

Memo



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Date: October 20, 2021

To: Ryan Hook
Principal Civil Engineer/Associate Vice President
Carollo

From: Joshua Boldt
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Subject: SASD RCCC Pump Station Rehabilitation Project – Arborist Survey Results

Introduction

This memorandum was prepared to document the results of the arborist survey conducted for the proposed Sacramento Area Sewer District (SASD) Rio Cosumnes Correctional Center (RCCC) Pump Station Rehabilitation Project (project). Ascent Environmental was contracted by Carollo to perform a tree survey and prepare an arborist report for the approximately 7.6-acre survey area. In addition to this memorandum, a detailed arborist report will be prepared once project plans have been finalized and an impact assessment on trees can be conducted.

Results

A total of 63 trees are present on the project site. Two are native oak species but one of the oak trees is dead. The remaining on-site trees are nonnative species¹. The results of the arborist survey are presented in Table 1 below and in the attached Figure.

Table 1 Arborist Survey Data

Tree ID ¹	Species	DBH ² (inches)	Total DBH	Condition ³	Protected Tree ⁴	Public Tree ⁵
1	<i>Eucalyptus globulus</i> blue gum	22	22	Good	No	Yes
2	<i>Eucalyptus globulus</i> blue gum	18	18	Good	No	Yes
3	<i>Eucalyptus globulus</i> blue gum	18	18	Good/Fair	No	Yes
4	<i>Eucalyptus globulus</i> blue gum	12, 10	22	Good/Fair	No	Yes
5	<i>Eucalyptus globulus</i> blue gum	15, 12	27	Good/Fair	No	Yes
6	<i>Eucalyptus globulus</i> blue gum	8	8	Good/Fair	No	Yes
7	<i>Eucalyptus globulus</i> blue gum	28, 19	47	Good/Fair	No	Yes

¹ Redwood (*Sequoia sempervirens*) and Monterey pine (*Pinus radiata*) are native to California, but not to Sacramento County.

Tree ID ¹	Species	DBH ² (inches)	Total DBH	Condition ³	Protected Tree ⁴	Public Tree ⁵
8	<i>Eucalyptus globulus</i> blue gum	12, 7	19	Good/Fair	No	Yes
9	<i>Eucalyptus globulus</i> blue gum	14	14	Fair	No	Yes
10	<i>Eucalyptus globulus</i> blue gum	14, 12, 10	36	Good/Fair	No	Yes
11	<i>Eucalyptus globulus</i> blue gum	15	15	Good/Fair	No	Yes
12	<i>Eucalyptus globulus</i> blue gum	23	23	Good	No	Yes
13	<i>Eucalyptus globulus</i> blue gum	16	16	Good/Fair	No	Yes
14	<i>Eucalyptus globulus</i> blue gum	25	25	Good	No	Yes
15	<i>Eucalyptus globulus</i> blue gum	17	17	Fair	No	Yes
16	<i>Eucalyptus globulus</i> blue gum	27	27	Good	No	Yes
17	<i>Eucalyptus globulus</i> blue gum	18	18	Good	No	Yes
18	<i>Eucalyptus globulus</i> blue gum	27, 22	49	Fair	No	Yes
19	<i>Eucalyptus globulus</i> blue gum	14	14	Poor	No	Yes
20	<i>Eucalyptus globulus</i> blue gum	11	11	Fair	No	Yes
21	<i>Eucalyptus globulus</i> blue gum	21	21	Good	No	Yes
22	<i>Eucalyptus globulus</i> blue gum	24	24	Fair	No	Yes
23	<i>Eucalyptus globulus</i> blue gum	11	11	Good	No	Yes
24	<i>Eucalyptus globulus</i> blue gum	14, 13	27	Good/Fair	No	Yes
25	<i>Eucalyptus globulus</i> blue gum	22	22	Good/Fair	No	Yes
26	<i>Eucalyptus globulus</i> blue gum	22	22	Good/Fair	No	Yes
27	<i>Eucalyptus globulus</i> blue gum	8, 6, 5	19	Fair	No	Yes
28	<i>Pinus radiata</i> Monterey pine	17	17	Good	No	Yes
29	<i>Morus alba</i> white mulberry	19	19	Good	No	Yes
30	<i>Pinus radiata</i>	8	8	Good	No	Yes

Tree ID ¹	Species	DBH ² (inches)	Total DBH	Condition ³	Protected Tree ⁴	Public Tree ⁵
	Monterey pine					
31	<i>Pinus radiata</i> Monterey pine	7	7	Good	No	Yes
32	<i>Morus alba</i> white mulberry	16	16	Good/Fair	No	Yes
33	<i>Morus alba</i> white mulberry	18	18	Good	No	Yes
100	<i>Schinus molle</i> Peruvian pepper tree	4	4	Good	No	Yes
101	<i>Schinus molle</i> Peruvian pepper tree	5	5	Good	No	Yes
102	<i>Schinus molle</i> Peruvian pepper tree	5	5	Good	No	Yes
103	<i>Schinus molle</i> Peruvian pepper tree	4	4	Good	No	Yes
104	<i>Schinus molle</i> Peruvian pepper tree	3	3	Good	No	Yes
105	<i>Schinus molle</i> Peruvian pepper tree	7	7	Good	No	Yes
106	<i>Schinus molle</i> Peruvian pepper tree	6	6	Good	No	Yes
107	<i>Schinus molle</i> Peruvian pepper tree	6	6	Good	No	Yes
108	<i>Schinus molle</i> Peruvian pepper tree	7	7	Good	No	Yes
109	<i>Schinus molle</i> Peruvian pepper tree	5	5	Good	No	Yes
110	<i>Ceratonia siliqua</i> carob	6, 4, 4, 3, 3	20	Fair/Good	No	Yes
111	<i>Schinus molle</i> Peruvian pepper tree	4	4	Good	No	Yes
112	<i>Quercus wislizeni</i> interior live oak	6	6	Poor	Yes	Yes
113	<i>Quercus wislizeni</i> interior live oak	4	4	Dead	No	Yes
114	<i>Pinus radiata</i> Monterey pine	16, 13	29	Fair	No	Yes
115	<i>Pinus radiata</i> Monterey pine	15, 13, 9	37	Fair	No	Yes
116	<i>Pinus radiata</i> Monterey pine	14, 12	26	Fair	No	Yes
117	<i>Pinus radiata</i> Monterey pine	12, 11, 10	33	Fair	No	Yes
118	<i>Sequoia sempervirens</i> redwood	6	6	Poor	No	Yes

Tree ID ¹	Species	DBH ² (inches)	Total DBH	Condition ³	Protected Tree ⁴	Public Tree ⁵
119	<i>Sequoia sempervirens</i> redwood	6	6	Poor	No	Yes
120	<i>Sequoia sempervirens</i> redwood	9	9	Poor	No	Yes
121	<i>Sequoia sempervirens</i> redwood	5	5	Poor	No	Yes
122	<i>Sequoia sempervirens</i> redwood	6	6	Poor	No	Yes
123	<i>Sequoia sempervirens</i> redwood	5	5	Poor	No	Yes
124	<i>Sequoia sempervirens</i> redwood	9	9	Poor	No	Yes
125	<i>Sequoia sempervirens</i> redwood	8	8	Poor	No	Yes
126	<i>Sequoia sempervirens</i> redwood	7	7	Poor	No	Yes
127	<i>Sequoia sempervirens</i> redwood	5	5	Poor	No	Yes
128	<i>Eucalyptus globulus</i> blue gum	24	24	Good	No	Yes
129	<i>Eucalyptus globulus</i> blue gum	21	21	Good	No	Yes

¹ Tree IDs 100-129 were not tagged with a metal ID tag during the survey due to inaccessibility.

² DBH (diameter at breast height): the diameter of a tree measured at 4.5 feet above ground level. Trees with multiple trunks and DBH measurements are separated by a comma.

³ General health of the tree including root collar, trunk, limbs, foliage, structure, and general vigor.

⁴ Tree protected under Chapter 19.12 (Tree Preservation and Protection) of the Sacramento County Code of Ordinances.

⁵ Tree defined as a "Public Tree" under Chapter 19.04 of the Sacramento County Code of Ordinances.

Regulatory Setting

Sacramento County Code of Ordinances

Chapter 19.12: The Sacramento County Tree Preservation and Protection Ordinance (Chapter 19.12 of the Sacramento County Code of Ordinances) provides for the protection of native oak trees, including valley oak (*Quercus lobata*), interior live oak (*Q. wislizeni*), blue oak (*Q. douglasii*), and oracle oak (*Q. morehus*)². Protected trees include any living native oak tree having at least one trunk of six inches or more DBH, or a multi-trunked native oak tree having an aggregate DBH of ten inches.

Chapter 19.12 states that no person shall trench, grade, or fill within the dripline of any native oak tree; or destroy, kill, or remove any native oak tree, on any property, public or private, without a tree permit. As indicated in Table 1, Tree #112 is the only tree within the survey area to qualify for protection under Chapter 19.12.

² *Q. morehus* is a hybrid of *Q. wislizeni* and *Q. kelloggii* and is not recognized as a species by The Jepson Manual: Vascular Plants of California (Second Edition) (Baldwin et al., 2012).

Chapter 19.04: Chapter 19.04 of the Sacramento County Code of Ordinances provides for the protection, preservation, and regulation of trees on public property within Sacramento County. This includes all trees planted or maintained by the County on an easement, planting easement, street, county park, or public premises. A permit shall be required to plant, transplant, move, separate, trim, prune, cut above or below ground, disrupt, alter, or take any other action upon any tree located on public premises. Because the survey area is entirely on public property, all trees within the survey area are subject to the tree permit requirements in Chapter 19.04.

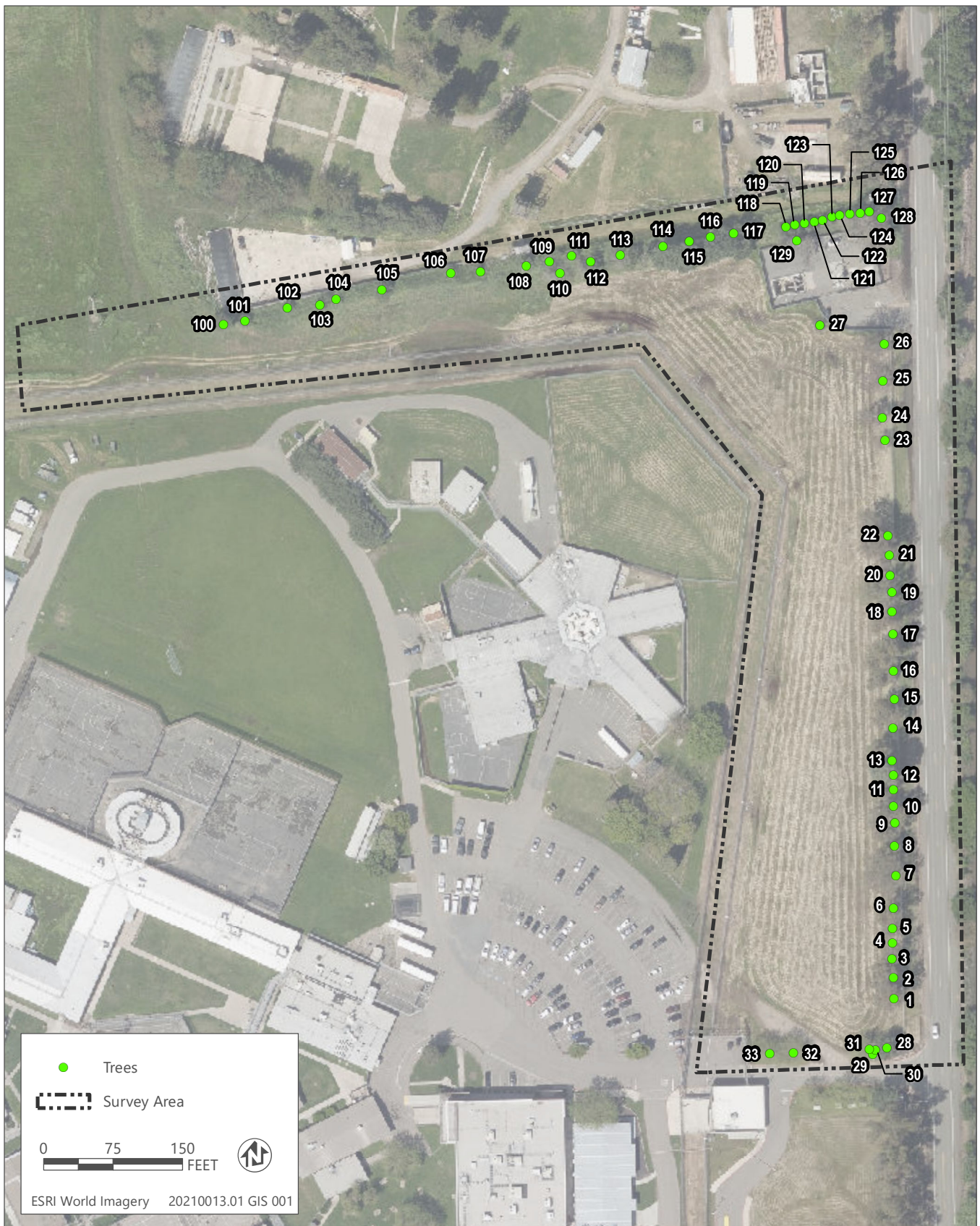
Tree Preservation Guidelines

For those trees that will be preserved on site during project construction, the following guidelines are recommended to ensure the long-term survival and stability of the trees.

- ▶ **Educate Workers:** Educate all workers on site about tree protection guidelines and requirements before construction. A Certified Arborist shall provide a training session regarding tree protection guidelines and requirements for all workers before project construction; alternately, a Certified Arborist shall prepare a brochure outlining the tree protection guidelines and requirements for distribution to all workers before project construction.
- ▶ **Establish a Tree Protection Zone:** Establish a tree protection zone (TPZ) around any tree or group of trees designated for retention. The TPZ should at minimum be equal to 1.5 times the radius of the dripline (i.e., the area beneath the outer circumference of the tree branches and leaves). The TPZ may be adjusted on a case-by-case basis after consultation with a Certified Arborist.
- ▶ **Install Fencing and Signage:** Install fencing around the TPZ of all trees or groups of trees designated for retention. The fencing should remain in place for the duration of construction activities. Post appropriate signage to help convey the importance of the TPZ to workers.
- ▶ **Prohibit Construction Activities within the TPZ:** Prohibit construction-related activities, including grading, trenching, construction, demolition, or other work, within the TPZ. No heavy equipment or machinery should be operated within the TPZ. No construction materials, equipment, machinery, or other supplies should be stored within the TPZ. Vehicle and foot traffic should not be permitted within the TPZ. No wires or signs should be attached to any trees designated for retention.
- ▶ **Prune Selected Trees:** Prune selected trees to provide necessary clearance during construction and to remove any defective limbs or other tree parts that may pose a failure risk. All pruning should be completed by a Certified Arborist or Tree Worker and adhere to the Tree Pruning Guidelines of the International Society of Arboriculture.
- ▶ **Monitor Trees and TPZs:** Monitor the integrity of the TPZs and the health of the trees designated for retention regularly throughout the construction process. A Certified Arborist should monitor the health and condition of the protected trees and, if necessary, recommend additional mitigations and appropriate actions. This could include the monitoring of trees adjacent to project facilities to determine if construction activities (including the removal of nearby trees) would affect protected trees in the future.
- ▶ **Treat Impacted Trees:** Provide supplemental irrigation and other care, such as mulch and fertilizer, as deemed necessary by a Certified Arborist, to any trees impacted by construction. Treatment of any injuries should be performed by a Certified Arborist.

References

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2021. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, CA.



Source: Data collected by Ascent in 2021

10/14/2021

Figure 3. Arborist Survey Results

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