrounding ruderal area, such as house mice (*Mus musculus*), California vole (*Microtus californicus*), California ground squirrel (*Ostospermophilus beecheyi*), and black-tailed jackrabbit (*Lepus californicus*).

### Developed

ESA mapped a portion of an existing road in the southwest corner, and the area within Pond L-8 as developed habitat. Pond L-8 is used as a gun range and bomb disposal area, and is largely barren (bare dirt) with some outbuildings, fencing, and other infrastructure. No wildlife was observed in this area.

### Non-tidal Salt Marsh

Vegetation within non-tidal salt marsh is as described above. Within the study area, ESA observed this habitat within the basins of most of the inactive biosolids lagoons, as well as along the western edge of the study area, and as an isolated 1/3-acre area of pickleweed northeast of Pond L-4. Wildlife species observed during the reconnaissance survey in this habitat include a mouse of unknown genus (i.e., possible harvest mouse [*Reithrodontomys* sp.] or house mouse). Wildlife commonly associated with non-tidal salt marsh include salt marsh harvest mouse (*Reithrodontomys raviventris*), western harvest mouse (*Reithrodontomys megalotis*), California vole, northern harrier (*Circus cyaneus*), and short-eared owl (*Asio flammeus*).

<sup>3</sup> Some berms were not accessible due to tall, dense vegetation.

<sup>4</sup> ESA, 2019. Legacy Lagoons Cleanup Project Aquatic Resources Delineation Report (Draft). Prepared for City of San José. August 2019.

## Open Water

Open water habitat is as described above. Within the study area, ESA observed this habitat along the northern edge of the inactive biosolids lagoons, within the central canal running north–south between the eastern and western inactive lagoons complexes, and the pools along the eastern edge of the study area. Wildlife species observed during the reconnaissance survey in or adjacent to this habitat include mallard (*Anas platyrhynchos*), American coot (*Fulica americana*), ruddy duck (*Oxyura jamaicensis*), northern shoveler (*Anas clypeata*), black-necked stilt (*Himantopus mexicanus*), and snowy egret (*Egretta thula*).

## Ruderal

Vegetation within ruderal habitat is as described above. Within the study area, ESA observed this habitat in and around the inactive biosolids lagoons, on the levees, and in the staging area. Wildlife species observed during the reconnaissance survey in this habitat include California ground squirrel, black-tailed jackrabbit, sharp-shinned hawk (*Accipiter striatus*), red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayornis nigricans*), Say’s phoebe (*Sayornis saya*), Alameda song sparrow (*Melospiza melodia pusillula*), golden-crowned sparrow (*Zonotrichia atricapilla*), white-crowned sparrow (*Zonotrichia leucophrys*), and yellow-rumped warbler (*Setophaga coronata*).

## Unvegetated Salt Panne

Salt pannes are topographic depressing occurring within salt marsh habitat that are typically seasonally inundated. The accumulated salts associated with seasonal inundation and drying can inhibit establishment of vegetation, leaving the area barren. Within the study area, ESA observed unvegetated salt panne within the basins of the inactive biosolids lagoons. Wildlife species observed during the reconnaissance survey in this habitat greater yellowlegs (*Tringa melanoleuca*). Wildlife species associated with this habitat type are those that are associated with the adjacent salt marsh.

## Conclusion

The vegetation communities identified within the current study area under Appendix J are generally consistent with the vegetation communities/habitats observed during ESA’s reconnaissance survey. However, Figure 6, *Habitats in the Project Area*, in Appendix J shows the inactive lagoons uniformly mapped as “inactive biosolids lagoons and drying beds”, and do not include specific vegetation communities found within the inactive lagoons; whereas, ESA mapped the inactive lagoons to show the distribution of three vegetation types: ruderal, non-tidal salt marsh, and unvegetated salt panne. Although the latter vegetation type was discussed in Appendix J, it was described only as being present around the border of Pond A18, but was not described within the current study area.

The primary implication for the inclusion of vegetation communities within the inactive lagoons is that wildlife and other sensitive biological resources associated with these vegetation types, have the potential to be present in the inactive lagoons. Sensitive biological resources that could be present in the inactive lagoons include wetlands, sensitive natural communities, and protected

wildlife, including salt marsh harvest mouse, salt marsh wandering shrew, and nesting raptors and birds protected by the Migratory Bird Treaty Act.

Despite the refinement to the habitat mapping in the study area, these resources are adequately covered by the Plant Master Plan EIR under the following Mitigation Measures (MM): MM BIO-2c, Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew Measures; MM BIO-2d, Raptor and Migratory Bird Nest Measures; MM BIO-4a, Wetlands Avoidance Measures; MM BIO-4b, Wetlands Restoration for Project-level Improvements; and MM BIO-4c, Wetlands Restoration for Program-Level Improvements and Other Proposed Land Uses. Therefore, this technical memorandum details a more refined look at the habitats present in the study area, but our findings do not add any new regulatory implications as the Plant Master Plan EIR already covered the range of possible impacts to biological resources identified by this survey.

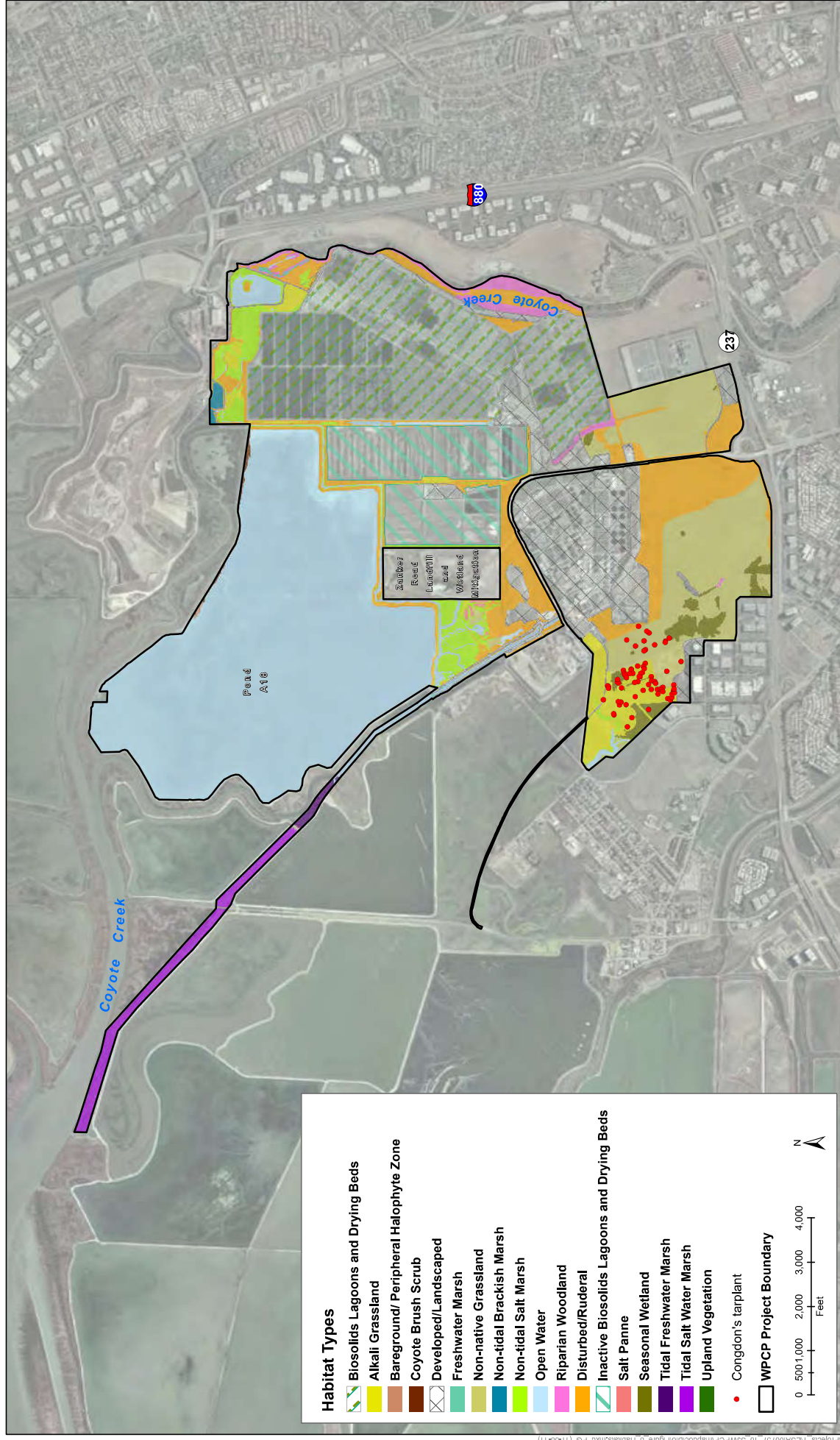
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## Attachment A

**Figure 6 of Appendix J,  
*Biological Resources Existing  
Conditions*, of the Approved  
Plant Master Plan EIR**







San Jose Water Pollution Control Plant

Figure 6  
Habitats in the Project Area



**Attachment B**  
**Vegetation Communities**  
**within the Study Area**  
**(2019 Addendum)**







SOURCE: NAIP, 2016; ESA, 2019

Legacy Biosolids Lagoons Site Cleanup . D131002.26

**Figure 1**

Habitats Within the Project Study Area



## Attachment C

### **Figure 5-1, Aquatic Resources Delineation Map**







SOURCE: NAIP 2016, ESA 2019

D131002.26 Legacy Lagoons Cleanup







# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** Quad</span> IS </span>(Niles (3712158)</span> OR </span>Newark (3712251)</span> OR </span>Milpitas (3712148)</span> OR </span>Mountain View (3712241))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Accipiter cooperii</i></b> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<b><i>Agelaius tricolor</i></b> tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
<b><i>Ambystoma californiense</i></b> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<b><i>Anniella pulchra</i></b> northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
<b><i>Antrozous pallidus</i></b> pallid bat	AMACC10010	None	None	G5	S3	SSC
<b><i>Aquila chrysaetos</i></b> golden eagle	ABNKC22010	None	None	G5	S3	FP
<b><i>Ardea herodias</i></b> great blue heron	ABNGA04010	None	None	G5	S4	
<b><i>Astragalus tener var. tener</i></b> alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<b><i>Atriplex depressa</i></b> brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
<b><i>Atriplex minuscula</i></b> lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
<b><i>Bombus caliginosus</i></b> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<b><i>Bombus crotchii</i></b> Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
<b><i>Bombus occidentalis</i></b> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<b><i>Campanula exigua</i></b> chaparral harebell	PDCAM020A0	None	None	G2	S2	1B.2
<b><i>Centromadia parryi ssp. congdonii</i></b> Congdon's tarplant	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
<b><i>Charadrius alexandrinus nivosus</i></b> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
<b><i>Chloropyron maritimum ssp. palustre</i></b> Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
<b><i>Chorizanthe robusta var. robusta</i></b> robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Circus hudsonius</i></b> northern harrier	ABNKC11011	None	None	G5	S3	SSC
<b><i>Clarkia concinna ssp. automixa</i></b> Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
<b><i>Coccyzus americanus occidentalis</i></b> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<b><i>Corynorhinus townsendii</i></b> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
<b><i>Coturnicops noveboracensis</i></b> yellow rail	ABNME01010	None	None	G4	S1S2	SSC
<b><i>Danaus plexippus pop. 1</i></b> monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
<b><i>Egretta thula</i></b> snowy egret	ABNGA06030	None	None	G5	S4	
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Eryngium aristulatum var. hooveri</i></b> Hoover's button-celery	PDAP10Z043	None	None	G5T1	S1	1B.1
<b><i>Extriplex joaquinana</i></b> San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
<b><i>Geothlypis trichas sinuosa</i></b> saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
<b><i>Lasiurus cinereus</i></b> hoary bat	AMACC05030	None	None	G5	S4	
<b><i>Lasthenia conjugens</i></b> Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
<b><i>Lateralus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<b><i>Lepidurus packardii</i></b> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
<b><i>Malacothamnus arcuatus</i></b> arcuate bush-mallow	PDMAL0Q0E0	None	None	G2Q	S2	1B.2
<b><i>Masticophis lateralis euryxanthus</i></b> Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	
<b><i>Melospiza melodia pusillula</i></b> Alameda song sparrow	ABPBXA301S	None	None	G5T2?	S2S3	SSC
<b><i>Myotis yumanensis</i></b> Yuma myotis	AMACC01020	None	None	G5	S4	
<b><i>Navarretia prostrata</i></b> prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.1



# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

### California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Neotoma fuscipes annectens</i></b> San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
<b><i>Northern Coastal Salt Marsh</i></b> Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<b><i>Oncorhynchus mykiss irideus pop. 8</i></b> steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
<b><i>Plagiobothrys glaber</i></b> hairless popcornflower	PDBOR0V0B0	None	None	GH	SH	1A
<b><i>Puccinellia simplex</i></b> California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
<b><i>Rallus obsoletus obsoletus</i></b> California Ridgway's rail	ABNME05011	Endangered	Endangered	G5T1	S1	FP
<b><i>Rana boylei</i></b> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<b><i>Rana draytonii</i></b> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<b><i>Reithrodontomys raviventris</i></b> salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
<b><i>Riparia riparia</i></b> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<b><i>Rynchops niger</i></b> black skimmer	ABNNM14010	None	None	G5	S2	SSC
<b><i>Senecio aphanactis</i></b> chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<b><i>Sorex vagrans halicoetes</i></b> salt-marsh wandering shrew	AMABA01071	None	None	G5T1	S1	SSC
<b><i>Spergularia macrotheca var. longistyla</i></b> long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
<b><i>Spirinchus thaleichthys</i></b> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
<b><i>Sternula antillarum browni</i></b> California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
<b><i>Streptanthus albidus ssp. peramoenus</i></b> most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
<b><i>Stuckenia filiformis ssp. alpina</i></b> slender-leaved pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
<b><i>Suaeda californica</i></b> California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1
<b><i>Trifolium hydrophilum</i></b> saline clover	PDFAB400R5	None	None	G2	S2	1B.2
<b><i>Tryonia imitator</i></b> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Record Count: 61

\*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

## Plant List

25 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quads 3712251, 3712158 3712241 and 3712148;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Androsace elongata ssp. acuta</a>	California androsace	Primulaceae	annual herb	Mar-Jun	4.2	S3S4	G5?T3T4
<a href="#">Astragalus tener var. tener</a>	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S1	G2T1
<a href="#">Atriplex depressa</a>	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
<a href="#">Atriplex minuscule</a>	lesser saltscall	Chenopodiaceae	annual herb	May-Oct	1B.1	S2	G2
<a href="#">Campanula exigu</a>	chaparral harebell	Campanulaceae	annual herb	May-Jun	1B.2	S2	G2
<a href="#">Centromadia parryi ssp. congdonii</a>	Congdon's tarplant	Asteraceae	annual herb	May-Oct(Nov)	1B.1	S1S2	G3T1T2
<a href="#">Chloropyron maritimum ssp. palustre</a>	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4?T2
<a href="#">Clarkia concinna ssp. automixa</a>	Santa Clara red ribbons	Onagraceae	annual herb	(Apr)May-Jun(Jul)	4.3	S3	G5?T3
<a href="#">Eryngium aristulatum var. hooveri</a>	Hoover's button-celery	Apiaceae	annual / perennial herb	(Jun)Jul(Aug)	1B.1	S1	G5T1
<a href="#">Extriplex joaquinana</a>	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
<a href="#">Lasthenia conjugens</a>	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	1B.1	S1	G1
<a href="#">Leptosiphon acicularis</a>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	4.2	S4?	G4?
<a href="#">Malacothamnus arcuatus</a>	arcuate bush-mallow	Malvaceae	perennial evergreen shrub	Apr-Sep	1B.2	S2	G2Q
<a href="#">Malacothamnus hallii</a>	Hall's bush-mallow	Malvaceae	perennial evergreen shrub	(Apr)May-Sep(Oct)	1B.2	S2	G2
<a href="#">Monardella antonina ssp. antonina</a>	San Antonio Hills monardella	Lamiaceae	perennial rhizomatous herb	Jun-Aug	3	S1S3	G4T1T3Q
<a href="#">Navarretia paradoxiclora</a>	Patterson's navarretia	Polemoniaceae	annual herb	May-Jun(Jul)	1B.3	S2	G2

<a href="#"><u>Navarretia prostrata</u></a>	prostrate vernal pool navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G2
<a href="#"><u>Plagiobothrys glaber</u></a>	hairless popcornflower	Boraginaceae	annual herb	Mar-May	1A	SH	GH
<a href="#"><u>Puccinellia simplex</u></a>	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
<a href="#"><u>Senecio aphanactis</u></a>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
<a href="#"><u>Spergularia macrotheca var. longistyla</u></a>	long-styled sand-spurrey	Caryophyllaceae	perennial herb	Feb-May(Jun)	1B.2	S2	G5T2
<a href="#"><u>Streptanthus albidus ssp. peramoenus</u></a>	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr-Sep(Oct)	1B.2	S2	G2T2
<a href="#"><u>Stuckenia filiformis ssp. alpina</u></a>	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	2B.2	S2S3	G5T5
<a href="#"><u>Suaeda californica</u></a>	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	1B.1	S1	G1
<a href="#"><u>Trifolium hydrophilum</u></a>	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2

### Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 30 August 2019].

### Search the Inventory

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### Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

[California Natural Diversity Database](#)

[The Jepson Flora Project](#)

[The Consortium of California Herbaria](#)

[CalPhotos](#)

### Questions and Comments

[rareplants@cnps.org](mailto:rareplants@cnps.org)



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office  
Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846  
Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

December 16, 2019

Consultation Code: 08ESMF00-2020-SLI-0558

Event Code: 08ESMF00-2020-E-01755

Project Name: SJ RWS Legacy Biosolids Lagoons

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

[http://www.nwr.noaa.gov/protected\\_species/species\\_list/species\\_lists.html](http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html)

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.



The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

---

Attachment(s):

- Official Species List

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

## **Sacramento Fish And Wildlife Office**

Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846  
(916) 414-6600

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

## **San Francisco Bay-Delta Fish And Wildlife**

650 Capitol Mall  
Suite 8-300  
Sacramento, CA 95814  
(916) 930-5603

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## Project Summary

Consultation Code: 08ESMF00-2020-SLI-0558

Event Code: 08ESMF00-2020-E-01755

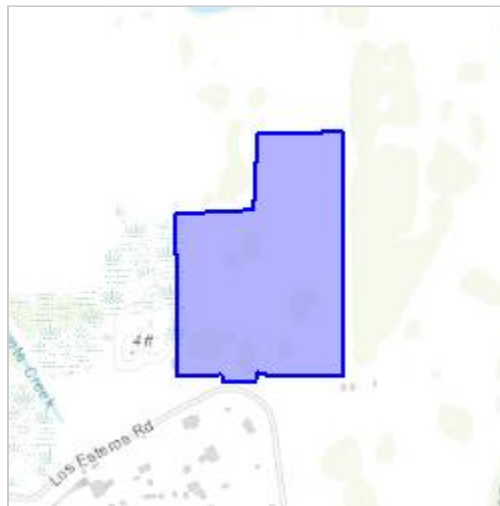
Project Name: SJ RWS Legacy Biosolids Lagoons

Project Type: WASTEWATER FACILITY

Project Description: Remediation of inactive biosolids lagoons and grading.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.44183086153046N121.94238781860972W>



Counties: Santa Clara, CA

---

## Endangered Species Act Species

There is a total of 17 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Salt Marsh Harvest Mouse <i>Reithrodontomys raviventris</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/613">https://ecos.fws.gov/ecp/species/613</a>	Endangered
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2873">https://ecos.fws.gov/ecp/species/2873</a>	Endangered

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## Birds

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4240">https://ecos.fws.gov/ecp/species/4240</a>	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8104">https://ecos.fws.gov/ecp/species/8104</a>	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>proposed</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

## Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) <i>Masticophis lateralis euryxanthus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5524">https://ecos.fws.gov/ecp/species/5524</a>	Threatened

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a> Species survey guidelines: <a href="https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf">https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf</a>	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a>	Threatened

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
Bay Checkerspot Butterfly <i>Euphydryas editha bayensis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2320">https://ecos.fws.gov/ecp/species/2320</a>	Threatened
San Bruno Elfin Butterfly <i>Callophrys mossii bayensis</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3394">https://ecos.fws.gov/ecp/species/3394</a>	Endangered

## Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8246">https://ecos.fws.gov/ecp/species/8246</a>	Endangered
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2246">https://ecos.fws.gov/ecp/species/2246</a>	Endangered

## Flowering Plants

NAME	STATUS
California Seablite <i>Suaeda californica</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6310">https://ecos.fws.gov/ecp/species/6310</a>	Endangered
Contra Costa Goldfields <i>Lasthenia conjugens</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7058">https://ecos.fws.gov/ecp/species/7058</a>	Endangered
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## **Critical habitats**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
San Francisco Bay-Delta Fish And Wildlife  
650 Capitol Mall  
Suite 8-300  
Sacramento, CA 95814  
Phone: (916) 930-5603 Fax: (916) 930-5654  
[http://kim\\_squires@fws.gov](mailto:kim_squires@fws.gov)



In Reply Refer To:

December 16, 2019

Consultation Code: 08FBDT00-2020-SLI-0053

Event Code: 08FBDT00-2020-E-00130

Project Name: SJ RWS Legacy Biosolids Lagoons

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

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**San Francisco Bay-Delta Fish And Wildlife**

650 Capitol Mall

Suite 8-300

Sacramento, CA 95814

(916) 930-5603

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

**Sacramento Fish And Wildlife Office**

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

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## Project Summary

Consultation Code: 08FBDT00-2020-SLI-0053

Event Code: 08FBDT00-2020-E-00130

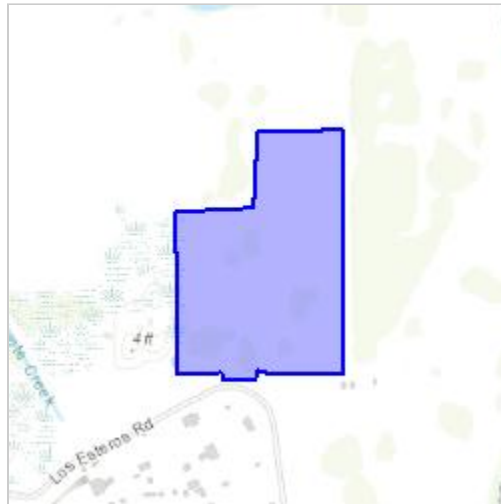
Project Name: SJ RWS Legacy Biosolids Lagoons

Project Type: WASTEWATER FACILITY

Project Description: Remediation of inactive biosolids lagoons and grading.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.44183086153046N121.94238781860972W>



Counties: Santa Clara, CA

---

## Endangered Species Act Species

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See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
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## Birds

NAME	STATUS
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Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>proposed</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

## Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) <i>Masticophis lateralis euryxanthus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5524">https://ecos.fws.gov/ecp/species/5524</a>	Threatened

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a>	Threatened

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
Bay Checkerspot Butterfly <i>Euphydryas editha bayensis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2320">https://ecos.fws.gov/ecp/species/2320</a>	Threatened
San Bruno Elfin Butterfly <i>Callophrys mossii bayensis</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3394">https://ecos.fws.gov/ecp/species/3394</a>	Endangered

## Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8246">https://ecos.fws.gov/ecp/species/8246</a>	Endangered
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2246">https://ecos.fws.gov/ecp/species/2246</a>	Endangered

## Flowering Plants

NAME	STATUS
California Seablite <i>Suaeda californica</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6310">https://ecos.fws.gov/ecp/species/6310</a>	Endangered
Contra Costa Goldfields <i>Lasthenia conjugens</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7058">https://ecos.fws.gov/ecp/species/7058</a>	Endangered
Robust Spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9287">https://ecos.fws.gov/ecp/species/9287</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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**TABLE BIO-1**  
**POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES WITHIN THE STUDY AREA**

Common Name	Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Habitat Requirements	Potential to Occur
<b>Fish</b>				
Steelhead – Central California Coast DPS	<i>Oncorhynchus mykiss</i>	FT/-/-	Requires cold, freshwater streams with suitable gravel for spawning. Rears in rivers and tributaries to the San Francisco Bay.	<b>Not expected.</b> No spawning or rearing habitat due to water quality conditions in the study area, and lack of connectivity to Bay. Recent CNDDDB observations in Guadalupe River ~ 2.5 miles SW of the study area.
Chinook Salmon – Central Valley fall-run ESU	<i>Oncorhynchus tshawytscha</i>	-/SSC/-	Requires cold, freshwater streams with suitable gravel for spawning. Rears in rivers and tributaries to the San Francisco Bay.	<b>Not expected.</b> No spawning or rearing habitat due to water quality conditions in the study area, and lack of connectivity to Bay. No CNDDDB observations within 3 miles of the study area.
North American Green Sturgeon – Southern DPS	<i>Acipenser medirostris</i>	FT/SSC/-	Adults found in coastal waters from Canada to Mexico. Requires cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, tributaries, and Delta.	<b>Not expected.</b> No spawning or rearing habitat due to water quality conditions in the study area, and lack of connectivity to Bay. No CNDDDB observations within 3 miles of the study area.
Longfin Smelt	<i>Spirinchus thaleichthys</i>	FC/ST/-	Juvenile and subadults predominately inhabit brackish water areas of the estuary and nearshore coastal waters. Adults return to spawn in the freshwater regions of the lower Sacramento River, near or downstream of Rio Vista, and the lower San Joaquin River downstream of Medford Island.	<b>Not expected.</b> Overall lack of connectivity to tidal channels and Bay habitat. No CNDDDB observations within 3 miles of the study area.
Pacific lamprey	<i>Entosphenus tridentatus</i>	-/SSC/-	Requires cold, freshwater streams with suitable gravel for spawning. Rears in rivers and tributaries to the San Francisco Bay.	<b>Not expected.</b> No spawning or rearing habitat due to water quality conditions in the study area, and lack of connectivity to Bay. No CNDDDB observations within 3 miles of the study area.
<b>Reptiles</b>				
Western pond turtle	<i>Emys marmorata</i>	-/SSC/-	Requires freshwater to brackish aquatic habitat with suitable access to basking and upland habitats.	<b>Low.</b> Limited and small open channel habitat lacking basking sites. One recent CNDDDB occurrence in freshwater creek, ~3 miles from study area.
<b>Birds</b>				
Tricolored Blackbird	<i>Agelaius tricolor</i>	-/CE/BCC	Nests colonially over or near freshwater, in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall shrubs.	<b>Low.</b> Marginal habitat in a small area of bulrushes in the center of the site adjacent to disturbance from a levee road. Several CNDDDB occurrences within 3 miles of study area in habitats comprised of tall invasive plant species such as poison hemlock, wild radish, mustard, bull thistle, and yellow start thistle.
Great blue heron	<i>Ardea herodias</i>	--/*/--	Nests in colonies of 100s, primarily in trees, but will also nest on ground, bushes and structures, channel markers and artificial nest platforms. Forages on shorelines, river banks, and edges of marshes, estuaries, and ponds, as well as meadows, farmland and other open fields.	<b>Low.</b> No nesting/roosting habitat within study area. May forage within study area. Nearest CNDDDB occurrence in cottonwood within riparian corridor ~3 miles from study area.

**TABLE BIO-1 (CONTINUED)**  
**POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES WITHIN THE STUDY AREA**

Common Name	Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Habitat Requirements	Potential to Occur
<b>Birds (cont.)</b>				
Western burrowing owl	<i>Athene cunicularia hypugaea</i>	-/SSC/-	Prefer open, treeless areas with low, sparse vegetation. Uses the burrows of fossorial mammals such as ground squirrels.	<b>Low.</b> Study area includes limited ground squirrel burrows on edges of levees between lagoons. Numerous CNDDDB observations within boundaries, or in the vicinity, of the Facility on barren or ruderal land; however, Santa Clara Audubon Society's Christmas Bird Count, which surveys the perimeter of the inactive lagoons, has not observed this species in the study area over the last 10 years.. <sup>1</sup>
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FT/SSC/--	Found on barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils piles deposited on beach or dune habitat, levees and flats at salt evaporation ponds, river bars, along alkaline or saline lakes, reservoirs and ponds. Feeds on terrestrial and aquatic invertebrates. Present year-round in the Bay Area.	<b>Low.</b> No nesting habitat within study area. All CNDDDB observations in the vicinity are at salt evaporation ponds.
Northern harrier	<i>Circus cyaneus</i>	-/SSC/-	Often frequents fresh and saltwater emergent vegetation habitat of the San Francisco Bay region.	<b>Moderate.</b> Marginal nesting habitat in some salt marsh habitat within the study area. Observed foraging in study area during site visit. No CNDDDB observations within 3 miles of the study area.
White-tailed kite	<i>Elanus leucurus</i>	-/FP/-	Inhabit savannas, open woodlands, marshes, desert grasslands, partially cleared lands, and cultivated fields. Nests in trees that typically range from 10 to 160 feet tall.	<b>Low.</b> Common in South Bay marshes, but no suitable trees or bushes for nesting habitat in study area. One CNDDDB observation from 1971 of this species nesting in a eucalyptus tree approximately 1 mile of study area.
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	-/SSC/BCC	Found in Marin, Napa, Sonoma, Solano, San Francisco, San Mateo, Santa Clara, and Alameda counties within freshwater marshes in summer and salt or brackish marshes in fall and winter.	<b>Moderate.</b> Potential to nest within marsh vegetation and ruderal vegetation. CNDDDB occurrences are in vicinity of Coyote Creek tidal marshes and other nearby sloughs.
Bald eagle	<i>Haliaeetus leucocephalus</i>	Delisted/SE;FP/--	Nest in trees, such as tall, sturdy conifers, except in regions where only cliff faces or ground sites are available. Nest near water. Diet is primarily fish, but opportunistic eaters – will eat birds, reptiles, amphibians, crabs, and mammals.	<b>Low.</b> No nesting or foraging habitat within study area. No CNDDDB occurrences within 3 miles of the study area.
California gull	<i>Larus californicus</i>	-/-/BCC	Breed on sparsely vegetated islands and levees including in salt ponds in the San Francisco Bay.	<b>Low.</b> Known to forage and breed within south San Francisco Bay. Study area lacks suitable nesting habitat. No CNDDDB observations within 3 miles of the study area.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	-/ST;FP/-	Found in marshes vegetated with tall, dense pickleweed and other tidal emergent vegetation (e.g.,	<b>Low.</b> No suitable habitat in study area. Nearest CNDDDB observation is historic (1891), non-specific (location =

<sup>1</sup> Santa Clara County Audubon Society, Christmas Bird Count data for all routes in Alviso (2015-2019)

**TABLE BIO-1 (CONTINUED)**  
**POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES WITHIN THE STUDY AREA**

Common Name	Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Habitat Requirements	Potential to Occur
			bulrush, saltbush, alkali heath, saltgrass) around San Francisco Bay.	"Milpitas"). More recent observations over 2 miles away in Alviso Slough and Coyote Creek marshes.
Alameda song sparrow	<i>Melospiza melodia pusillula</i>	-/SSC/BCC	Found in the brackish marshes vegetated with pickleweed along the southern portion of the San Francisco Bay.	<b>High.</b> Potential to nest within marsh vegetation and ruderal vegetation. Historic (1947) CNDDDB observation on Guadalupe River ~2.5 miles SW of study area.
<b>Birds (cont.)</b>				
California Ridgway's rail	<i>Rallus obsoletus obsoletus</i>	FE/SE;FP/-	Ranges along the Pacific Coast within Monterey and San Luis Obispo Counties. Found in the tidal mudflats and sloughs of the San Francisco Bay-Delta.	<b>Low.</b> No suitable habitat in study area. CNDDDB observations from 1975 in Alviso Slough and Coyote Creek marshes.
California least tern	<i>Sternula antillarum browni</i>	FE/SE/--	Nest is a shallow scrape on sandy beaches on the coast and San Francisco Bay shoreline. Forages for small fishes shrimp and occasionally other invertebrates in bays, lagoons, estuaries, river and creek mouths, tidal marshes and lakes.	<b>Low.</b> No nesting or foraging habitat within study area. No CNDDDB observations within 3 miles of study area.
<b>Mammals</b>				
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE/SE;FP/-	Salt marsh harvest mice inhabit pickleweed habitat and other salt marsh vegetation within the greater San Francisco Bay region.	<b>Moderate.</b> Potential to occur within salt marsh and salt panne habitat in inactive biosolids lagoons. Known to occur in habitat surrounding of San José – Santa Clara WPCP legacy and active lagoons (1990), Warm Springs (2006), Triangle Marsh (1990), and New Chicago Marsh (1990).
Salt marsh wandering shrew	<i>Sorex vagrans halicoetes</i>	--/SSC/--	Salt marsh habitat 6-8 feet above sea level, with abundant pickleweed and driftwood.	<b>Low.</b> Suitable habitat not present in study area. Within study area, one CNDDDB occurrence from 1951 in an area that has since been urbanized ~2.5 miles from study area.
<b>Plants</b>				
Alkali milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	-/-1B.2	Alkaline flats and low ground in playas, vernal moist grassland, and vernal pools. Elevation 1 - 170 meters. March – June	<b>Low.</b> Non-tidal salt marsh within study area provides marginal suitable habitat. Nearest recent occurrence (2003, occurrence #7) is 3 miles away in a constructed vernal pool.
Brittlescale	<i>Atriplex depressa</i>	-/-1B.2	Usually on alkali clay soils in alkali scalds in chenopod scrub, playas, grassland, and vernal pools. Elevation 1 – 320 meters. April - October	<b>Low.</b> Non-tidal salt marsh within study area provides marginal suitable habitat, but nearest recent occurrence from 2003 (occurrence #67) 3 miles away was determined to be <i>Atriplex minuscula</i> in 2010.
Lesser saltscale	<i>Atriplex minuscula</i>	-/-1B.1	Alkaline and sandy soils in alkali sinks in chenopod scrub, playas, and grassland. Elevation 15 - 200 meters. May - October	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat. Nearest recent occurrence from 2003 (occurrence #43) is 3 miles away.

**TABLE BIO-1 (CONTINUED)**  
**POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES WITHIN THE STUDY AREA**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status<sup>1</sup> (Federal/State/ Other)</b>	<b>Habitat Requirements</b>	<b>Potential to Occur</b>
Congdon's tarplant	<i>Centromadia parryi</i> ssp. <i>congdonii</i>	-/-1B.1	Alkaline soils, sometimes described as heavy, white clay, on terraces, swales, floodplains, and disturbed sites within grassland. Elevation 0 - 245 meters. May - October (November)	<b>High.</b> Upland areas provide suitable habitat. Nearest recent occurrence from 2016 (occurrence #41) is 0.3 miles away.
<b>Plants (cont.)</b>				
Point Reyes salty bird's-beak	<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	-/-1B.1	Coastal salt marsh. Elevation <10 meters. June – October	<b>Low.</b> Non-tidal salt marsh does not provide suitable habitat. Nearest recent occurrence is from the Nation Resource Database at Don Edwards National Wildlife Refuge, about 6 miles away. No recent CNDDDB occurrences nearby.
Small spikerush	<i>Eleocharis parvula</i>	-/-4.3	Brackish wet soil, coastal. Elevation <50 meters. (April) June – August (September)	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat, but no nearby occurrences.
Hoover's button-celery	<i>Eryngium aristulatum</i> var. <i>hooveri</i>	-/-1B.1	Vernal pools, seasonal wetlands, occasionally alkaline. Elevation <50 meters. (June) July (August)	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat. Nearest recent occurrence from 2009 (occurrence #15) is 3 miles away.
San Joaquin spearscale	<i>Extriplex joaquinana</i>	-/-1B.2	Alkaline soils in seasonal alkali wetlands or alkali sink scrub in association with <i>Distichlis spicata</i> and <i>Frankenia</i> . Elevation 1 - 835 meters. April – October	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat. Nearest recent occurrence from 2011 (occurrence #54) is 3 miles away.
Contra Costa goldfields	<i>Lasthenia conjugens</i>	FE/-1B.1	Vernal pools, swales, wet meadows, alkaline playas, and low depressions in open grassy areas. Elevation 0 - 470 meters. March – June	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat. Nearest recent occurrence (occurrence #30) is 3.1 miles away.
Prostrate vernal pool navarretia	<i>Navarretia prostrata</i>	-/-1B.1	Mesic, alkaline soils in grasslands or in vernal pools. Elevation 3 - 1,210 meters. April – July	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat. Nearest recent occurrence from 2009 (occurrence #15) is 4 miles away.
Hairless popcornflower	<i>Plagiobothrys glaber</i>	-/-1A	Presumed extinct. Wet, saline, alkaline soils in coastal salt marshes and alkaline meadows. Elevation 15 - 125 meters. April – May	<b>Low.</b> Non-tidal salt marsh provide marginal suitable habitat, but this species is presumed to be extinct.
California alkali grass	<i>Puccinellia simplex</i>	-/-1B.2	Alkaline and vernal mesic soils on sinks, flats, and lake margins. Elevation 2 - 930 meters. June – July	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat. Nearest recent occurrence from 2003 (occurrence #39) is 3 miles away.
Chaparral ragwort	<i>Senecio aphanactis</i>	-/-2B.2	Drying alkaline flats and dry, open, rocky sites in chaparral,	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat.

**TABLE BIO-1 (CONTINUED)**  
**POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES WITHIN THE STUDY AREA**

Common Name	Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Habitat Requirements	Potential to Occur
			cismontane woodland, and coastal scrub. Elevation 20 – 855 meters. February - May	
<b>Plants (cont.)</b>				
long-styled sand-spurrey	<i>Spergularia macrotheca</i> var. <i>longistyla</i>	-/-1B.2	Alkaline marshes, mud flats, meadows, and hot springs. Elevation 0 - 220 meters. February - May	<b>Low.</b> Non-tidal salt marsh provides marginal suitable habitat.
California seablite	<i>Suaeda californica</i>	FE/-1B.1	Margins of coastal salt marshes. Elevation < 5 meters. July - October	<b>Low.</b> Non-tidal salt marsh provide marginal suitable habitat, but in 2010USFWS determined 1986 occurrence (occurrence #14) 3 miles away to most likely be extirpated.
Saline clover	<i>Trifolium hydrophilum</i>	-/-1B.2	Mesic, alkaline soils within open areas in marshes, grassland, and vernal pools. Elevation 0 - 300 meters. April - June	<b>Low.</b> Suitable habitat not present in study area. Nearest recent occurrence from 2003 (occurrence #45) is 3 miles away.

**Federal Listings**

FE = Listed as endangered under the FESAFT = Listed as threatened under the FESA  
FC = Candidate for listing under the FESA  
BCC = Bird of Conservation Concern (USFWS)

**State Listings**

SE = Listed as endangered under the CESA  
ST= Listed as threatened under the CESA  
SSC = Species of Special Concern (CDFW)  
CE = Candidate Endangered (CDFW)  
FP = Fully Protected (CDFW)

**California Rare Plant Rank (CRPR)**

Rank 1A = Plants presumed extirpated in California and either rare or extinct elsewhere.  
Rank 1B = Plants rare, threatened, or endangered in California and elsewhere.  
Rank 2A = Plants presumed extirpated in California, but more common elsewhere.  
Rank 2B = Plants rare, threatened, or endangered in California, but more common elsewhere.  
An extension reflecting the level of threat to each species is appended to each rarity category as follows:  
.1 – Seriously endangered in California.  
.2 – Fairly endangered in California.  
.3 – Not very endangered in California.

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