

APPENDIX D

ARBORIST REPORTS

Arborist Report

Stone Beetland

City of Sacramento, Sacramento County, California

16 May 2022



Prepared for:

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Stone Beetland**

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1.0 INTRODUCTION

This report presents the results of an arborist survey conducted for the Stone Beetland Property (Study Area) by Madrone Ecological Consulting, LLC (Madrone) on 21 March 2022. The approximately 127-acre Study Area is west of Morrison Creek north of Cosumnes River Boulevard, and approximately 1 mile east of Interstate 5 within the City of Sacramento, Sacramento County, California. The Study Area is located within Sections 7, 8, 17 and 18, Township 7 North, Range 5 East (MDB&M) (Longitude -121.469194, Latitude 38.466003; NAD83) and is portrayed on the "Florin, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2018) (Figure 1).

2.0 GENERAL SITE CONDITIONS AND HABITAT

According to LiDAR elevation data provided to Sacramento County by Merrick & Company in 2004 and 2007, the Study Area is situated on relatively flat terrain at elevations ranging from approximately 6 to 18 feet above sea level.

Most of the site is characterized by flat terrain that has been historically leveled, ditched, and drained for agricultural use. The northeastern corner displayed uneven topography due to the presence of several trash and spoils piles; several "squatter" gardens were located within the Study Area along the northeastern fence line and appear to have been planted by residents from the abutting neighborhood to the north. An abandoned California Highway Patrol drivers training track is also located to the north of the Study Area and west of the aforementioned neighborhood.

Fallow agricultural lands occupy areas to the south and west, and the eastern boundary borders the toe of a large levee constructed along Morrison Creek. A portion of the Sacramento Regional Transit Light Rail "Blue Line" (Light Rail) and Light Rail station parallels the eastern boundary just west of Morrison Creek.

2.1 Annual Brome Grasslands

The majority of the Study Area historically supported agricultural lands that were partially impacted during the construction of the Light Rail and Cosumnes River Boulevard, which started in the early 2010's. Since the completion of these projects, approximately 9.31 acres of the site has reverted to annual brome grasslands that are characterized by soft chess (*Bromus hordeaceus*), wild oats (*Avena fatua*), rip-gut brome (*Bromus diandrus*), and perennial rye (*Lolium perenne*). Common herbaceous species include prickly lettuce (*Lactuca serriola*), yellow star-thistle (*Centaurea solstitialis*), and alkali mallow (*Malvella leprosa*).

2.2 Mixed Riparian Woodland

Approximately 0.46 acre of mixed riparian woodland comprised of small stands of sandbar willow (*Salix exigua*) and a scattered mix of escaped non-native fruit/ornamental species flank the east bank of

Morrison Creek. This area also includes poison oak (*Toxicodendron diversilobum*), edible fig (*Ficus carica*), and Himalayan blackberry (*Rubus armeniacus*). This area appears to have burned in 2021.

2.3 Developed

Approximately 2.73 acres of developed lands were mapped within the Study Area. Developed lands refer to constructed, heavily graded, and/or heavily compacted features such as the Light Rail line and its base and overpass, levee access roads, a gravel staging area, and the portions of the levee within the Study Area adjacent to Morrison Creek. Vegetation, if present, is typically sparse or ruderal and includes stinkwort (*Dittrichia graveolens*), Russian thistle (*Salsola tragus*), tumbleweed amaranth (*Amaranthus albus*), pigweed amaranth (*A. blitoides*), rough cocklebur (*Xanthium strumarium*), wild radish (*Raphanus sativus*), milk thistle (*Silybum marianum*), bindweed (*Convolvulus arvensis*), black mustard (*Brassica nigra*), and broad leaf filaree (*Erodium botrys*). There are several non-native ornamental tree plantings located along the landscaped margin on the north side of Cosumnes River Boulevard.

3.0 METHODOLOGY

Madrone ISA Certified Arborist Daria Snider (#WE-8666A) conducted the arborist survey with assistance from Madrone senior biologist Dustin Brown on 21 March 2022. The survey was conducted in accordance with the Sacramento City Code Section 12.56 on tree planting, maintenance, and conservation.

Prior to the survey Madrone queried the City of Sacramento database of City Trees to determine whether any City or Private Protected Trees were within the Study Area. A City Tree means any tree which, when the trunk is measured, measured four and one-half feet above ground, is partially or completely located in a City park, on the City's property, or on a public right-of-way (i.e., any street, road, sidewalk, park, alley, etc.). The Sacramento City Code defines a "Private Protected Tree" as follows:

- A. A tree that is designated by city council resolution to have special historical value, special environmental value, or significant community benefit, and is located on private property;
- B. Any native Valley Oak (*Quercus lobata*), Blue Oak (*Quercus douglasii*), Interior Live Oak (*Quercus wislizenii*), Coast Live Oak (*Quercus agrifolia*), California Buckeye (*Aesculus californica*), or California Sycamore (*Platanus racemosa*), that has a Diameter at Standard Height (DSH) of 12 inches or more, and is located on private property;
- C. A tree that has a DSH of 24 inches or more located on private property that:
 1. Is an undeveloped lot; or
 2. Does not include any single unit or duplex dwellings; or
 3. A tree that has a DSH of 32 inches or more located on private property that includes any single unit or duplex dwellings.

As part of this inventory all native trees with a DSH of 12 inches or more and any tree with a DSH of 24 inches or more were surveyed.

For each tree surveyed, Ms. Snider recorded the tree identification number, tree species, DSH, approximate dripline radius, and general health and structure. Aluminum tags with a unique identification number were nailed into the trunk of each surveyed tree. The location of each tree was recorded with a GPS unit capable of sub-meter accuracy (EOS Tools Arrow 100).

4.0 RESULTS

A total of three native trees with a DSH greater than 12 inches were inventoried within the Study Area. The data are summarized in Table 1 and a map of the inventoried trees is included as Figure 2.

Table 1. Surveyed Trees within the Study Area

Species	Number of Trees (DSH)	Trees in Poor Health (DSH)	Trees in Fair Health (DSH)	Trees in Good Health (DSH)
Interior live oak (<i>Quercus wislizenii</i>)	1 (12.5)	1 (12.5)		
Valley oak (<i>Quercus lobata</i>)	1 (19.5)			1 (19.5)
Northern California black walnut (<i>Juglans hindsii</i>)	1 (41)		1 (41)	
Total	3 (73)	1 (12.5)	1 (41)	1 (19.5)

One tree (Tree 597) was burned in a fire in 2021 and appears to have almost died and is resprouting mid-way up the trunk and from the base.

5.0 REPLACEMENT PLAN

A total of three trees will be removed by the Project including one interior live oak (tree 597), one Northern California black walnut (tree 599), and one Valley oak (tree 600). Of these three trees, only the two native oak trees (trees 597 and 600) qualify as Private Protected trees. Tree 597 is in poor health due to being burned severely in a fire in 2021 and does not require replacement mitigation for removal. Thus, tree 600 is the only tree planned for removal that will require replacement mitigation.

Replacement options may be achieved by onsite planting of 20 DSH of native oak trees as described below or by the payment of in-lieu fees equal to \$325 per inch or \$6,500. If the project proponent chooses to pay in-lieu fees, the fees are paid to the City of Sacramento and are due when the planned project has been approved and the appeal period has expired. An invoice will be mailed to the applicant of the tree permit application around the middle of the month following planning project approval and it is payable upon receipt. If the project proponent chooses to conduct onsite replacement plantings as mitigation, the following specifications shall be followed. Each 15-gallon planting shall be equivalent to 1 inch DSH, each 24" box planting shall be equivalent to 2 DSH, and each 36" box or bigger shall be equivalent to 3 DSH. Each native oak planting shall require a minimum planter width of seven feet and a minimum planter length of 14-feet. The plantings shall be planted no less than 35 feet apart and shall be adequately irrigated.

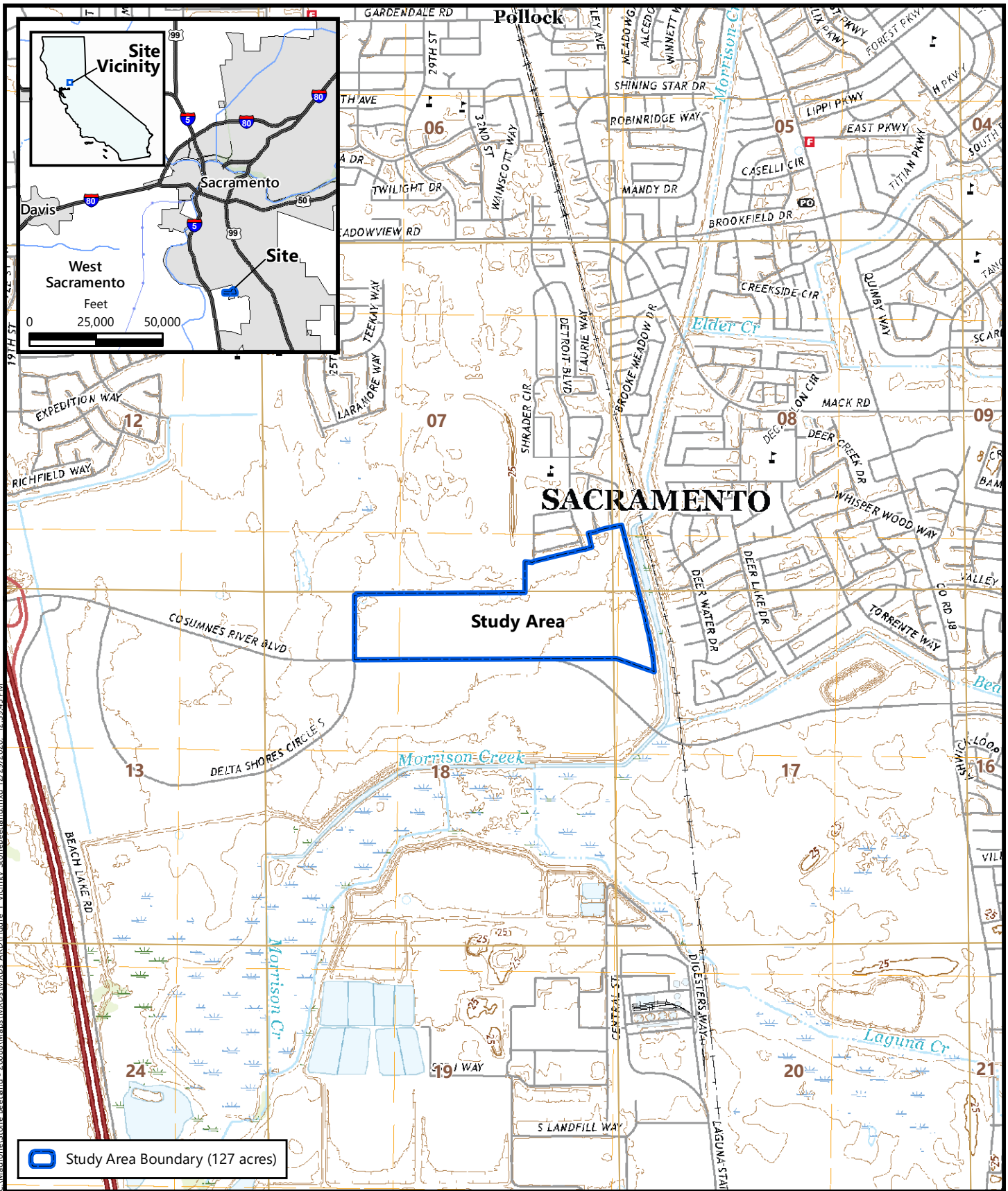
6.0 REFERENCES

U.S. Geological Survey (USGS). 2018. "Florin, California" 7.5-Minute Series Topographic Quadrangle. U. S. Geological Survey. Denver, Colorado.

Figures

Figure 1. Vicinity Map

Figure 2. Tree Inventory Map



C:\Madrona\Stone Beetland - 2008\Map\MXD\MXD\ARDS - Figure 1 Vicinity StoneBeetland.mxd 12/29/2020 12:39:45 PM

Source: United States Geologic Survey, 2018.
 "Florin, California" 7.5-Minute Topographic Quadrangle
 Sections 7-8, and 17-18, Township 7 North, Range 5 East
 Longitude -121.469194, Latitude 38.466003

Figure 1
Site and Vicinity

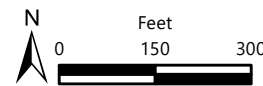
Stone Beetland
 Sacramento County, California





- Study Area Boundary (127 acres)
- Impacted Tree
- Drip Line Radius

Existing Tree Inventory						
Tree Number	Common Name	Scientific Name	DBH	Drip Line Radius (ft)	Structure	Health
597	Interior live oak	<i>Quercus wislizeni</i>	12.5	5	Poor	Poor
599	Northern California black walnut	<i>Juglans hindsii</i>	13.5, 13.5, 14.0	22	Poor	Fair
600	Valley oak	<i>Quercus lobata</i>	19.5	23	Good	Good



Aerial Source: Maxar, 4 March 2021

Figure 2
Tree Inventory

SRCSD Property
Sacramento County, California



Attachments

Attachment A: Arborist Survey Data

Attachment A

Arborist Survey Data

Stone Beetland Arborist Survey Data

Tree Number	Common Name	Scientific Name	DBH	Drip Line Radius (ft)	Structure	Health	Notes
597	Interior live oak	<i>Quercus wislizeni</i>	12.5	5	Poor	Poor	nearly died in fire; one sprout in canopy and stump sprouts, dead drip line is 10'
599	Northern California black walnut	<i>Juglans hindsii</i>	13.5, 13.5, 14.0	22	Poor	Fair	
600	Valley oak	<i>Quercus lobata</i>	19.5	23	Good	Good	

Arborist Report

SRCSD Property

City of Sacramento, Sacramento County, California

16 May 2022



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- Figure 3. Impacts to Aquatic Resources and Terrestrial Vegetation Communities

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- Attachment A. Arborist Survey Data

1.0 INTRODUCTION

This report presents the results of an arborist survey conducted for the Sacramento County Sanitation District (SRCSD) Property (Study Area) by Madrone Ecological Consulting, LLC (Madrone) on 21 March 2022. The approximately 14.55-acre Study Area is west of the confluence of Morrison and Beacon Creeks north of Cosumnes River Boulevard within the City of Sacramento, Sacramento County, California. The Study Area is located within Sections 17 and 18, Township 7 North, Range 5 East (MDB&M) (Longitude - 121.469194, Latitude 38.466003; NAD83) and is portrayed on the "Florin, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2018) (Figure 1).

2.0 GENERAL SITE CONDITIONS AND HABITAT

According to LiDAR elevation data provided to Sacramento County by Merrick & Company in 2004 and 2007, the Study Area is situated on relatively flat terrain at elevations ranging from approximately 4 to 20 feet above mean sea level.

Most of the site is characterized by flat terrain that has been historically leveled, ditched, and drained for agricultural use. Fallow lands occupy areas to the north, south, and west, and the eastern boundary parallels a reach of Morrison Creek. Morrison Creek, which merges with a reach of Beacon Creek near the southernmost portion of the Study Area, generally flows from north to south and is bracketed by large levees on both sides.

The Sacramento Regional Transit Light Rail "Blue Line" (Light Rail) bisects the east half of the parcel along an approximate north-south axis, and the recently-opened (29 August 2021) Morrison Creek Light Rail station is situated to the north.

2.1 Annual Brome Grasslands

The majority of the Study Area historically supported agricultural lands that were heavily impacted during the construction of the Light Rail and Cosumnes River Boulevard, which started in the early 2010's. Since the completion of these projects, approximately 9.31 acres of the site has reverted to annual brome grasslands that are characterized by soft chess (*Bromus hordeaceus*), wild oats (*Avena fatua*), rip-gut brome (*Bromus diandrus*), and perennial rye (*Lolium perenne*) (Figure 3). Common herbaceous species include prickly lettuce (*Lactuca serriola*), yellow star-thistle (*Centaurea solstitialis*), and alkali mallow (*Malvella leprosa*).

2.2 Mixed Riparian Woodland

Approximately 0.46 acre of mixed riparian woodland comprised of small stands of sandbar willow (*Salix exigua*) and a scattered mix of escaped non-native fruit/ornamental species flank the east bank of Morrison Creek. This area also includes poison oak (*Toxicodendron diversilobum*), edible fig (*Ficus carica*),

and Himalayan blackberry (*Rubus armeniacus*) (Figure 3). A well-developed homeless encampment is present in this area.

2.3 Developed

Approximately 2.73 acres of developed lands were mapped within the Study Area. Developed lands refer to constructed, heavily graded, and/or heavily compacted features such as the Light Rail line and its base and overpass, levee access roads, a gravel staging area, and the portions of the levee within the Study Area adjacent to Morrison Creek (Figure 3). Vegetation, if present, is typically sparse or ruderal and includes stinkwort (*Dittrichia graveolens*), Russian thistle (*Salsola tragus*), tumbleweed amaranth (*Amaranthus albus*), pigweed amaranth (*A. blitoides*), rough cocklebur (*Xanthium strumarium*), wild radish (*Raphanus sativus*), milk thistle (*Silybum marianum*), bindweed (*Convolvulus arvensis*), black mustard (*Brassica nigra*), and broad leaf filaree (*Erodium botrys*).

3.0 METHODOLOGY

Madrone ISA Certified Arborist Daria Snider (#WE-8666A) conducted the arborist survey with assistance from Madrone senior biologist Dustin Brown on 21 March 2022. The survey was conducted in accordance with the Sacramento City Code Section 12.56 on tree planting, maintenance, and conservation.

Prior to the survey Madrone queried the City of Sacramento database of City Trees to determine whether any City or Private Protected Trees were within the Study Area. A City Tree means any tree which, when the trunk is measured, measured four and one-half feet above ground, is partially or completely located in a City park, on the City's property, or on a public right-of-way (i.e., any street, road, sidewalk, park, alley, etc.). The Sacramento City Code defines a "Private Protected Tree" as follows:

- A. A tree that is designated by city council resolution to have special historical value, special environmental value, or significant community benefit, and is located on private property;
- B. Any native Valley Oak (*Quercus lobata*), Blue Oak (*Quercus douglasii*), Interior Live Oak (*Quercus wislizenii*), Coast Live Oak (*Quercus agrifolia*), California Buckeye (*Aesculus californica*), or California Sycamore (*Platanus racemosa*), that has a Diameter at Standard Height (DSH) of 12 inches or more, and is located on private property;
- C. A tree that has a DSH of 24 inches or more located on private property that:
 1. Is an undeveloped lot; or
 2. Does not include any single unit or duplex dwellings; or
 3. A tree that has a DSH of 32 inches or more located on private property that includes any single unit or duplex dwellings.

As part of this inventory all native trees with a DSH of 12 inches or more and any tree with a DSH of 24 inches or more were surveyed.

For each tree surveyed, Ms. Snider recorded the tree identification number, tree species, DSH, approximate dripline radius, and general health and structure. Aluminum tags with a unique identification

number were nailed into the trunk of each surveyed tree with the exception of one inaccessible tree (#1). The location of each tree was recorded with a GPS unit capable of sub-meter accuracy (EOS Tools Arrow 100). In one case, dense poison oak precluded access to the tree trunk. In this case, no tag was attached to the tree, and the DBH and physical location was estimated.

The survey did not include trees on the eastern banks of Morrison Creek as no impacts are proposed for that area, and the creek is not passable on foot.

4.0 RESULTS

A total of seven native trees with a DSH greater than 12 inches were inventoried within the Study Area. The data are summarized in Table 1 and a map of the inventoried trees is included as Figure 2.

Table 1. Surveyed Trees within the Study Area

Species	Number of Trees (DSH)	Trees in Poor Health (DSH)	Trees in Fair Health (DSH)	Trees in Good Health (DSH)
Interior live oak (<i>Quercus wislizenii</i>)	2 (28)		2 (28)	
Boxelder (<i>Acer negundo</i>)	2 (73)			2 (73)
Goodding’s black willow (<i>Salix gooddingii</i>)	2 (111.5)	1 (30)	1 (81.5)	
Northern California black walnut (<i>Juglans hindsii</i>)	1 (55)		1 (55)	
Total	7 (280)	1 (30)	4 (164.5)	2 (73)

Several of the trees were burned in a fire in 2021. Tree 597 appears to have almost died and is resprouting mid-way up the trunk and from the base. Tree 1, a large Goodding’s black willow is mostly dead and has many cavities.

5.0 REPLACEMENT PLAN

A total of four trees will be removed by the Project including two Goodding’s black willow trees (Trees 1 and 592) and two interior live oak trees (Trees 594 and 595). Of these four trees, only the two interior live oak trees qualify as Private Protected trees totaling 28 DSH and require replacement.

Replacement options may be achieved by onsite planting of 28 DSH of native oak trees as described below or by the payment of in-lieu fees equal to \$325 per inch or \$9,100. If the project proponent chooses to pay in-lieu fees, the fees are paid to the City of Sacramento and are due when the planned project has been approved and the appeal period has expired. An invoice will be mailed to the applicant of the tree permit application around the middle of the month following planning project approval and it is payable upon receipt. If the project proponent chooses to conduct onsite replacement plantings as mitigation, the following specifications shall be followed. Each 15-gallon planting shall be equivalent to 1 inch DSH, each 24” box planting shall be equivalent to 2 DSH, and each 36” box or bigger shall be equivalent to 3 DSH. Each native oak planting shall require a minimum planter width of seven feet and a

minimum planter length of 14-feet. The plantings shall be planted no less than 35 feet apart and shall be adequately irrigated.

6.0 REFERENCES

U.S. Geological Survey (USGS). 2018. "*Florin, California*" 7.5-Minute Series Topographic Quadrangle. U. S. Geological Survey. Denver, Colorado.

Figures

Figure 1. Vicinity Map

Figure 2. Tree Inventory Map

Figure 3. Impacts to Aquatic Resources and
Terrestrial Vegetation Communities

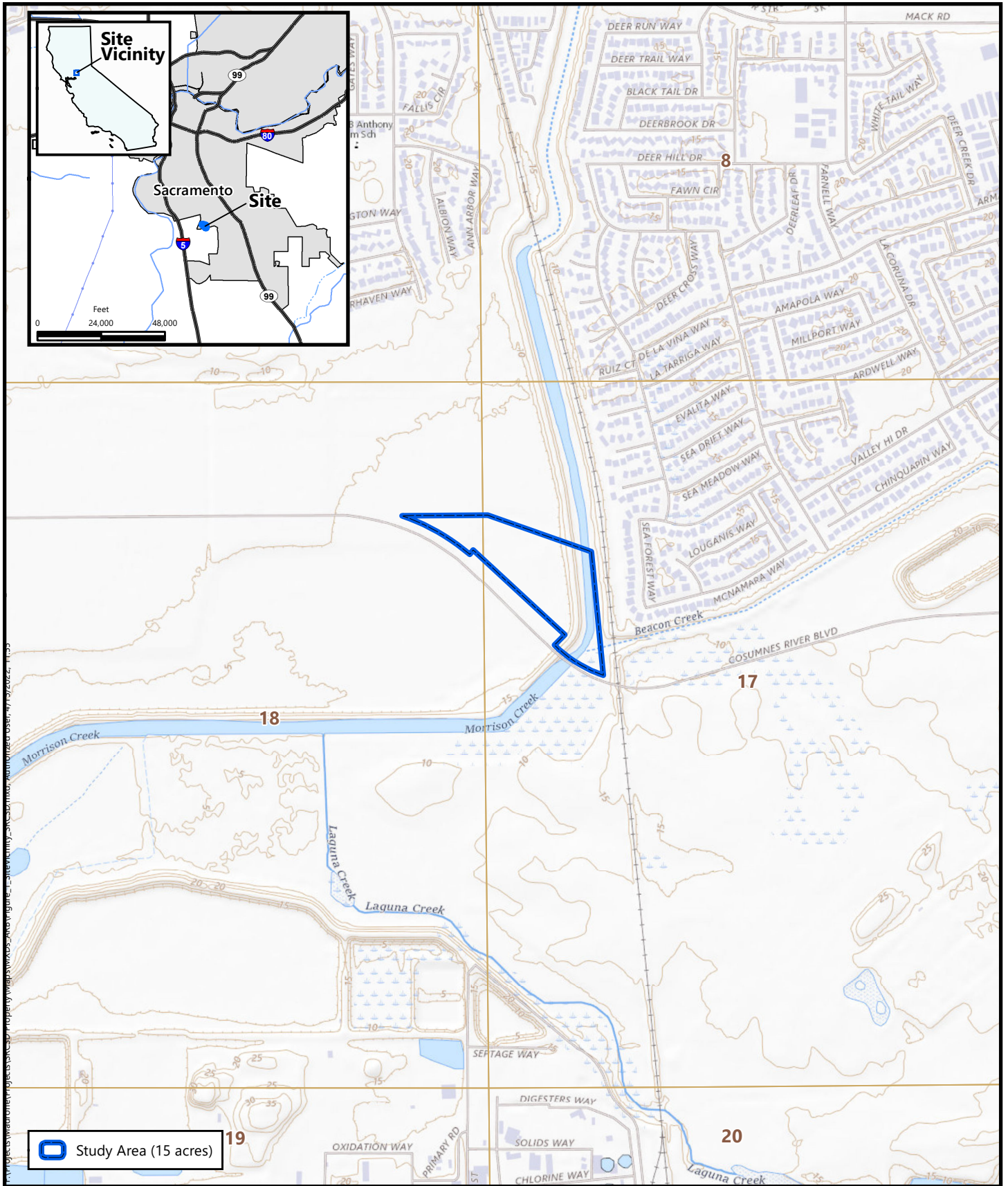







Figure 1
Site and Vicinity

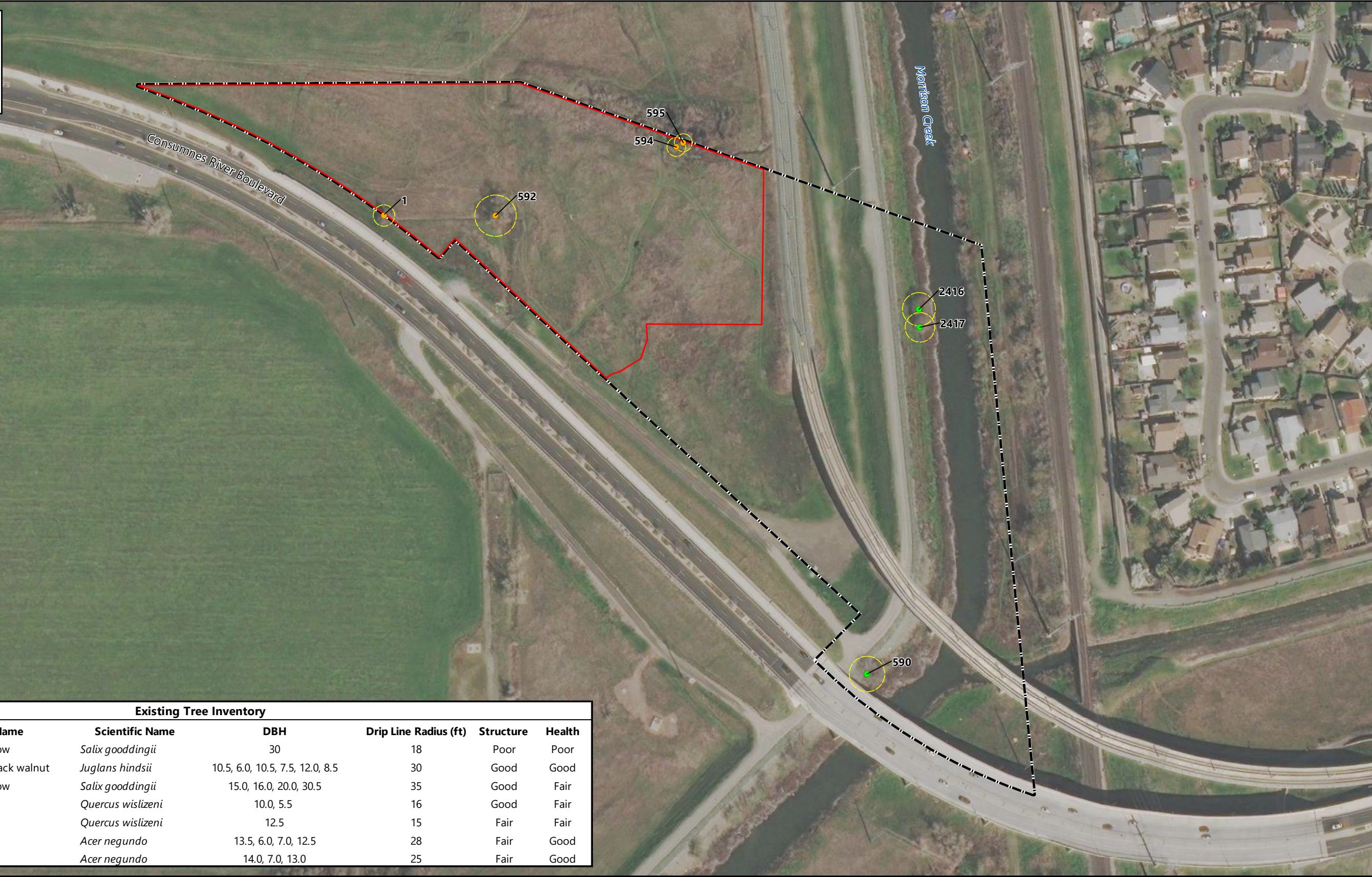
Source: United States Geologic Survey, 2018
 "Florin, California" 7.5-Minute Topographic Quadrangle
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SRCS Property
 Sacramento County, California

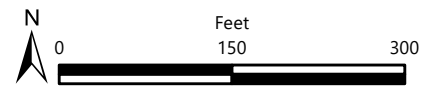


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 Study Area Boundary (15 acres)
 Impact Area
 Tree
 Impacted Tree
 Drip Line Radius



Existing Tree Inventory						
Tree Number	Common Name	Scientific Name	DBH	Drip Line Radius (ft)	Structure	Health
1	Goodding's black willow	<i>Salix gooddingii</i>	30	18	Poor	Poor
590	Northern California black walnut	<i>Juglans hindsii</i>	10.5, 6.0, 10.5, 7.5, 12.0, 8.5	30	Good	Good
592	Goodding's black willow	<i>Salix gooddingii</i>	15.0, 16.0, 20.0, 30.5	35	Good	Fair
594	Interior live oak	<i>Quercus wislizeni</i>	10.0, 5.5	16	Good	Fair
595	Interior live oak	<i>Quercus wislizeni</i>	12.5	15	Fair	Fair
2416	Boxelder	<i>Acer negundo</i>	13.5, 6.0, 7.0, 12.5	28	Fair	Good
2417	Boxelder	<i>Acer negundo</i>	14.0, 7.0, 13.0	25	Fair	Good

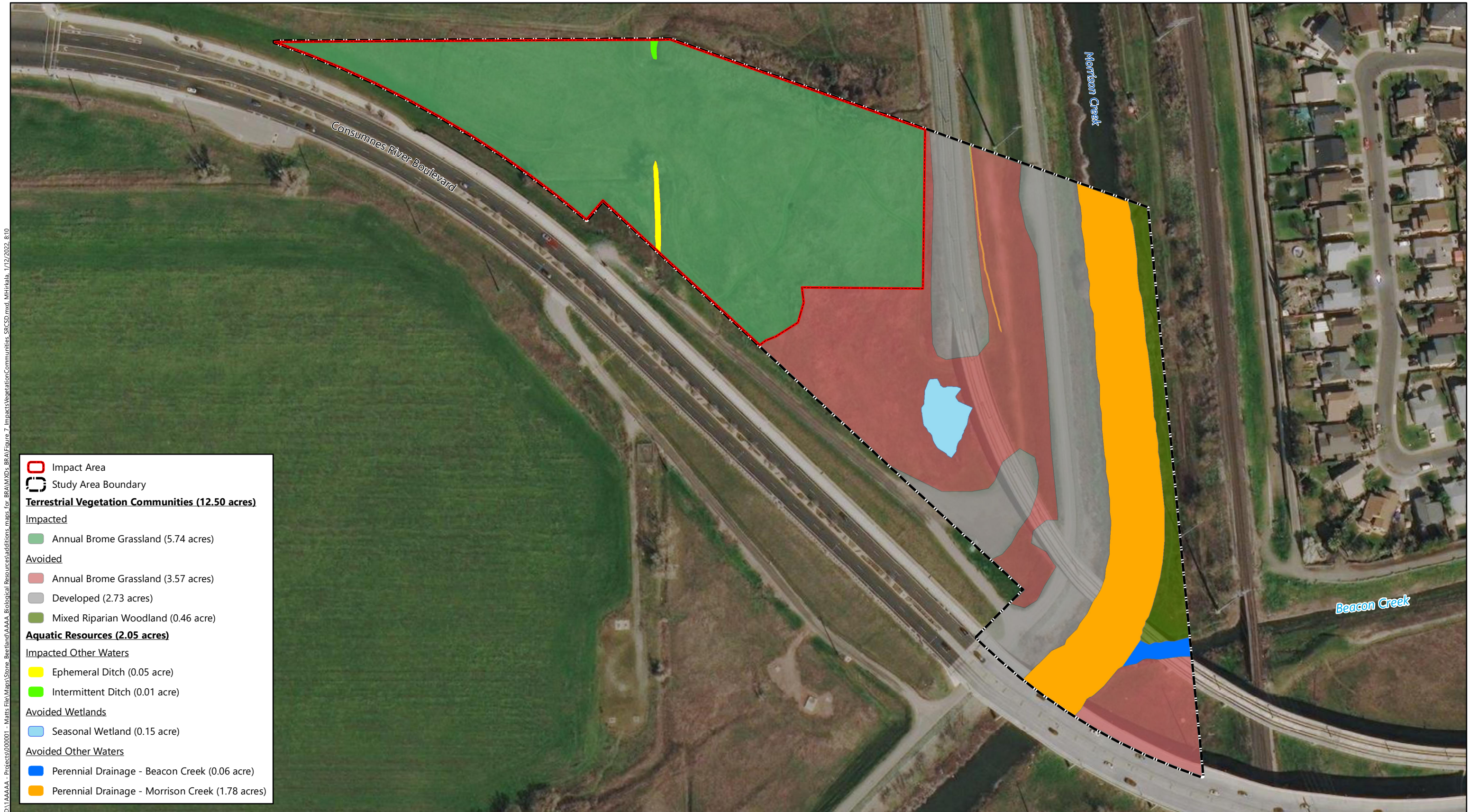


Aerial Source: Maxar, 4 March 2021

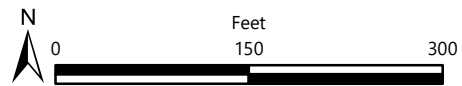
Figure 2
Tree Inventory

SRCS Property
Sacramento County, California





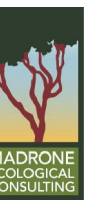
D:\1\AAAAA - Projects\000001 - Matt's File Maps\Stone Beerland\AAAA Biological Resources\additions maps for BRA\MXDs BRA\Figure 7 - Impacts\VegetationCommunities_SRCSD.mxd_Mhirikala_1/12/2022_810



Aerial Source: Sac Regional GIS Coop, 26 March 2018

Figure 3
Impacts to Aquatic Resources and
Terrestrial Vegetation Communities

SRCS Property
 Sacramento, Sacramento County, California



Attachments

Attachment A: Arborist Survey Data

Attachment A

Arborist Survey Data

SRCS D Property Arborist Survey Data

Tree Number	Common Name	Scientific Name	DBH	Drip Line Radius (ft)	Structure	Health	Notes
1	Goodding's black willow	<i>Salix gooddingii</i>	30.0	18	Poor	Poor	Much of tree is dead, large cavaties at base
590	Northern California black walnut	<i>Juglans hindsii</i>	10.5, 6.0, 10.5, 7.5, 12.0, 8.5	30	Good	Good	
592	Goodding's black willow	<i>Salix gooddingii</i>	15.0, 16.0, 20.0, 30.5	35	Good	Fair	
594	Interior live oak	<i>Quercus wislizeni</i>	10.0, 5.5	16	Good	Fair	
595	Interior live oak	<i>Quercus wislizeni</i>	12.5	15	Fair	Fair	
2416	Boxelder	<i>Acer negundo</i>	13.5, 6.0, 7.0, 12.5	28	Fair	Good	lower bark shredding and missing in areas
2417	Boxelder	<i>Acer negundo</i>	14.0, 7.0, 13.0	25	Fair	Good	lower bark missing on one trunk