ANNUAL ROUTINE MAINTENANCE PLAN SUMMARY

FISCAL YEAR 2018-2019

Prepared by

The Santa Barbara County Flood Control and Water Conservation District
ALAMO PINTADO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
Maintenance on Alamo Pintado Creek begins 200 feet upstream of Alamo Pintado Avenue and terminates approximately 100 feet upstream of Highway 246 in the City of Solvang.

Setting:

Alamo Pintado Creek originates in the San Rafael Mountains and flows southward through pasture, cultivated fields and the towns of Los Olivos, Ballard and Solvang before flowing into the Santa Ynez River. Alamo Pintado Creek drains a 19,000 acre watershed along the western boundary of the Santa Ynez Valley capable of producing 7,400 cfs at Highway 246 during a 100-year return period precipitation event.

Surrounding land uses within the management area vary from suburban, agriculture, pasture, and open space. In some areas, the riparian corridor is wide with minimal disturbance; other reaches are degraded with almost no riparian buffer. From the Highway 154 bridge and downstream approximately 0.5 miles, the creek was dry. The remaining length down to Highway 246 in Santa Ynez/Solvang was wetted with flowing water. Low herbaceous vegetation such as watercress, blackberry, and poison oak was present throughout. The creek channel was mostly open under a dense willow canopy. Other characteristic tree species include sycamore and walnut. However, several downed limbs and trees occurred in several locations. Based on the District’s observations, downed tree and limbs are relatively common in Alamo Pintado Creek in most years. The dense canopy tends to drop limbs and trees frequently in this system, creating a potential flood risk.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>Alamo Pintado Creek</th>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002/2003</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2004/2005</td>
<td>700</td>
<td>4,000</td>
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<td>-700</td>
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<tr>
<td></td>
<td>2005/2006</td>
<td>700</td>
<td>3,000</td>
<td>3,000</td>
<td>1,600</td>
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<tr>
<td></td>
<td>2007/2008</td>
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<td>2008/2009</td>
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<td>5,300</td>
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<tr>
<td></td>
<td>2009/2010</td>
<td>0</td>
<td>5,300</td>
<td>5,000</td>
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<td>2010/2011</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4,950</td>
</tr>
</tbody>
</table>
Engineering Analysis:
There are many downed trees in various places along the channel. There are several public and private bridges along the course of the creek which are susceptible to plugging from this downed vegetation. Removal of downed trees as well as trimming back tree limbs hanging into the active channel is necessary to prevent plugging of bridges, to prevent local scour due to diversion of flow, and to prevent debris plugs from forming on the downed vegetation.

The bankfull width as determined by field indicators is approximately 12 feet. Therefore, removal of obstructive vegetation should result in a cleared cross-section that mimics the stable channel geometry found in the vicinity of the proposed project.

Project Description:

Sections 1-6
These sites are downed willow trees and branches. The downed material will be cut up and removed from the channel.

Section 7
This is a downed tree and tangled debris. The woody material will be cut and removed from the active channel.

Sections 8-12
These sites are downed willow trees and branches. The downed material will be cut up and removed from the channel.

Section 13
A fallen sycamore limb will be cut up and removed from the channel.

Section 14
A fallen oak limb will be cut up and removed from the channel.

Sections 15-34
These sites are downed willow trees and branches. The downed material will be cut up and removed from the channel.

Section 35
This is a downed tree and tangled debris. The woody material will be cut and removed from the active channel.

Sections 36-42
These sites are downed willow trees and branches. The downed material will be cut up and removed from the channel.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology EIR sections 5.1.2, 5.1.3</td>
<td>H-A</td>
<td>H-1</td>
</tr>
<tr>
<td>Water Quality EIR sections 5.2.2, 5.2.3</td>
<td>WQ-A, WQ-B</td>
<td>H-1, B-2, W-2, W-6, W-7, W-8, W-4</td>
</tr>
<tr>
<td>Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3</td>
<td>WRR-A</td>
<td>B-1, B-2, B-3</td>
</tr>
<tr>
<td>Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3</td>
<td>FAW-A, FAW-F, FAW-I, FAW-J</td>
<td>B-1, B-2, B-3, H-1, W-2, W-1, W-4</td>
</tr>
<tr>
<td>Public Health EIR section 5.10</td>
<td>PH-A</td>
<td>W-2</td>
</tr>
</tbody>
</table>

*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 12 days to complete.
Alamo Pintado - A

Legend

◆ Sites

- Lengths

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and omissions may occur. Sources used in creating the dataset may be referenced in the map. Santa Barbara County shall not be liable for any errors, omissions, or drawings the reader. The representations here presented are not intended to imply or indicate any assurance of accuracy, value, bearing or distances.

Department of Public Works
County of Santa Barbara

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared by:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.
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SECTION 15
SECTION 14
SECTION 16
SECTION 17
SECTION 18
SECTION 19
SECTION 20
SECTION 21
SECTION 22
SECTION 23
SECTION 24
SECTION 25
This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and site boundaries shown on this map are as of the date of publication and may not reflect changes since that time. The information and maps shown here are intended to indicate the location of sites; this map is not intended for detailed use. Boundaries shown on this map do not represent county lines, degrees, minutes, or seconds, bearings or distances.

Prepared by:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by: the Public Works Enterprise GIS
CEBADA CANYON CREEK ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins near the intersection of Purisima Road and State Highway 246 and terminates downstream approximately 500 feet.

Setting:
Inspected on March 29, 2018.

Cebada Canyon Creek originates in the Purisima Hills approximately 2 miles north of the end of Cebada Canyon Road northeast of Lompoc. The drainage is a natural creek until the last approximately 1.6 miles of the drainage where it turns into a concrete U-shaped channel and eventually drains into the Santa Ynez River near the south end of Rucker Road. The channel contains flows for a limited time after a rain event but usually quickly dries up and contains no persistent pools within the maintenance reach.

The creek was inspected by District staff March 31, 2016 to determine the necessity and extent of maintenance. The stretch of creek proposed for maintenance runs parallel to and immediately south of Purisima Road. Surrounding land use is open space and agriculture. Substrate in the creek invert is sand and gravel with evidence of sediment transport from the adjacent agricultural property. The creek banks are very well vegetated mainly with shrubby willows but also with coyote brush, elderberry, blackberries and poison oak, along with many non-native weedy species.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
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<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006/2007</td>
<td>0</td>
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<tr>
<td>2007/2008</td>
<td>4,800</td>
<td>4,800</td>
<td>0</td>
<td>-4,800</td>
</tr>
<tr>
<td>2009/2010</td>
<td>200</td>
<td>5,000</td>
<td>5,000</td>
<td>0</td>
</tr>
<tr>
<td>2010/2011</td>
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<td>0</td>
<td>0</td>
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<td>2014/2015</td>
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<td>0</td>
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<tr>
<td>2016/2017</td>
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<tr>
<td>2018/2019</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-200</td>
</tr>
</tbody>
</table>
**Engineering Analysis:**
The maintenance area of Cebada Canyon Channel drains culverts from La Purisma Road and a traffic roundabout on Highway 246. The Channel is low-gradient and tends to collect sediment and debris, which can plug these culverts. Low-hanging limbs and debris in the channel can further trap sediment and lead to debris plugs within the channel and downstream. Potential obstructions must be removed periodically or La Purisima Rd. and Hwy 246 will flood.

**Project Description:**

**Section 1:**
This reach of the creek collects drainage from Purisima Road and the traffic roundabout drainage culvert at Highway 246. The narrow riparian corridor features low, dropping willow limbs and fallen woody material in the center of the drainage trench. The District crew will limb low branches and remove fallen material from this reach to prevent obstructions.

The work area will be completely dry during operations. The work will not result in impacts to live native vegetation.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
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<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology</td>
<td>H-A, H-B</td>
<td>H-1, H-6</td>
</tr>
<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Quality</td>
<td>WQ-A, WQ-C</td>
<td>H-1, B-2, W-6, W-7, W-4</td>
</tr>
<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
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</tr>
<tr>
<td>Category</td>
<td>Code</td>
<td>Pages</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
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<td>-------</td>
</tr>
<tr>
<td>Wetlands, Riparian Habitat, and Rare Plants</td>
<td>WRR-A</td>
<td>B-1, B-2, B-3</td>
</tr>
<tr>
<td>Fish, Aquatic Species, and Wildlife</td>
<td>FAW-A, FAW-B, FAW-I</td>
<td>B-1, B-2, B-3, H-1, B-5, W-2, W-1</td>
</tr>
<tr>
<td>Air Quality</td>
<td>AQ-A</td>
<td>A-1</td>
</tr>
<tr>
<td>Noise</td>
<td>N-A</td>
<td>N-1</td>
</tr>
<tr>
<td>Visual</td>
<td>V-A</td>
<td>V-1</td>
</tr>
</tbody>
</table>

*Residual Impacts:*
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 2 days to complete.
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DAVIS CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project is located north of the City of Lompoc between the communities of Vandenberg Village and Mission Hills immediately north of Highway 1, approximately .8 miles from the intersection of Hwy 1 and La Purisma Rd.

Setting:
Inspected on March 29, 2018.

Davis Creek is a small drainage that flows through the Burton Mesa Ecological Reserve near Lompoc. The area is owned by the State Lands Commission. This drainage is a tributary to Santa Ynez River, however development and agriculture downstream of Hwy 1 has altered the drainage so it no longer flows all the way to the Santa Ynez River. The drainage is surrounded by the 5,367 acre Burton Mesa Ecological Reserve upstream of Hwy 1 and downstream of Hwy 1 the surrounding area is undeveloped private open space with some small areas of agriculture. Davis Creek contains some flow year-round.

The Vandenberg Village Community Services District (VVCSD), through perpetual easements, operates water wells, water storage tanks and a water treatment facility adjacent to Davis Creek. The portion of the channel receiving maintenance is bordered along the east by the VVCSD road that accesses the District’s facilities. Between the west side of the creek and Hwy 1, the corridor is surrounded by high quality mature willow woodland habitat. Species such as arroyo willow, stinging nettle, blackberry, cattail, and poison oak are found throughout the maintenance reach. The channel ranges from 4’ to 12’ wide through the maintenance reach. The VVCSD waterline is located within the bank between the creek and the access road.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts. It has been many years since Davis Creek has been maintained by the District, therefore this will be the first entry for tracking impacts and associated mitigation for this drainage. The proposed maintenance may result in up to 6,000 square feet of impacts to native vegetation. A restoration site will be identified either on the reserve property, nearby County-owned property, or the adjacent Allan Hancock Jr. College Campus property located downstream of Hwy 1 along Davis Creek.
### Davis Creek Annual Plan

<table>
<thead>
<tr>
<th>Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017/2018</td>
<td>4,800</td>
<td>6,000</td>
<td>16,300</td>
<td>11,500</td>
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<tr>
<td>2018/2019</td>
<td>600</td>
<td>0</td>
<td>0</td>
<td>10,900</td>
</tr>
</tbody>
</table>

**Wildlife Survey:**

As described in the project description, proposed maintenance will require the use of equipment working within the creek bed as well as from the top of the bank. This maintenance has the potential to impact wildlife. A biological assessment was completed in 2016, including protocol level surveys for Ca. red-legged frogs, by the consulting firm Althouse and Meade and no sensitive animal or plant species were found within the maintenance areas. Monitoring during maintenance will ensure that impacts will be less than significant with the incorporation of proposed mitigation measures.

**Engineering Analysis:**

As a public agency, the VVCSD provides approximately 2,000 acre-feet per year of potable water to approximately 7,000 residents of the Vandenberg Village community. Over many years, overhanging vegetation, downed and standing dead trees, and obstructive vegetation in the channel bottom has resulted in the accumulation of sediment through the maintenance reach to a point where creek capacity is greatly compromised in some areas. If water overtops the channel, the VVCSD facility and access road can flood and restrict access to the operations yard and wells that provide water to residents. If the drainage continues to become obstructed, it is likely that escaped water will flow down the access road and onto Hwy 1, presenting a safety concern for motorists.
**Project Description:**
Maintenance along Davis Creek will be implemented with BMPs to minimize impacts to riparian vegetation. Removal of live and dead obstructive vegetation, along with desilting portions of the corridor, is expected to provide enough blockage relief to allow the creek to flow more freely and flush some of the accumulated sediment out naturally.

**Section 1:**
This site was trimmed and excavated to remove an obstruction from the culvert under the VVCSD access road. The culvert has remained open and draining in 2018; however the area may tend to accumulate weedy growth, obstructive vegetation, and sediment if periodic maintenance tasks are not performed. To alleviate overgrowth in the drainage ditch, the District crew will spot-spray vegetation sprouts in the center of the channel only, the edges of the toe and the banks will be left undisturbed for wildlife habitat. Retreatment every 1-2 months may be performed during the summer and fall maintenance season. Periodic light spot-spray applications prevent the need for further aggressive weed treatment and excavation. The site has been previously maintained and tabulated for mitigation.

**Section 2:**
Section 2 involves 400 linear feet of the channel upstream from the Highway 1 culvert. This area has a braided, poorly defined drainage channel with accumulated sediment, debris, and thickets of vegetation. The lack of a defined main-channel limits drainage alongside the access road to the VVCSD facility.

Using a small mini-excavator, the District crew will cut a small trench through the center of the drainage channel. Residual root masses, accumulated plant litter, and sediment will be excavated within a trench approximately 3ft wide and 1-2 ft deep (a total of 66 cubic yards of material may be excavated). The trench will continue downstream and taper into the existing grade near the Highway 1 culvert. Re-establishing a slight gradient through this reach will allow floodwaters to reach the culvert. Excavated material will be sidecast within bare patches of the existing site, which allows the work to proceed without additional disturbance for haul trucks. An existing access window will be used for the small excavator to enter the work site.

District Environmental Staff will inspect the site prior to work and will monitor for any RLF or other sensitive species that may be present.

This work takes place within part of the same work area that was brushed last year, these impacts have already been tabulated for mitigation. The 2018 project may involve an additional 600 square feet of temporal disturbance to native vegetation.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydrology</strong></td>
<td>H-A, H-D, H-E</td>
<td>H-1, H-2, H-3, H-4</td>
</tr>
<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water Quality</strong></td>
<td>WQ-A, WQ-C, WQ-D</td>
<td></td>
</tr>
<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
<td></td>
<td>B-1, B-2, W-1, W-3, W-4,</td>
</tr>
<tr>
<td><strong>Wetlands, Riparian Habitat, and Rare Plants</strong></td>
<td>WRR-A, WRR-C, WRR-D,</td>
<td>B-1, B-2, B-3, B-4</td>
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<tr>
<td>EIR sections 5.3.2, 5.3.3</td>
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<td></td>
</tr>
<tr>
<td><strong>Fish, Aquatic Species, and Wildlife</strong></td>
<td>FAW-A, FAW-B, FAW-I</td>
<td>B-1, B-2, B-3, B-5, B-6,</td>
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<td>EIR sections 5.4.2, 5.4.3</td>
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<td>H-1, W-1</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td>AQ-A</td>
<td>A-1</td>
</tr>
<tr>
<td>EIR sections 5.5.2, 5.5.3</td>
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<td></td>
</tr>
</tbody>
</table>

*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 5 days to complete.
Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District

Compiled by the Public Works Enterprise GIS.

Coordinate System: State Plane California Zone V NAD 1983

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Department of Public Works
County of Santa Barbara

Legend

Lengths

Lompoc-casalita Rd

SECTION 1

SECTION 2

Davis Creek
GREEN CANYON DRAINAGES ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
Routine maintenance of the Green Canyon drainages begins south of the town of
Guadalupe and terminates approximately 2 miles east of the confluence with
Orcutt/Solomon Creek. The Green Canyon system is divided into 3 channels: North,
Middle, and South. South Green Canyon flows into Orcutt/Solomon Creek in agricultural
fields near Highway 1. North Green Canyon flows into Middle Green Canyon, which
meets Orcutt/Solomon Creek near the Santa Maria River.

Setting:
Inspected on March 26, 2018.

Middle Green Canyon Channel begins approximately 1,500 feet upstream of Highway 1
and flows to the confluence with Orcutt/Solomon Creek just upstream of West Main
Street, a distance of approximately 4 miles. This is a highly degraded agriculture
tailwater channel. This earthen trapezoidal channel carries highly turbid agricultural
tailwater through row crops along most of its length. The lower 2,000 feet of the
drainage flows through a cattle pasture to the confluence with Orcutt/Solomon Creek.
Dirt access roads run parallel to both sides of the drainage at the top of the bank. The
banks are vegetated with weedy species such as wild radish, black mustard,
cheeseweed and annual grasses. Vegetation within the invert is mainly watercress with
an occasional clump of bulrush. No native trees grow along the banks where
maintenance is scheduled, although there are patches of willows along portion of this
drainage.

North Green Canyon Channel begins approximately 1,200 feet south of the intersection
of Sal Dunes Way and West Main Street near the town of Guadalupe and flows to the
southwest for a distance of approximately 1 mile to its confluence with Middle Green
Canyon Channel. This agricultural drainage ditch carries highly turbid tailwater and
varies from 2 feet deep at the upstream end to almost 10 feet deep near its confluence
with Middle Green Canyon Channel. Vegetation on the banks is wild radish, black
mustard, cheeseweed and annual grasses. Invert vegetation is intermittent and patches
of watercress and bulrush can develop. One patch of willows, approximately ¼ acres in
size, is growing along the banks halfway down the drainage. Dirt access roads run
parallel to both sides of the ditch. Row crops grow beyond the access roads. Sediment
input into this channel is high due to agricultural runoff and limited or absent bank
vegetation.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001
EIR for the Updated Routine Maintenance Program, the District has been tracking and
reporting the impacts and associated restoration on creeks included in each Annual
Routine Maintenance Plan. The following table is being included in the Annual Routine
Maintenance Plan addenda to more easily display and track the District’s restoration
efforts.
<table>
<thead>
<tr>
<th>Middle Green Canyon</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
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<th>New Temporal Impacts to Native Vegetation (square feet)</th>
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**Wildlife Survey:**
As described in the project description, maintenance will involve using equipment to desilt, mow, and remove obstructive vegetation to restore flow capacity. This type of maintenance has the potential to impact wildlife, particularly the California red legged frog.

The California red legged frog has been consistently detected in the Green Canyon drainages since 2004. The District assumes that red legged frogs may be present in any part of the Green Canyon drainages and implements mitigation measures and best management practices to protect the species. The District has developed a management strategy and special conditions through a Biological Opinion issued by the US Fish and Wildlife Service.
No other sensitive species have been observed within this drainage. Impacts to red legged frogs and other species address in the Program EIR are expected to be less than significant with the incorporation of the proposed mitigation measures and monitoring conditions specified in the Biological Opinion.

**Engineering Analysis:**
The Western Santa Maria Valley is an old floodplain formed by historic flows of the Santa Maria River. As agricultural activity intensified in the Valley, a network of channels/ditches evolved. One of the most prominent drainage features is the Green Canyon system of channels. The valley floor is very flat and there is insufficient energy to convey the sediments to the river. Year round sediment laden flows from agriculture operations results in excessive sedimentation, bulrush growth, and reduced capacity along this drainage course. Removal of the recently deposited sediment will restore channel capacity and reduce the risk of flooding to west Main Street, Highway 1 and surrounding properties. In addition, it is necessary to control vegetation to maintain higher velocities that will transport sediment more efficiently.

**Project Description:**

**Middle Green Canyon Channel**

**Section 1:**
The ditch at Section 1 has obstructive vegetation (bulrush and cattail) and accumulated sediment. The ditch is losing depth and capacity as a result. Using a Gradall stationed at the adjacent road, the crew will scoop the sediment from the channel and place the material onto the adjacent farm field, to be dewatered and then graded backed over the field. The work area is approximately 50 linear feet, 4 feet wide, and 2 feet deep. Approximately 15 cubic yards will be desilted. Part of this area has been maintained previously and the impacts have been tabulated for mitigation.

**Section 2:**
This site has bulrush colonizing the floor of the drainage ditch. A strip of vegetation will be brushed and spot-sprayed to alleviate the obstruction. Vegetation will be left behind at the edges of the bank for wildlife habitat. The work will result in 10 square feet of impact to native vegetation.

**Section 3:**
This reach is losing depth and capacity due to accumulated sediment and vegetation. Using a Gradall stationed at the adjacent road, the crew will scoop the sediment from the channel and place the material onto the adjacent farm field, to be dewatered and then graded backed over the field. The work area is approximately 100 linear feet, 4 feet wide, and 2 feet deep, which is sporadically vegetated. Approximately 30 cubic yards will be desilted. This work area has been maintained previously and the impacts have been tabulated for mitigation.

**Section 4:**
This reach is losing depth and capacity due to accumulated sediment and vegetation. Using a Gradall stationed at the adjacent road, the crew will scoop the sediment from the channel and place the material onto the adjacent farm field, to be dewatered and then graded backed over the field. The work area is approximately 100 linear feet, 4 feet wide, and 2 feet deep, which is sporadically vegetated. Approximately 30 cubic yards will
be desilted. This area has been maintained previously and the impacts have been tabulated for mitigation.

**Section 5:**
This reach has bulrush colonizing the floor of the drainage ditch. This reach is too narrow and confined to allow effective excavation. A strip of vegetation will be brushed and spot-sprayed to alleviate the obstruction. Vegetation will be left behind at the edges of the bank for wildlife habitat. The work area is 1300 linear ft and includes the confluence of North and Middle Green Canyon ditches. This area has been maintained previously and the impacts have been tabulated for mitigation.

**Section 6:**
This reach is losing depth and capacity due to accumulated sediment and vegetation. Using a Gradall stationed at the adjacent road, the crew will scoop the sediment from the channel and place the material onto the adjacent farm field, to be dewatered and then graded backed over the field. The work area is approximately 100 linear feet, 5 feet wide, and 2 feet deep, which is sporadically vegetated. Approximately 35 cubic yards will be desilted. Part of this area has been maintained previously; the additional work will result in 200 square feet of temporal impacts to native vegetation.

**Section 7:**
This reach is losing depth and capacity due to accumulated sediment and vegetation. Using a Gradall stationed at the adjacent road, the crew will scoop the sediment from the channel and place the material onto the adjacent farm field, to be dewatered and then graded backed over the field. The work area is approximately 1400 linear feet, 4 feet wide, and 2 feet deep, which is sporadically vegetated and choked with sediment. The District will determine in the field which areas within the reach require desilting, based on field conditions in fall 2018.

Approximately 80 cubic yards will be desilted. Part of this area has been maintained previously; the additional area of impact to native vegetation will be determined in the field, based on the final configuration of the work.

**North Green Canyon Channel**

**Section 1:**
This area of the ditch alongside ag fields. The ditch has become colonized by cattail and bulrush and choked with sediment. The vegetation and sediment restrict flow and further impede drainage.

The District will excavate the floor of the ditch to reclaim a trench 4 ft wide and 2 feet deep for a distance of 400 feet. Approximately 300 cubic yards of material will be desilted. The project will result in 400 square feet of temporal impacts to native vegetation. The material will be placed on the adjacent farm field and graded back into the existing field after has dewatered.

**Section 2:**
This section is frequently inundated and colonized by dense cattail and bulrush. The District previously attempted an alternative maintenance strategy by only mowing the vegetation and alternating years of desilting. This year, thicket has become too dense to mow effectively; the District will spot-spray a central channel through the reach as needed to maintain a connected drainage pathway. Vegetation will be left in a strip at
the edge of the banks for wildlife habitat. This area has been maintained in previous years by desilting and mowing, and the impacts have already been tabulated for mitigation.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydrology</strong></td>
<td>H-A, H-D, H-E</td>
<td>H-1</td>
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<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water Quality</strong></td>
<td>WQ-A, WQ-B, WQ-C, WQ-D</td>
<td>H-1, B-2, W-1, W-2, W-4, W-5, W-6, W-7, W-8,</td>
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<td><strong>Wetlands, Riparian Habitat, and Rare Plants</strong></td>
<td>WRR-A, WRR-D</td>
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<tr>
<td><strong>Fish, Aquatic Species, and Wildlife</strong></td>
<td>FAW-A, FAW-B, FAW-E, FAW-F, FAW-I</td>
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<td>EIR sections 5.6.2, 5.6.3</td>
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</table>
*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

Project Specifics:
The Green Canyon Drainage projects will take 14 days to complete.
GREEN CANYON DRAINAGES

This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and other sources used in creating the database may be affected by errors, omissions, or other causes. In no event shall the County be liable for any errors, omissions, or other causes. This map is to be used as an illustration of Green Canyon Drainages only and should not be used for engineering, legal, or other purposes. The level of accuracy is claimed for the boundaries and is subject to change without notice, hearings, or directives.

Legend
-Sites
-Lengths

Department of Public Works
County of Santa Barbara

Fiscal Year 2018-2019

Prepared by:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.
MISSION HILLS CHANNEL ROUTINE MAINTENANCE
ADDITION TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins near the intersection of Purisima Road and State Highway 246 and terminates downstream approximately 500 feet.

Setting:
Inspected on March 29, 2018.

The Mission Hills Channel runs along the northeast area of Lompoc, along the east side of the Mission Hills subdivision. The channel drains south toward Cebada Canyon and eventually to the Santa Ynez River. The channel is generally dry and only conveys water during rain events. The area is typically maintained as an exempt facility via periodic mowing of the access road and spot-spraying weeds.

Surrounding land use is suburban housing, open space and agriculture. The Mission Hills Community Services District operates a water treatment facility immediately adjacent to the Channel.

In 2018, the area immediately downstream of the basin off of Burton Mesa Blvd was inspected and revealed that the drainage culverts are plugged with sandy sediment, and the downstream channel has silted-in. Only a narrow residual trench persists to carry floodwaters. These conditions present a flood hazard adjacent to the Mission Hills Community Services District treatment facility and the upstream neighborhoods adjacent to the basin.

Revegetation:

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
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Engineering Analysis:
Accumulated sediment is severely blocking the culverts through the basin and not allowing the flows in Mission Hills Channel to pass downstream. The basin must drain properly to protect homes and properties in the Mission Hills Subdivision. The downstream properties, including the water treatment plant, would be subject to overtopping flows or flows breaking out of the channel if the current over-filled channel is not excavated.

Project Description:
Section 1:
In 2018, the area immediately downstream of the basin off of Burton Mesa Blvd was inspected and revealed that the drainage culverts are plugged with sandy sediment, and the downstream channel has silted-in. Downstream of the basin, the riparian corridor has filled with sediment. Only a narrow residual trench persists to carry floodwaters. These conditions present a flood hazard adjacent to the Mission Hills Community Services District treatment facility and the upstream neighborhoods adjacent to the basin.

To alleviate the flood hazard, the District will use a small mini-excavator and/or bobcat to dig and expose the culvert openings through the basin. Material will be sidecast and transported offsite and/or reused to compact over the existing access roads.

Starting at the basin culvert, the work area will be 30ft wide and tapering to 6ft wide where the willow canopy begins. The trench will continue at 6ft wide and 2 ft deep for a total length of 300 ft. The material will be sidecast and dispersed to avoid creating windrows. Excess material may be pushed upstream to be loaded and hauled away for upland disposal. The trench will taped back to the existing grade at the downstream end of the project area.

Most of the work area is bare exposed sand and will be completely dry during operations. Some of the edges of the willow canopy may be disturbed and/or damaged during the excavation of the trench to allow access. Impacts will be minor and temporary. The District Biologist will monitor the work and direct the operations to proceed minimal disturbance to habitat. Square footage of impacts will be tabulated onsite during operations, and mitigation requirements will be determined.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.
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<td><strong>Fish, Aquatic Species, and Wildlife</strong></td>
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*Residual Impacts:*
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 2 days to complete.
Mission Hills Channel

Legend

- Sites
- Lengths

This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and other data sources used in creating the database may be affected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages resulting from the use of this document. No level of accuracy is claimed for the hand-drawn lines shown herein and these lines should not be used for value, bearing or distance.

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise CIB.
Location: The project begins 2000 feet downstream of Stillwell Road and ends 1200 feet upstream of Solomon Rd. in Orcutt.

Setting: Inspected on March 26 and April 5, 2018.

Orcutt/Solomon Creek originates in the Solomon Hills southeast of Santa Maria and drains a 27,357 acre watershed. The District’s management area includes the semi-urban reach of the watershed running through the community Orcutt, as well as portions of the creek running near the Laguna Sanitation Water Treatment Plant and the downstream confluence of Orcutt Creek and the Santa Maria River.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

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**Wildlife Survey:**
Red-legged frogs are known to inhabit the lower reaches of Orcutt/Soloman Creek near West Trails and the Laguna Sanitation facility. Maintenance work upstream of Laguna Sanitation Facility involves only vegetation trimming/maintenance and the channel will be dry during the summer months. No RLF would be present or disturbed in these areas.

The proposed projects near Laguna Sanitation facility involve tree-trimming and sediment shaping with heavy equipment. The District assumes that RLF may be present in these areas whenever standing water is present. The District Biologist will monitor and inspect the project areas prior to commencement. Any RLF or other aquatic animals detected during the monitoring inspection will be flushed and/or temporarily relocated to the adjacent pools during operations. The District’s existing Biological Opinion addresses these projects in this area. Any disturbance would be minor and temporary and would follow the requirements of the Biological Opinion. It is most likely that the work areas will be dry during the maintenance season and no disturbance to aquatic organisms would occur.

**Engineering Analysis:**
Maintenance of Orcutt/Solomon Creek requires vegetation and silt removal to preserve flood flow conveyance and to protect adjacent properties. Obstructive vegetation consisting primarily of downed limbs and trees, limbs projecting into the active channel, and several trees growing in the active channel, will be removed from the main channel at various locations to provide conveyance of flood waters as well as reduce the debris load which can cause debris plugs that divert flows towards banks causing erosion or raise water surface levels, and aggravate bridge and culvert plugging. The bankfull discharge width for Orcutt/Solomon Creek, based on field indicators is approximately 10’-12’ wide.

The gradient through Orcutt is relatively low, combined with sandy soils, culverts in this region are easily plugged by sediment. For the past 4-5 years, the creek has not had substantial flow to clear culverts or actively scour sediment and vegetation sprouts. As a result, sediment bars have been colonized by vegetation and root material. This material must be removed and/or loosened and vegetation removed to maintain flow capacity under highways and bridges.

**Project Description:**

Section 1:
This site has low, dangling willow limbs and mulefat projecting into the active channel. The crew will limb and remove the projecting branches to a height of 6 ft. Maintenance in this section will not result in impacts to native vegetation.

Sections 2-3:
These sites are fallen willow trees and branches. The crew will cut apart the fallen material. The cut material will be chipped and dispersed along the banks and adjacent riparian area, or hauled out, depending on access. Maintenance in these sections will not result in impacts to native vegetation.
Section 4:
This site has a tangled thicket of debris and woody material in the creek channel. The debris plug will be cut and broken apart to remove the obstruction. Maintenance in these sections will not result in impacts to native vegetation.

Sections 5-6
These sections are fallen willow trees and branches. The crew will cut apart the fallen material. The cut material will be chipped and dispersed along the banks and adjacent riparian area, or hauled out, depending on access. Maintenance in these sections will not result in impacts to native vegetation.

Sections 8-9
Old, dying pine trees have fallen into the channel. The crew will cut the trees into smaller pieces and remove the debris from the creek channel. The cut material will be dispersed along the banks and adjacent riparian area, or hauled out, depending on access. Maintenance in this section will not result in impacts to native vegetation.

Section 10
This section runs from the Highway 135 culvert downstream to a retention basin. The narrow riparian corridor has several fallen willow trees and limbs and low dangling branches. The crew will limb and remove the projecting branches to a height of 6 ft and cut up fallen woody material. Maintenance in this section will not result in impacts to native vegetation.

Section 11
Fallen willow branches will be cut apart and dispersed along the banks, or hauled out, depending on access. Maintenance in these sections will not result in impacts to native vegetation.

Section 12
This section of the creek is immediately downstream of the West Trails housing development and continues downstream several hundred feet toward the northwest. The channel has a willow riparian corridor along both banks and within the channel. The central channel has become populated with willow thickets, which have collected debris plugs. The area was brushed last year to create a connected channel through the thickets. Sprouts have emerged and debris jams from winter rains have formed within the channel.

To alleviate this issue, the District will selectively brush willow sprouts within the centerline of the creek to re-connect the existing open channel and form a continuous flow corridor through the section. Debris plugs within the channel will be broken apart and cut with tools.

The crew will maximize existing open areas and only cut vegetation where necessary to re-connect open areas to keep the flow corridor within the central channel. Vegetation along the toes and banks will not be removed, to assist in stabilizing the new corridor. Some leaning and projecting branches may be limbed to facilitate the new corridor.

This area was previously maintained and incidental impacts have already been tabulated for mitigation.

Laguna Sanitation Facility
Section 13-14:
The property at Laguna Sanitation has several fallen willow trees within the creek corridor. The crew has identified 3 sites along the main creek and 3 sites in the tributary creek with excess debris and fallen trees. Dead fallen trees will be cut into smaller pieces. The cut woody material will be cut into manageable lengths and stashed in the adjacent riparian trees or hauled out and chipped, depending on access. Live trees and whole willow trunks will not be cut. The project will not result in impacts to native vegetation.

Section 15:
This reach has 4 downed trees and a tangled lump of fallen limbs and debris. The debris and fallen material will be cut into smaller pieces. The cut woody material will be cut into manageable lengths and stashed in the adjacent riparian trees or hauled out and chipped, depending on access. Live trees and whole willow trunks will not be cut. The project will not result in impacts to native vegetation.

Section 16:
This site is the confluence of Orcutt-Soloman Creek and series of wetland ponds to the south of the main creek channel. Sediment and debris routinely collect here and threaten to block the pond outlet pipe. The crew will use an excavator stationed on the adjacent access ramp to remove sediment from the culvert opening.

Excavated material will be placed on the existing dirt road, outside of the creek channel, and graded back over the road shoulder to fill existing erosion holes. The willow canopy along the side of the drainage is narrow, but dense and mature. The crew may need to limb some branches from a few trees to create a “window” for the excavator arm. Entire tree trunks will not be cut, only light limbing would be performed.

This work area has been maintained previously and the impacts have already been tabulated for mitigation in 2015/16. The District Biologist will monitor the work onsite to minimize impacts to vegetation and relocate any RLF that may be present onsite.

Section 17:
**Extreme caution will be used to avoid the overhead powerlines at this location**

Orcutt-Soloman Creek joins with the Green Canyon ditches just upstream of West Main Street, near the road crossing for Guadalupe Dunes. The culvert at this location has accumulated silt and sediment. A triangular sediment bar has formed downstream of the culvert, choking the culvert and slowing the rate of water flow, which causes additional sediment and debris to settle in the channel. To alleviate this problem, the District crew will use a Gradall to remove sediment. The desilting area is approximately 100 by 6 by 2 feet deep at the downstream opening.

Approximately 45 cubic yards of material will be removed. The sediment will be placed over the adjacent dirt access road and allowed to dry for several days, and then graded and compacted back over the dirt road.
As the material is scooped out of the culvert, the operator will allow water to drain out of the bucket for several seconds before releasing the material over the road bed. The District Biologist will monitor the work for RLF. The existing water quality at this location is extremely turbid from ag runoff, unstable soil, and cattle in the adjacent fields and in the creek itself. The area is bare soil, muddy water, and clumps of non-native watercress. The work will not result in impacts to native vegetation.

Section 18: There are two downed willow trees at this location. The fallen material will be cut apart and removed from the channel. Maintenance in these sections will not result in impacts to native vegetation.

Impact Analysis and Mitigation Measures: Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts: Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures: Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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<tr>
<th>Resource</th>
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<th>Mitigation Measures*</th>
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**Residual Impacts:**
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 15 days to complete.
This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and
site locations shown may not be accurate. The County of Santa Barbara, Department of Public Works, shall not be liable for any error,
omission or damage that results from any unauthorized use of this map. The map is not intended to reflect the exact coordinates, or
bearings or distances.
This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and road names, and coordinates used in creating the database may be reflected on this map. Santa Barbara County shall not be liable for errors or omissions in these data. Consequently, use of this document at one’s own risk. This map is not surveyed to any specific level of accuracy and is intended for the general public’s use. All data are subject to errors, omissions, or changes.
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RODEO-SAN PASCUAL DRAINAGES MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR
SANTA FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project is located at Rodeo-San Pascual Basin and the northern end of the associated concrete channel near the Santa Ynez River, approximately two miles west of the City of Lompoc.

Setting:
Inspected on March 29, 2018.

The Rodeo-San Pascual Basin is formed at the confluence of Rodeo Channel (also called La Salle Canyon) coming from the west and San Pascual Channel (also called Sloan Canyon) from the east. These two canyons run through the Lompoc Foothills into concrete lined channels, meeting south of Ocean Avenue, where each tributary flows through a concrete culvert under agricultural access roads. Rodeo Channel is concrete lined from approximately 2000' upstream of the basin and San Pasqual Channel is concrete lined from approximately 4600 feet above the basin. At the point of confluence, the drainages expand into a settling basin, approximately 1 acre in surface area. Flows into Rodeo-San Pascual Basin are mostly agricultural tailwater during summer months. The basin remains wetted year round due to natural seepage and irrigation in the watersheds.

Rodeo-San Pascual Basin has an earthen floor and sides. The banks are populated with weedy species 4 to 6 feet tall, including poison hemlock, black mustard, wild radish, fennel, and Italian thistle. A few native species such as willow sprouts, equisetum, and vervain are present mixed with the weedy species.

The basin has accumulated excessive sediment, nearing capacity and threatening to fill and flood adjacent properties and roadways.

Ponded water exits the basin to the north through a concrete lined channel, eventually meeting the Santa Ynez River. The concrete lined channel is maintained free of weeds and sediment. Cliff swallows utilize the water and small amounts of mud for building nests on nearby bridges and culverts. The last several hundred feet of the channel, before it discharges into the Santa Ynez River (River), is earthen and contains mostly weedy vegetation on the upper banks along the first hundred feet of the earthen channel. After the first hundred feet beyond the concrete channel, the earthen channel is runs through a riparian corridor that blends into the Santa Ynez River banks. The area is well vegetated with species such as willows, blackberry, stinging nettle, cottonwood and poison oak. The tree canopy over the channel is very well developed and the channel bottom is usually clear of obstructive vegetation.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual
Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
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**Engineering Analysis:**
Rodeo/San Pasqual Channel and basin were built by the Soil Conservation Service to manage flows and sediment across the lower Lompoc Valley and maintenance of this facility is essential in providing flood protection to thousands of acres of agriculture. This basin periodically fills with sediment and must be desilted prior to the next rainy season. Removing the accumulated sediment in a staged approach will allow the majority of the basin to remain outside of the impact area and will also allow the retention of ponded water (red-legged frog habitat) within the basin during the project.

Sediment has accumulated within the natural bottom portion of Rodeo-San Pasqual Channel between the concrete-lined channel and the confluence with the Santa Ynez River. The build-up of sediment impedes flows from the Rodeo-San Pasqual Channel as they enter the river. This condition interrupts the sediment transport function of the channel and the river, slows flows down which raises water surface elevations, and reduces conveyance capacity within the Rodeo-San Pasqual Channel, all of which exacerbates sediment accumulation within this channel. Additionally, downed vegetation is also obstructing flows through this facility. Maintaining an obstruction free channel at the outlet of the Rodeo-San Pasqual Channel is also a required element of the maintenance of this federally funded project.

**Project Description:**

Section 1:
Desilting Rodeo-San Pascual Basin: The first step of the project will be to reduce the amount of water in the basin and allow the sediment to dry out. Water will be diverted from each incoming channel via a temporary sandbag or soil dam. A flexible pipe will capture water from the dam and lead around the basin to the outlet channel. After the diversions are in place, water will flow around the basin and the sediments will start to dry. Water diversion will continue in this manner for 7 to 21 days, allowing water to percolate out of the sediment and maintaining habitat for aquatic organisms.
As was successfully performed in 2010, at one corner of the basin a temporary settling pit will be excavated first. This pit will allow standing water to drain into one smaller location, providing refuge for aquatic organisms and further allowing sediments to dry out. After the sediment has dried for several days, the settling pit will be excavated further, then the basin will be allowed to dry further for 1-2 additional weeks. This will encourage any remaining wildlife to move upstream, downstream, or into the settling basin where the District Biologist will perform capture and relocation. When sediments are dry enough, excavation will begin.

An excavator or gradall with bucket extension will scoop out accumulated sediment and stockpile on the adjacent dirt road. A second excavator may work at the same time to speed up the desilting process. The District Biologist will monitor excavation and will capture and relocate any RLF as necessary. RLF will be relocated upstream to suitable wetted habitat or downstream of the San Pascual Channel near the confluence with the Santa Ynez River where water is present year-round. This method of desilting with onsite monitoring has been implemented successfully for several years in the District’s maintained drainages with RLF.

The estimated quantity of sediment to be removed is 3,000 cubic yards. Dewatering would occur in August or later, depending on the presence and density of RLF tadpoles and metamorphs. Excavated sediment will be trucked to nearby farm fields along Ocean Road in the Lompoc valley.

The area is bare, exposed sediment and gravel with a strip of weedy vegetation along the edges. The project will not result in impacts to native vegetation.

Section 2
Channel Outlet: This section addresses the gap between the concrete lined section and the willow canopy further north downstream. This reach is approximately 200 feet long. The concrete liner ends and sediment laden water spreads over the floor of the earthen channel. This site frequently collects excess fine sediment.

The District will use an excavator or Gradall to remove the wedge of sediment, approximately 12 ft wide, 200 ft long, and 1-2 ft deep. The site is bare exposed sediment. The District Biologist will monitor the work and relocate any RLF or other wildlife that may be present onsite. The project will not result in impacts to native vegetation.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are
included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 3 weeks to complete.
Location:
The Airport/Abex channels are located along the northeast side of the Santa Maria Municipal Airport. See attached map for specific locations.

Setting:
Inspected on April 5, 2018.

Airport Channel begins a short distance to the west of the intersection of Skyway Drive and Lakeview Road northeast of the Santa Maria Airport. The Airport Ditch is a trapezoidal channel that has been reinforced with hard bank structures (i.e., concrete rip-rap) in some locations. The ditch trends northwest along Skyway Drive for approximately 1 mile. After passing beneath Skyway Drive, the ditch runs generally westward along the south side of Sunset Ridge Golf Course. Runoff is directed from north and west of the golf course to a weir structure in corner of the channel adjacent to the golf course. The weir enables water to be diverted into a natural, westward-trending channel that leads to Betteravia Lakes. A three-quarter mile segment of the Airport Ditch between Air Park Lane and the point where Skyway Drive turns north is concrete lined.

Vegetation along portions of the ditch varies in composition. Emergent aquatic species such as cattail, bulrush and sedges occur in the streambed along with bare sand and gravel. The banks of the channel are sparsely vegetated with predominantly non-native, ruderal species, including patches of exotic pampas grass. The District is working on removing exotic vegetation and replacing native willows and riparian trees. The restoration areas have created a willow canopy that helps minimize dense obstructive vegetation in the channel. The District continues to replant species in the restoration areas and remove pampas grass. Both native and non-native trees are present along some segments. Arroyo willow is the most common native tree species.

Abex Channel is a combination of concrete-lined and earthen ditch that is located adjacent to the Santa Maria Airport and is a tributary to Airport Ditch. The Santa Maria Airport property is located to the south and west, industrial buildings and a large paved lot are located to the north. The earthen portion of this channel is located at the confluence with Airport Ditch and is approximately 500 feet long. The remaining length of Abex Ditch (upstream of the earthen portion) is concrete lined, travels amongst industrial and office buildings located northeast of the airport, and contains poor habitat for any native plants or animals. Portions of the concrete-lined channel are underground within culverts. The District typically performs maintenance tasks only in the earthen segment of Abex Channel. This reach often becomes colonized with patches of cattail and bulrush which constrict the flow capacity of the drainage. Adjacent vegetation is mostly weedy species such as wild radish, black mustard and telegraph weed along the banks. The District installed approximately 4,000 square feet of native riparian vegetation along 300 linear feet of the south bank in 2005.
Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

### Santa Maria Airport Channel

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<thead>
<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
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### Abex Channel

<table>
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<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
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<td>2018/2019</td>
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<td>0</td>
<td>0*</td>
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</table>
*Restoration on Airport Channel and Abex Channel is applied for mitigation along both locations.

**Wildlife Survey:**
The California red legged frog (RLF) has been detected in the Airport Channel and Abex Channel. Red legged frogs were observed in the wetted portions during surveys in 2003 and maintenance monitoring in 2005. In dryer years, RLF are generally not detected in the channel.

Similarly, RLF were observed in the Abex Channel sporadically since 2003. It is expected that frogs are likely to be present in the drainage when standing water is present, therefore work in the channel is postponed until the dry season.

The District presumes that red legged frogs may still be present in the channels and implements protective measures and monitoring as required. The District has developed a management strategy and special conditions for red legged frog through a Biological Opinion issued by the US Fish and Wildlife Service.

Proposed maintenance in Airport and Abex Channels uses a Gradall with a mower attachment to mow non-native vegetation, leaving enough residue to serve as wildlife cover. The District Biologist monitors equipment work and captures/relocates any RLF that are flushed from vegetation during the work. This strategy has been successfully deployed for several years in RLF habitat.

This year’s maintenance includes equipment work at Airport Ditch. Depending on weather in summer 2017, the entire work area may be completely dry during maintenance. If standing water is present, the District Biologist will monitor sediment-moving operations. RLF will be flushed from the work site and relocated out of the work area into adjacent habitat downstream of the weir. Impacts to the red legged frog and other species discussed in the Program EIR are expected to be less than significant with the incorporation of proposed mitigation measures, monitoring, and special conditions in the Biological Opinion.

**Engineering Analysis:**
The Airport/Abex channels are engineered drainages designed to convey storm flows from portions of Orcutt and the City of Santa Maria through the industrial areas of the Airport area. Reduction in capacity, as a result of excessive vegetation and/or sedimentation, subjects the surrounding areas to frequent flooding. The Santa Maria River valley is very flat and all of the drainage courses are prone to sedimentation. Vegetation in the channel bed aggravates this situation. Obstructive vegetation in these drainages can severely restrict channel capacity resulting in flooding of roads, commercial/industrial properties as well as the airport. Vegetation lowers velocities and increases the potential for sedimentation and the attendant reduction in channel capacity. Therefore, controlling vegetation to minimize the potential for sedimentation will maintain the design capacity of the channels.
Project Description:

Airport Channel

Section 1:
This reach along the ditch has a narrow band of cattails along the north edge of the channel, while the south edge of the channel is bare, eroding sediment. The south edge has continued to erode for several years, threatening the access road and allowing the ditch to “drift” away from the culverts associated with the airport infrastructure.

To remedy this problem while maintaining native vegetation, the District will use a Gradall with a mower attachment to mow the existing cattails along the bank and south edge of the channel. The mower will leave 6-12” of vegetation stubble as wildlife cover. The strip of vegetation approximately 5’ wide along the north edge of the channel will not be mowed, but will be left behind as wildlife cover.

A follow-up application of herbicide may be done in the spring/summer (only on the floor of the channel and avoiding the buffer strip on the north edge of the channel) if vegetation begins to resprout in the floor of the channel. Spot-spray will be suspended during February/March/April for the RLF breeding season. This area has been maintained previously and the square footage of impacts have already been tabulated for mitigation.

Section 2:
The culvert under the access road typically accumulates sediment again from the urban runoff in the associated ditches. Using a drag-sled attached to a small tractor, the District will pull sediment through the culvert into a pile. From there, a Gradall stationed on the existing access road will scoop and remove sediment from the concrete apron. The material will be placed behind the machinery on the access road to dry, and then graded back into the roadbed. The material will be dry during maintenance. Approximately 4 cubic yards of material will be removed. The work area is bare sandy sediment. The project will not result in impacts to native vegetation.

Section 3:
This site is a small setting basin west of the weir spillway. This area captures sandy sediment from Airport Ditch and frequently becomes filled with sediment. The standing water used by RLF and other wildlife is eliminated when the basin fills with sand. To reclaim capacity and restore standing-water habitat, the District will use a Gradall stationed on the access road to excavate the basin to approximately 4 ft deep. Approximately 35 cubic yards of sandy sediment will be removed and placed directly into dump trucks. The material will be hauled south to the stockpile area no airport property for disposal.

The work area is mostly bare sand and sporadic weeds. A fringe of cattails will be left along the edge of the banks for wildlife habitat. The work will not result in impacts to native vegetation. The District Biologist will monitor the work for RLF.

Section 4:
At Section 4, water runs through a willow riparian corridor. The reach has several low hanging limbs and fallen limbs. The District crew will trim back dangling limbs and remove downed vegetation from the corridor.
Abex Channel

Section 1:
This section of the ditch had a narrow but well-established willow corridor along the south bank. At some point in 2016, the willows and shrubby vegetation were damaged, exposing the ditch to sunlight and potential erosion. The ditch is therefore subject to obstructive weedy growth and bank failure.

In this length (approximately 4’X450’), the weedy upper slope of Abex ditch will be mowed for the entire length. A Gradall using a mower attachment will also drive along the adjacent access road and reach into the ditch to mow the weedy vegetation and grasses on the floor of the channel and the north bank. The mower will leave 6-12” of vegetation stubble as wildlife cover.

The strip of bulrush along the south toe will not be mowed, but will be left behind as wildlife cover. A follow-up application of herbicide may be done in the spring/summer (only on the floor of the channel) if vegetation begins to resprout in the floor of the channel. Spot-spray will be suspended during February/March/April for the RLF breeding season. This area has been maintained previously and the square footage of impacts have already been tabulated for mitigation.

The south bank, where the vegetation was damaged, will not be mowed or trimmed, to allow the willows and shrubs to regrow.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.
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<thead>
<tr>
<th>Resource</th>
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*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
This project will take approximately 8 days to complete.
SECTION 1

SECTION 2

SECTION 3

SECTION 4

Santa Maria Airport Ditch

Abex Ditch

Santa Maria Airport/ABEX Channels

Legend

• Sites

- Lengths

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and/or omissions may exist. Sources used in deriving the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from any inappropriate use of this document. No level of accuracy is claimed for the boundaries, their shapes, areas, or other features. Not for use in navigation, bearings or distances.

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared by:
The Santa Barbara County Flood Control and Water Conservation District

Compiled by: the Public Works Enterprise GIS

Coordinate System: State Plane California Zone V NAD 1983
**Location:**
The sections of the Santa Maria River proposed for maintenance are west of the City of Santa Maria, along the southern levee where drainage culverts convey water through the levee and along the northern levee upstream and downstream of Bonita School Road.

**Setting:**
Inspected on March 26, 2018.

The Santa Maria River originates in the Los Padres National Forest and drains a 1,600 sq. mile watershed capable of producing 100,000 cfs during a 100 year return period precipitation event. Two main tributaries, the Sisquoc River and Cuyama River, join east of the City of Santa Maria and continue westward to the Pacific Ocean. Approximately 26 miles of the River are bounded by a levee along portions of the north and south banks to protect farms, and the cities of Santa Maria and Guadalupe. Between the levees, the Santa Maria River is a wide sandy corridor with a series of active and inactive braided channels. Willows as well as scrub and shrub species populate the sand and gravel substrate, while much of the channel is bare sediment. Sediment is chiefly sand and fines from deposition.

At several locations along the southern and northern levees, urban runoff and agricultural tailwater is channeled through the levee via culverts. The culverts empty into the river system just up from the toe of the levee, while the active flow channel of the Santa Maria River might be several hundred feet away. In the summer months, tailwater dries up before joining the active channel. Most of the lower Santa Maria River goes completely dry during the summer.

Santa Maria River is designated critical habitat for the Southern California Distinct Population Segment of steelhead (*Oncorhynchus mykiss*). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries Service (NMFS), which describes the District’s approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

**Revegetation:**
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.
## Santa Maria River

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (acres)</th>
<th>Proposed Restoration (acres)</th>
<th>Restoration Implemented (acres)</th>
<th>Surplus Restoration (acres)</th>
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<td>2018/2019</td>
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<td>1.4ac</td>
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</table>

*Mitigation for 2010/2011 projects is being tracked separately by RWQCB Cert 34210WQ17.

** Square footage for 2 different sites combined for simplified tracking.

The Santa Maria River Levee Operation and Maintenance manual, which prescribes standard procedures and maintenance requirements for the Federally constructed *Santa Maria Valley Levees and Channel Improvements* states “The flood flow channel...was cleared of brush, trees, and obstacles under the terms of the contract for construction of the project.” The manual also says that the agency responsible for operation and maintenance (Santa Barbara County Flood Control District) “shall maintain the channel or floodway clear of debris, weed and wild growth.” A section of the Code of Federal Regulations that governs maintenance of the levee project states: “Where practicable, measures shall be taken to retard bank erosion by planting of willows or other suitable growth on areas riverward of the levees.”

Over the years the District has allowed and encouraged growth of willows and shrub/scrub vegetation in the river channel, especially along the toe of the levee. From Fugler Point, where the levee starts, to the terminus at Highway 1 in Guadalupe, the levee system encompasses approximately 4,100 acres of land of which nearly 1,800 acres are covered by varying densities of the shrub/scrub type of habitat. The vegetated areas have various densities of natives such as mulefat, bush lupine, sandbar willow, coyote bush, mugwort, and a variety of nonnatives including wild radish, pearly everlasting, malva, black mustard, bromes, and morning glory, to
name just a few. The Army Corps of Engineers has agreed that this vegetation that has been allowed to colonize the channel can be used as mitigation acreage for the temporal disturbance during pilot channel construction and other maintenance-related impacts. This type of habitat is of relatively low quality; the diversity, density and wildlife habitat is essentially identical between the areas to be cleared and the colonized vegetation on the adjacent terraces. In contrast, disturbance in higher-quality willow woodland has historically been mitigated by the District through compensatory restoration sites with new plantings.

In 2010, the Regional Water Quality Control Board requested that the District develop additional mitigation and restoration measures for incidental impacts to vegetation within the Santa Maria River System. The District would performed riparian plantings at a 1:1 ratio for impacts that occurred in shrub/scrub or mixed willow/riparian habitats, while the District would not be required to mitigate for impacts occurring over bare substrate or weedy growth.

Some impacts in 2010/2011 were processed by RWQCB under a separate permit (Water Quality Cert 34210WQ17). The mitigation for this Cert is being tracked separately from mitigation for the Annual Plan. Both numbers are provided in the summary above for illustrative purposes.

**Engineering Analysis:**
The Santa Maria River Levee was constructed by the US Army Corps of Engineers to a design capacity of the Standard Project Flood (SPF). The SPF flow rate is 150,000 cubic feet per second.

Obstructive vegetation must be removed in order to maintain flow through the channels and to prevent sediment accumulation and loss of the pilot channel structure. Loss of the pilot channels could lead to damage to the levee and bridge infrastructure, flooding of adjacent homes and land within the Santa Maria Valley.

**Project Description:**

**Section 1:**
This site conveys Blosser Culvert through the Santa Maria River levee. The culvert carries urban nuisance water several months of the year, while the main active flow of the River is typically 300 feet or more to the north. As a result, outflow from the Blosser Road culvert spreads into the river channel and drops sediment. The ongoing input of water has led to a dense but low thicket of willows and coyotebrush, which traps more sediment and street litter.

To maintain adequate drainage through the culvert and away from the edge of the levee, the District excavated a trench in 2017. The trench was able to convey water and sediment away from the levee, but since there was no major flow in the River, the site has backed up with standing water.

The District crew proposes to maintain the existing trench by spot-spraying the center of the channel to minimize encroaching vegetation and obstructions. Spot-spray every 4-6 weeks during summer and fall will prevent the need for further more aggressive weed treatments and excavation. Spot-spray will be limited the center channel so that the edges of the toe and banks
can remain for wildlife habitat. Spot-spray will not occur in Feb/March/April during RLF breeding season.

Section 2:
The Unit 2 ditch crosses under the levee and conveys flow into the river channel. The riparian area to the northwest of the culvert crossing has filled with sediment over the past several years.

To maintain adequate drainage through the culvert and away from the edge of the levee, the District excavated proposes to re-establish and lengthen the drainage trench by excavating sediment within a length of 300 ft, 8 ft wide, and up to 3 ft deep. The trench will be dug with an excavator tractor taking access from the Levee access road near the site. A total of 175 cubic yards will be moved in this manner. The sediment will be placed behind the machine and windrowed slightly to avoid leaving large or steep piles of sediment. The operator will place sediment over existing bare patches or weedy areas and groom the sediment to blend with existing topography.

The work will be monitored by the District Biologist and RLF will be flushed and/or relocated out of the work area. The site may be completely dry by the summer maintenance period.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
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<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
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<tr>
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### Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

### Project Specifics:
The project will take approximately 2 weeks to complete.

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<td>Visual</td>
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SECTION 1

Santa Maria River

SECTION 2

Unit 2 Tailwater

Blosser Rd

Rancho Verde

Taylor St

Frank Ln

Hermosa Dr

El Camino St

Unit 2 Channel

Western Ave

Main St

Donovan Rd

Blosser Rd

North Ave

Alvin Ave

Alison Ave

Teelyn Ave

Juleston Dr

Within Ave

Mary Dr

Fesler St

De Joy St

Gunner St

Robert Ln

Alvin Ave

Hermsa Dr

El Camino St

Rosewood Dr

Fester St

East Ditch

Via Nuteo

Cesar E Chavez Dr

De Joy St

Harding Ave

Donovan Rd

Teelyn Ave

Juleston Dr

Blosser Rd

Rancho Verde

Taylor St

Frank Ln

Hermosa Dr

Alison Ave

Teelyn Ave

Juleston Dr

Blosser Rd

Western Ave

Main St

Donovan Rd

Blosser Rd

Rancho Verde

Taylor St

Frank Ln

Hermosa Dr

Alison Ave

Teelyn Ave

Juleston Dr

Blosser Rd

Western Ave

Main St

Donovan Rd

Blosser Rd

Rancho Verde

Taylor St

Frank Ln

Hermosa Dr

Alison Ave

Teelyn Ave

Juleston Dr

Blosser Rd

Western Ave

Main St

Donovan Rd
Location:
The proposed maintenance within the Santa Ynez River begins approximately 1,400 feet upstream of the Rodeo-San Pascual confluence and continues approximately 2,000 feet downstream. This area was maintained during the initial phases of the Santa Ynez River Maintenance program. Willows have since grown back and the valley has formed a series of braided channels and sediment bars.

Setting:
Inspected on March 30 and April 12, 2017.

The Santa Ynez River is one of the largest rivers in Santa Barbara County. The River is approximately 78 miles long and drains a watershed of 789 square miles. The River runs from west to east along the north slopes of the Santa Ynez Mountain Range. The lower watershed is on federal and private property. The river above the Lompoc Regional Waste Water Treatment Facility flows intermittently during the wet season, depending on rainfall and releases from the Bradbury Dam upstream. The river most often dries up during the summer months upstream of the City of Lompoc. Just below the WWTP, the river is perennial due to outflow from the facility. The facility treats up to 5 million gallons of water per day and releases the treated effluent into the Santa Ynez River adjacent to the proposed project reach. Portions of the project area are within a part of the river that is intermittently dry during summer months.

The Santa Ynez River has the highest quality riparian habitat of any other drainage system throughout Santa Barbara County and several listed species are either known to historically or currently occur at least nearby the proposed project reach. The California red-legged frog is known to occur and breed in the project reach, the river is designated as critical habitat for southern California steelhead, willow flycatchers are known to nest near the project reach although no focused surveys have been done for this species since the 1990s. The least Bell’s vireo is known to nest in the upper Santa Ynez River drainage and was heard within the river in the lower Lompoc Valley outside of the current proposed project, in the late 1980s. No focused surveys have been done for this species.

The riparian vegetation contains well developed, multi successional stages of willow riparian woodland and also areas of specimen cottonwood and sycamore trees. The understory is densely vegetated almost to the point of being impenetrable. Understory vegetation consists of large stands of California blackberry, clematis, poison oak, elderberry, stinging nettle and nightshade while the flow areas of the river are dominated by young willows intermixed with areas of cattail and bulrush. The District will be removing willows and will not disturb the more complex understory areas.
Revegetation:
After a 100’-wide clearing project in December 1997/January 1998, the District implemented 18 acres of restoration along the Santa Ynez River in three separate locations to compensate for the 16 acres of riparian vegetation that was removed. One location is just upstream of H-Street along the south side of the river in a fallow field, another site was located at Riverbend Park near Rucker Road on the south side of the river and the third site was located beginning just upstream of Riverbend Park. The proposed maintenance is within the same areas that were last cleared in 1998 therefore no additional restoration is proposed for this project.

Wildlife Survey:
The Santa Ynez River has the highest quality riparian habitat of any other drainage system throughout Santa Barbara County and several listed species are either known to historically or currently occur at least nearby the proposed project reach. The California red-legged frog is known to occur and breed in parts of the project reach. The overall project length stretches approximately 1400 feet up and downstream from the confluence with Rodeo-San Pascual outlet. The California Natural Diversity Database (CNDDB) shows historical observations of steelhead trout and red legged frog in the project region. The river is designated as critical habitat for southern California steelhead, willow flycatchers are historically known to nest within the river corridor but not within the project reach. The least Bell’s vireo is known to nest in the upper Santa Ynez River drainage and was heard within the lower Lompoc Valley (outside of the current proposed project), in the late 1980s.

Protocol level surveys for Southwestern willow flycatcher and least Bell’s vireo were performed in spring 2013, 2014, 2015, and spring 2017. The current work area overlaps the 2014 survey area, and no listed bird species were detected in this zone. While nesting birds frequently inhabit parts of the Santa Ynez River watershed, the work window has been delayed until late October/November to avoid the nesting season. Nesting birds would not be disturbed. The disturbance to vegetation is limited to the edges of the work corridor, while the remaining riparian habitat along both sides of the River remains intact.

A focused red-legged frog survey was not conducted, however red-legged frogs are known to occur within this region of the river and could potentially be present in standing water during maintenance operations. The vegetation maintenance will be performed outside of the wetted channel and along the edges of the channel. Pools will be avoided during clearing activities. All work will be performed outside of the RLF breeding season. The District Biologist will monitor vegetation removal operations and will provide a training session so crew members are aware of sensitive species issues and how to minimize disturbance to animal present on site. The District has successfully cleared vegetation for the past several maintenance seasons without harming any sensitive wildlife species.

Engineering Analysis:
As described in the 2001 Updated Routine Maintenance PEIR, the objectives for clearing obstructive vegetation within the Santa Ynez River is to maintain a 100-foot wide swath (or its equivalent in two swaths with a minimum width of 30 feet for each swath) along the project reach with non-obstructive vegetation in order to allow sufficient channel capacity for certain flood flows. The last time vegetation was cleared within the
river at this location was during the 2011/2012 Maintenance Season and since that time vegetation has regrown and is obstructing flow areas. Over time the 100'-wide channel has been reduced. In order to restore capacity through this area and allow floodwaters to enter and flow through the Santa Ynez River, the District will clear an average of 50' of obstructive vegetation along the length of the channel.

**Project Description:**
The project was described previously in the 2017/18 Annual Plan addendum. Due to crew limitations and emergency work in December 2017, the California Conservation Corps was unable to complete the project within the allowed work window. Approximately 1200 linear ft of section 1 (below) was completed.

The proposed work in 2018 comprises the remaining work area that was initiated last year. Obstructive vegetation in this portion of the Santa Ynez River was previously maintained during the 2012/2013 Maintenance Season and since that time the willows have grown back and are obstructing the river flows. The lack of substantial flows for several years and the restriction on herbicide use has allowed obstructive vegetation to easily regrow and impeded the 100-ft pilot channel.

During the summer months, flows within the Santa Ynez River are greatly reduced and flow typically stops upstream of the Robinson Street Bridge. Flows within the lower Lompoc Valley outside of the rainy season are the result of WWTP effluent releases. The WWTP treats up to 5 million gallons of effluent per day which is released into the Santa Ynez River and contained in a narrow low-flow channel that runs along the south bank until it joins the main channel flow area upstream of Floradale Bridge where the low flow is positioned within the middle of the channel for the majority of the stream course down to the ocean.

Ag tailwater runs through the Rodeo-San Pascual Channel and enters the River at the project site. This tailwater runs sporadically during the summer and fall, but enough water persists to produce a thicket of willows in the channel.

**Section 1:**
From the Rodeo-San Pascual confluence and extending upstream approximately 1,400, the existing open channel is currently 30 to 60 ft wide. Woody vegetation (primarily 3-5 year old willow thickets) along the floor of the channel will be cut to widen the creek corridor to the prescribed 100'-width. The majority of the cutting will be along the north edge of the channel as the south edge is large, mature riparian vegetation. As much as feasible, a buffer of standing vegetation will be left behind along both edges of the wetted low-flow channel, such that the finished project will involve a split channel comprised of the current wetted channel and a newly-trimmed accessory channel, with a total width of 100ft.

This District or contracted crew will use chain saws and hand tools. The willows will be cut into 4'-5' lengths and cast aside outside of the wetted channel. Patches of arundo will also be removed and dragged out of the creek corridor to desiccate and prevent further infestation.

**Section 2:**
Section 2 begins just at the Rodeol-San Pascual confluence and continues approximately 400 feet downstream. This section has a split/braided channel with
intermittent willow thickets. The northern portion of the channel is approximately 60 ft wide while the southern portion (the main wetted channel) is approximately 20 ft wide. The edges of northern channel will be trimmed and cut to establish a ~80 ft channel width, producing a total open channel of 100ft among the 2 separate channels. A buffer strip of vegetation will be left along the existing wetted channel, as the northern sandy bank has smaller, younger vegetation better suited to maintenance.

This District or contracted crew will use chain saws and hand tools. The willows will be cut into 4'-5' lengths and cast aside outside of the wetted channel. Patches of arundo will also be removed and dragged out of the creek corridor to desiccate and prevent further infestation.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included.

**Mitigation Measures:**
Mitigation measures are taken from the Section 6.0 Environmental Setting, Impacts and Mitigations-Santa Ynez River Program of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology</td>
<td>SY-H-A</td>
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<td>EIR sections 6.1.2, 6.1.3</td>
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<tr>
<td>Water Quality</td>
<td>SY-WQ-A, SY-WQ-B,</td>
<td>SY-H-1</td>
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<tr>
<td>Wetlands, Riparian Habitat, and</td>
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<td>SY-B-1, SY-B-2, SY-B-3,</td>
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<td>Rare Plants EIR sections 6.2.2,</td>
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<td>SY-B-4, SY-B-5, SY-B-6,</td>
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<td>6.2.3</td>
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<td>SY-B-7</td>
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<tr>
<td>Fish, Aquatic Species, and</td>
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<td>SY-H-1, SY-B-2, SY-B-5,</td>
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<tr>
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<td>SY-B-7, SY-B-8, SY-B-9</td>
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<td>Noise</td>
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<td>EIR sections 6.5.2</td>
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<td>Visual</td>
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<tr>
<td>EIR sections 6.7.2, 6.7.3</td>
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</tr>
</tbody>
</table>
*Residual Impacts:*
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 3 weeks to complete.
This map is for reference only. Although every effort has been made to ensure the accuracy of information, Street and Drainage Section, Bend and Line, Public Works, and The Santa Barbara County Flood Control and Water Conservation District make no representation as to its accuracy. Use of this map, or information derived therefrom, is at your own risk. Santa Barbara County shall not be liable for any error, omission, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown herein and these lines should not be used for legal purposes or reference.
UNIT II, UNIT II TAILWATER, EAST, AND WEST MAIN CHANNELS
ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
Routine maintenance of the network of drainages located immediately west of the City of Santa Maria will occur on various sections of the Unit II, West Main, East and Unit II Tailwater channels. See attached map for specific locations.

Setting:
Inspected on March 26, 2018.

West Main Street Channel:
West Main Channel is a degraded unlined trapezoidal roadside ditch that runs from just west of Blosser Road in Santa Maria parallel to West Main Street for a distance of approximately 1.5 miles where it flows under West Main Street through a culvert and enters Unit II Channel. Dirt access roads run parallel to the channel on either side. Beyond the channel to the south are row crops and light industrial land use. To the north is West Main Street, light industrial property and row crops. West Main Street Channel receives runoff from the west end of the city of Santa Maria and surrounding agriculture fields and flows year round. The channel banks are vegetated with weedy species such as black mustard, wild radish, cheeseweed and telegraph weed. No trees grow on along this drainage.

Unit II Channel:
Unit II Channel is a constructed trapezoidal channel that trends north from West Main Street to the Santa Maria River Levee, a distance of about 2 miles, where it enters the Santa Maria River. Dirt access roads run parallel to the channel on either side. Row crops surround the channel beyond the access roads. This channel carries highly turbid runoff from the surrounding agriculture fields as well as runoff from the west end of the City of Santa Maria. Weedy species such as black mustard, wild radish, cheeseweed, telegraph weed, watercress, and annual grasses occur along the entire length of the channel. The District’s maintenance program typically allows this vegetation to grow thicker at the toe of the bank along at least one side of the channel (to provide wildlife cover), while the higher banks are periodically mowed to keep the weeds to a minimum for the surrounding farmers. No trees grow along this drainage.

Unit II Tailwater Channel:
Unit II Tailwater Channel is an unlined, trapezoidal channel that carries highly turbid irrigation and storm water runoff from agricultural fields south of the Santa Maria River. The channel trends westward for about 1.5 miles parallel to the Santa Maria River Levee and discharges into the river just east of Bonita School Road. Dirt access roads run parallel to the channel on both sides. Vegetation within the bottom of the channel is relatively sparse and the banks of the channel are vegetated with weedy species such as black mustard, wild radish, cheeseweed and annual grasses. There are no trees along this drainage, except occasional willows isolated at the intersection with Bonita School Road. Water level is highly variable and can vary from 2-plus feet deep to completely dry, depending upon the surrounding crops and irrigation schedules.
**East Channel:**
The segment of East Channel that is maintained by the District is a 2-mile portion of the ditch that runs parallel to the Santa Maria River on the south side of the levee. The East Channel runs along agricultural fields and drains into Unit II, then through the levee via culvert. Vegetation in the bottom of the channel is relatively sparse due to infrequent flow; the banks are vegetated with weedy species such as black mustards, wild radish, cheeseweed, and annual grasses. There are no trees along this ditch. Water flow is highly variable and depends on runoff from the surrounding crops. Most of the year, East Ditch is dry.

**Revegetation:**
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

Maintenance proposed in Unit II Channel, Unit II Tailwater Channel and West Main Channel during the 2013/2014 Maintenance season will result in small patches of temporal impacts to native vegetation. Restoration within these channels is not reasonable because they are ag drainage ditches on private property. Restoration for these sites will likely be combined with larger restoration efforts for the Santa Maria River system.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004/2005</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>2005/2006</td>
<td>415</td>
<td>415</td>
<td>415</td>
<td>0</td>
</tr>
<tr>
<td>2006/2007</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>2007/2008</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>0</td>
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<td>2008/2009</td>
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</tr>
<tr>
<td>2011/2012</td>
<td>150</td>
<td>500</td>
<td>0</td>
<td>-150</td>
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<tr>
<td>2012/2013</td>
<td>300</td>
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<td>2013/2014</td>
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<td>2018/2019</td>
<td>0</td>
<td>0</td>
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<td>-450</td>
</tr>
</tbody>
</table>
**Wildlife Survey:**
As described in the project description below, proposed maintenance in this series of drainage ditches will require equipment reaching into the channel from the tops of the banks. This maintenance has the potential to impact wildlife, particularly the California red legged frog.

The red legged frog has been detected in Unit II Channel and Tailwater, as well as the West Main Street Channel, regularly since 2003. Red legged frogs have not been found in East Channel, but this drainage completely dries in most years and minimal maintenance (and surveys) has been performed.

The District has developed a management strategy and special conditions through a Biological Opinion issued by the US Fish and Wildlife Service. The District has successfully conducted maintenance on these four drainages during the last several years, has not injured any red legged frogs, and the population persists in the maintenance area when water is present.

As adjacent agricultural practices have switched from flood-irrigation to drip irrigation over the past several years, the amount of tail water in these channels has noticeably reduced. That, coupled with extreme drought, has resulted in less standing water and fewer red-legged frog present in these drainage.

Southwestern pond turtles (a state species of special concern) have been observed in Unit 2 Channel where the culvert meets the Santa Maria River levee. Biomonitoring and relocation for red legged frog will also serve to protect the southwestern pond turtle.

The District assumes red legged frogs may be present wherever standing water occurs in these channels. The District implements mitigation measures and best management practices as appropriate. Impacts to red legged frogs and other species address in the Program EIR are expected to be less than significant with the incorporation of the protective measures and monitoring conditions specified in the Biological Opinion.

The channel has many rodents and existing burrows available that may be attractive to burrowing owls. In fall and winter 2017, burrowing owls were observed in Unit 2 Channel, at the northern end of the channel near the Santa Maria River levee. The owls were observed foraging on the ground and flying over the adjacent ag fields. Inhabited burrows were detected in 2015, 2017, and 2018, although all burrowing owl sightings were in the non-breeding season and no nesting or breeding behavior has been detected in the area. Weekly site inspections by consultant field biologists noted burrowing owls through mid-March 2018, but no sightings from March through the spring/summer nesting season. Surveys during the breeding season have not detected burrowing owls or signs of occupied burrows in the vicinity. It appears the site is favored by overwintering burrowing owl individuals, due to remote location and bare/exposed sloping soils near the levee.

Burrowing owls may forage along the adjacent slopes and banks of the channel, but the species does not inhabit the wetted channel or riparian vegetation. Burrowing owls prefer sparsely vegetated dry slopes and hilltops. Vegetation maintenance such as mowing and desilting obstructive vegetation is limited to time periods outside burrowing owl nesting. Mowing is generally compatible with burrowing owl. All work is proposed in late summer and fall, outside of the burrowing owl nesting season.
Engineering Analysis:
The Unit II/West Main Channel system, including Unit II Tailwater channel and East Channel are engineered drainages designed to convey storm flows from the City of Santa Maria and adjacent agricultural areas. Reduction in capacity as a result of excessive vegetation and/or sedimentation subjects the surrounding areas to frequent flooding. It is necessary to maintain the proper gradient throughout the system to ensure that water reaches the Santa Maria River. In fact, portions of this system are in a leveed section, which is required to make the necessary gradient to the river. Overflows from this leveed section could have devastating results. The Santa Maria River valley is very flat and all of the drainage courses south of the levee and into the river are prone to sedimentation. Vegetation in the channel bed aggravates this situation. Sediment accumulation in these drainages can severely impede flows toward the Santa Maria River Levee and into the river. If the sediment is not removed, flows from the ditches will not flow into the river and will accumulate on the south side of the levee resulting in flooding of adjacent prime farmlands. In addition, sedimentation or vegetative debris can wedge open the levee flap gates. In such a case, flows from the river could back-flow through the gates and further add to flooding on the landward side of the Levee.

The County owns and operates the Santa Maria River Levee as well as Unit II Drainage. By agreement, the Corps built the Levee and the County maintains the system. The flap gates and the drainages that flow through the Levee are an integral component to the Levee. Therefore, sediment and vegetation removal is necessary to allow flows to freely drain into the river and to maintain the design capacity.

Project Description:
West Main Channel:

Section 1:
Non-native vegetation on the banks will be mowed along the entire length of both banks of the channel. The mower will leave a height of 6 to 12 inches remaining as wildlife cover. A strip of vegetation will be left along the toe of the bank, above the water level for 1-2 feet up the slope of the bank.

Periodic spot spraying may be necessary to maintain the design capacity of the channel and prevent obstructions within the floor of the channel. Within the floor of the wetted channel, a 1-foot buffer strip will be left along the edge of one side. The buffer strip will not be spot sprayed at all. The remaining floor of the channel and the opposite side will be spot sprayed only as needed to control dense clusters of vegetation or vegetation that has become tall or dense enough to form an obstruction.

Spot-spray will be suspended during the months of February/March/April for RLF breeding. Later in summer (May through August) period spot spray may resume as needed in the channel to prepare for the next year's Annual Plan maintenance. The vegetation that sprouts along the channel is mostly ruderal/weeds such as wild radish, black mustard, poison hemlock, watercress and tumbleweeds, with occasional cattail sprouts. This area has been maintained previously and the impacts already tabulated for mitigation. There will be no impact to native vegetation.

Section 2:
This section has accumulated sediment and weedy growth in the floor of the channel. This sediment bar periodically collects and must be excavated to retain channel capacity and configuration. Using a Gradall excavator stationed along the adjacent access road, the crew will desilt a section 3 ft wide and 2 ft deep for a length of 1000 ft. The material will be placed directly into dumptrucks and used to fill potholes and erosion pockets further downstream along Unit 2 Channel. The filled area will be groomed and blended into the existing bank to encourage colonization by vegetation. Approximately 220 cubic yards of material will be excavated. The work area is bare sediment and ruderal weeds. There will be no impact to native vegetation. The District Biologist will monitor the work onsite to flush wildlife from the work area in advance of the excavation. RLF on the work area will be captured and relocated downstream.

Sections 3:
This site is a bend in the channel and culvert leading under West Main Street/Highway 166. The concrete apron has collected sand and sediment in front of the culvert opening. Using a Gradall, the District crew will excavate excess sediment from the culvert opening. Approximately 12 cubic yards will be excavated and used to refill potholes and erosion pockets along Unit 2 Channel. The filled area will be groomed and blended into the existing bank to encourage colonization by vegetation.

The District Biologist will monitor the work onsite and flush any animals from the area prior to excavation. The filled area will be groomed and blended into the existing bank to encourage colonization by vegetation. The work area is bare sediment and wild radish. No impacts to native vegetation would occur.

Unit II Channel:
Section 1:
Non-native vegetation on the banks will be mowed along the entire length of both banks of the channel. The mower will leave a height of 6 to 12 inches remaining as wildlife cover. A strip of vegetation will be left along the toe of the bank, above the water level for 1-2 feet up the slope of the bank.

Periodic spot spraying may be necessary to maintain the design capacity of the channel and prevent weedy obstructions.

Periodic spot spraying may be necessary to maintain the design capacity of the channel and prevent obstructions within the floor of the channel. Within the floor of the wetted channel, a 1-foot buffer strip will be left along the edge of the wetted channel. The buffer strip will not be spot sprayed at all. The remaining floor of the channel side will be spot sprayed only as needed to control dense clusters of vegetation or vegetation that has become tall or dense enough to form an obstruction.

Spot-spray will be suspended during the months of February/March/April for RLF breeding. Later in summer (May through August) period spot spray may resume as needed in the channel to prepare for the next year’s Annual Plan maintenance. The vegetation that sprouts along the channel is mostly ruderal/weeds such as wild radish, black mustard, poison hemlock, watercress and tumbleweeds. This area has been maintained previously. There will be no impact to native vegetation.
Section 2:
The east bank of this reach has not been maintained in the past few seasons, as part of an effort to leave half of the channel undisturbed for wildlife. In 2018, this bank has become densely populated with weedy growth and sediment bars have collected at the lower toe of the bank. The project in 2018 will involve swapping the maintenance work to the east bank and leaving the west bank undisturbed.

Using a Gradall stationed on the existing access road to the east, the District crew will excavate the bench of sediment and associated weed clusters from the toe of the east slope. The work will be performed sporadically as needed along the entire reach of approximately 3500 linear feet. Where needed, a bucket of sediment (approx. 4 ft wide by 2 ft deep) will be removed from the edge of the toe, in order to create a smooth bank along the edge of the slope between the concrete check structures.

The material will be placed into dumptrucks and used to refill potholes and erosion pockets further downstream. Excess material will be hauled to the edge of the adjacent ag fields, stockpiled temporarily to dewater, and tilled back over the ag fields.

The vegetation that sprouts along the channel is mostly ruderal/weeds such as wild radish, black mustard, poison hemlock, watercress and tumbleweeds. There will be no impact to native vegetation. The District Biologist will monitor the work onsite and flush any animals from the area prior to excavation.

Unit II Tailwater:
Section 1:
Non-native vegetation on the banks will be mowed along the entire length of both banks of the channel. The mower will leave a height of 6 to 12 inches remaining as wildlife cover. A strip of vegetation will be left along the toe of the bank, above the water level for 1-2 feet up the slope of the bank.

As regional ag practices have changed, this section does not retain as much standing water as compared to 5-10 years ago. Weedy growth in the center channel has diminished, but periodic spot spraying may still be necessary in some areas to maintain the design capacity of the channel and prevent weedy obstructions. Spot-spray will be suspended during the months of February/March/April for RLF breeding. Within the floor of the wetted channel, a 1-foot buffer strip will be left along the edge of one side. The buffer strip will not be spot sprayed at all. The remaining floor of the channel and the opposite side will be spot sprayed only as needed to control dense clusters of vegetation or vegetation that has become tall or dense enough to form an obstruction.

Later in summer (May through August) period spot spray may resume as needed in the channel to prepare for the next year’s Annual Plan maintenance. The vegetation that sprouts along the channel is mostly ruderal/weeds such as wild radish, black mustard, poison hemlock, watercress and tumbleweeds. There will be no impact to native vegetation.

Section 2:
This section of the channel is a shallow ag ditch that has accumulated sediment. The depth and capacity of the channel is constrained due to excess sediment. The District will desilt a length approximately 100 ft long, 5 ft wide and 3 ft deep using a Gradall excavator stationed along the existing access road. Approximately 55 cubic yards of
material will be removed from the channel. The material will be placed behind the machine on the access road. Some of the excavated material may be re-used at Unit 2 channel fill and groom potholes and erosion pockets.

This section has is mostly bare sediment and non-native watercress, wild radish, and mustards. The work will not result in impacts to native vegetation. Re-establishing the depth and capacity of the channel encourages deeper water to persist, benefiting red-legged frog and other aquatic wildlife in these drainages.

The District biologist will monitor the work. Red legged frogs will be flushed and relocated from the work area per the District’s Biological Opinion.

**East Ditch:**

**Section 1:**

East Ditch will be mowed for the entire length. Additionally, the District will spot spray woody weeds along the centerline of the drainage ditch to keep an unobstructed pathway for flow. One edge of the channel will be left un-sprayed during an application to leave a strip of vegetation along the toe of one of the banks. The work area will be dry during maintenance. Work in this section has no impact to native vegetation.

**Impact Analysis and Mitigation Measures:**

Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**

Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**

Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
<td></td>
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<tr>
<td>Water Quality</td>
<td>WQ-A, WQ-B, WQ-C, WQ-D</td>
<td>H-1, B-2, W-1, W-2, W-3, W-4, W-8</td>
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<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
<td></td>
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</tr>
<tr>
<td><strong>Wetlands, Riparian Habitat, and Rare Plants</strong></td>
<td><strong>Fish, Aquatic Species, and Wildlife</strong></td>
<td><strong>Air Quality</strong></td>
</tr>
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<td>-----------------------------------------------</td>
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</tr>
<tr>
<td>EIR sections 5.3.2, 5.3.3</td>
<td>EIR sections 5.4.2, 5.4.3</td>
<td>B-1, B-2, B-3, B-4</td>
</tr>
<tr>
<td>WRR-A, WRR-D, WRR-F</td>
<td>FAW-A, FAW-B, FAW-E, FAW-F, FAW-I</td>
<td>H-1, B-1, B-2, B-3, B-5, B-6, W-1, W-2, W-3</td>
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<td></td>
</tr>
</tbody>
</table>

*Residual Impacts:*
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
These projects will take 3 weeks to complete.
This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and drainage data sources used to develop the database may be referred to in error. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown herein and these lines should not be used for legal purposes or as coordinate values, bearings or distances.
ZANJA DE COTA CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The maintenance area begins at Pine Street in the community of Santa Ynez and runs approximately 1 mile downstream to Calzada Avenue right-of-way.

Setting:
Zanja de Cota Creek is a small, intermittent drainage that runs through the community and back yards of Santa Ynez. The drainage collects mostly stormwater from the residential lots on both sides of the surrounding watershed. The channel is shallow, generally only a few feet lower than the adjacent yards. The channel has little to no riparian canopy, only occasional oaks and willows mixed with grassy lawns and landscape vegetation along the entire length of both banks. Downstream of the suburban development in Santa Ynez, the Creek drains though a narrow riparian corridor and meets the Santa Ynez River.

Revegetation:
Beginning with the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District began a new reporting and accounting program for the restoration component of the Annual Routine Maintenance Program. Since that time, the District has been tracking the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The District rarely performs maintenance tasks in Zanja de Cota Creek and no previous impacts to native riparian vegetation have resulted.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012/2013</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>-100</td>
</tr>
<tr>
<td>2015/2016</td>
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<td>0</td>
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<tr>
<td>2017/2018</td>
<td>50</td>
<td>0</td>
<td>50*</td>
<td>0</td>
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</tbody>
</table>

*The District has undertaken a large bioswale/restoration project in Santa Ynez. The surplus square footage at this site is used to offset small impacts in nearby watersheds (Zaca, Zanja de Cota, and Adobe Creeks)

Engineering Analysis:
Zanja de Cota is a very narrow and shallow drainage that passes through the back yards of many residences as well as through culverts and bridges within the community of Santa Ynez. Most of the drainage flows directly through the back yards of residential areas and is approximately 5' wide. Obstructive vegetation impedes flows and adds to the debris load generated during high runoff. Vegetation can plug bridges, downstream culverts, and divert flows out of the
narrow/shallow channel and cause flooding to adjacent properties. Removing obstructive vegetation and debris from the active channel can reduce the potential for flooding.

**Project Description:**

**Section 1:**
This site is a carry-over that was not completed in 2017. The site is the transition between the grassy swale and the concrete-lined channel leading to Highway 246. The creek is surrounded by large mature willow trees. Several large branches and trees have fallen into the channel, threatening to block the Highway culvert. The District crew will cut and remove the fallen branches and trees. The woody debris will be cut into smaller pieces and/or chipped into mulch onsite. Hanging blackberry canes and other projecting limbs and branches will be pruned from the culvert opening. The task will not result in impacts to native vegetation.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.
<table>
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<tr>
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<th>Mitigation Measures*</th>
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<tr>
<td>Hydrology</td>
<td>H-A, H-D, H-E</td>
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<td>EIR sections 5.1.2, 5.1.3</td>
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<tr>
<td>Water Quality</td>
<td>WQ-A, WQ-C</td>
<td>B-2, W-4</td>
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<td>EIR sections 5.2.2, 5.2.3</td>
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<tr>
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</tr>
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<td>N-A</td>
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<tr>
<td>EIR sections 5.9.2, 5.9.3</td>
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<td></td>
</tr>
</tbody>
</table>

*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels

**Project Specifics:**
The project will take 4 days to complete.
SECTION 1

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and
parcel names, and source data used in drafting the database may be reflected on this map. Santa Barbara
County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. The
level of accuracy is assumed for the known data shown herein and lines
should not be used for value, bearings or distances.

Zanja de Cota Creek

Legend

Sites

Lengths
ARROYO BURRO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins just downstream of the intersection of Mariana Way and Calle De Los Amigos and terminates at Cliff Drive.

Setting:
Inspected on April 2, 2018.

Arroyo Burro Creek originates in the foothills of the Santa Ynez Mountains and drains a 5,559 acre watershed capable of producing 5,400 cfs during a 100 year return period precipitation event. Land use adjacent to the creek is residential and open space.

The creek flows year round downstream of Highway 101 and contains pool and riffle sequences. The 2009 Jesusita Fire burned the majority of the San Roque Creek and Barger Canyon watersheds (the two major tributaries of Arroyo Burro Creek). In the first few years following the fire, some of the larger pools were filled with sediment.

From Modoc Road downstream, Arroyo Burro Creek is characterized by extremely steep banks with an average channel depth of approximately 50 feet. Downstream of Veronica Springs Road there are numerous landslides coming off of Campanil Hill on the west bank of the creek. The banks are very well vegetated with species such as poison oak, mustard, introduced grasses, eucalyptus, occasional oaks, many willows and sycamore. There are numerous large stands of Arundo donax in the lower portion of Arroyo Burro Creek. Long stretches of the creek have Arundo growing on the creek banks that hang over into the creek, impeding flow and contributing to debris plugs in the creek.

Efforts have been made by the County and volunteer organizations to remove some of the stands of Arundo donax. The City of Santa Barbara Creeks Restoration and Water Quality Improvement Division has removed several stands of Arundo and developed plans for further removal over the next several years.

Arroyo Burro Creek is designated critical habitat for the Southern California Distinct Population Segment of steelhead (Oncorhynchus mykiss). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries Service (NMFS), which describes the District's approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

The District's Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width,
including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel. The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper, and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

Arroyo Burro Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bankfull width may be considered.

**Revegetation:**
Beginning with the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District began a new reporting and accounting program for the restoration component of the Annual Routine Maintenance Program. Since that time, the District has been tracking the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

The District and the City of Santa Barbara are engaged in Arundo donax removal projects which will periodically result in temporarily exposed soil and associated restoration. As clusters of arundo are removal, restoration that is performed with District involvement will be allotted for the County’s restoration tables, while any restoration performed solely by the City staff/funds will not be indicated under the District maintenance program.

<table>
<thead>
<tr>
<th>Arroyo Burro</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
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<td>1,250</td>
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<td>2008/2009</td>
<td>375</td>
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</tr>
<tr>
<td></td>
<td>2009/2010</td>
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<td>2,000*</td>
<td>+7,400**</td>
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<tr>
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<td>2010/2011</td>
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<td>2012/2013</td>
<td>200</td>
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<td>2016/2017</td>
<td>30</td>
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</tr>
<tr>
<td></td>
<td>2018/2019</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*The 2000 square feet of restoration identified in 2008/2009 Annual Maintenance Plan was planted at an alternate site on San Roque Creek (a tributary) in May 2010.

**Restoration proposed to be implemented by the City of Santa Barbara as 1:1 replacement for banks exposed during Arundo removal and will not be credited to the District as surplus restoration.
**Engineering Analysis:**
Removing obstructive vegetation from the bankfull channel cross-section (active channel) is important to reduce the debris load associated with higher flows. Additionally, Obstructive vegetation growing in the active channel as well as growing along the banks and projecting into the active channel, which is what is occurring with the *Arundo donax* stands, can become mobilized during flood flows, raising the water surface elevation as well as plugging bridges and culverts located downstream.

The bankfull discharge* for Arroyo Burro Creek is approximately 572 cfs with a typical depth of 2.5 feet deep. The width of clearing should be between 15-20 feet to maintain channel equilibrium.

* As defined in “Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

**Project Description:**

Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

**Brushing:** A crew with chainsaws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
A down willow limb will be removed from the channel.
Section 2:
A down willow limb will be removed from the channel.

Section 3:
A debris plug will be cut up so that it can move through the system during future flow events.

Section 4:
A large forked eucalyptus has fallen and is bridging the creek and the lower fork is within the active channel. Only the lower fork (15" by 25") will be removed.

Section 5:
A down willow limb will be removed from the channel.

Section 6:
A willow limb is projecting into the active channel and will be limbed and a down willow branch will be removed from the channel.

Section 7:
A down willow will be removed from the active channel.

Section 8:
A 12" DBH by 30' down willow will be removed from the active channel.

Section 9:
A debris plug is obstructing flows and will be cut up.

Section 10:
A down willow limb will be removed from the active channel.

Section 11:
A down willow limb will be removed from the active channel.

Section 12:
A down 12"DBH by 45'L eucalyptus is directly downstream of an existing piece of LWD and will be removed from the active channel.

Section 13:
A down willow branch will be removed from the active channel.

Section 14:
A down willow branch will be removed from the active channel.

Section 15:
A down willow branch will be removed from the active channel.

Section 16:
A down willow and eucalyptus limb will be removed from the active channel.
Section 17:
Willow branches from the left bank are projecting into the active channel and will be limbed.

Section 18:
A down willow limb will be removed from the active channel.

Section 19:
Multiple down willow limbs will be removed from the active channel.

Arundo Removal (ongoing restoration)
The District, Agricultural Commissioner’s Office, and the City of Santa Barbara Creeks Division are partnering on a multi-year arundo removal effort in the Arroyo Burro watershed. A separate map is included to show the patches of arundo that have been targeted under this project. This is the sixth year of the effort and new arundo removal work will focus on the areas downstream of Veronica Springs Road. Re-vegetation and re-treatment of arundo resprouts will occur in areas where arundo has already been removed (primarily from Veronica Springs Road to Cliff Drive).

Arundo stalks will be cut to a height of six inches or less, and the stumps will be immediately painted with Polaris or Aquamaster herbicide (no overspray will result from herbicide application). Cut stalks and old Arundo biomass will be removed from the creek corridor, chipped if access is available for a chipper, and spread in areas that are removed from the channel, where material will not fall or be washed back into the creek corridor; or the material will be hauled offsite for landfill disposal, depending on access. Arundo re-growth will be retreated with herbicide as needed through the remaining spring and summer after a visual inspection of the infested sites. Re-treatment will not occur with 72 hours of a predicted rain event. The total amount of arundo is approximately 6.5-acres. Roughly 5.5-acres has been removed during the past five field seasons, with the final acre of removal anticipated this season. Access to the arundo sites will be gained from the end of Alan Road, and the City owned Veronica Meadows Property, as well as Las Positas Road. Retreatment surveys will be accessed from Modoc Road, the La Cumbre Country Club, Hidden Valley Park, and Veronica Springs Road. Approximately 50 work days are planned to remove arundo during this field season (August – October). Contractors will perform most of the work under guidance and supervision from City Creeks and County Agricultural Commissioner’s Office staff and District monitoring and permit compliance inspectors. Sites where arundo is removed will be re-vegetated with native plants in the fall and winter. Willow cuttings will be primarily used to re-vegetate, but oaks, sycamore, elderberry, and other riparian species will be planted in suitable locations that are not subject to creek flows.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance
Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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<td>H-1</td>
</tr>
<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
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<td></td>
</tr>
<tr>
<td>Water Quality</td>
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<td>H-1, B-2, W-2, W-4, W-6, W-7, W-8,</td>
</tr>
<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
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</tr>
<tr>
<td>Wetlands, Riparian Habitat, and Rare Plants</td>
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<td>B-1, B-2, B-3</td>
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**Project Specifics:**
This project will take 4 days to complete
This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and site names are approximate or may have changed. Sources used in creating the database may be reflected on this map. Santa Barbara County Flood Control and Water Conservation District, or Arroyo Burro Creek. In no event shall Santa Barbara County be liable for any errors, omissions, or damages that result from the use of this database. Not to be used for legal purposes. The level of accuracy is planned for the location of a site and site names are approximate. This database contains no values, bearings or distances.
Location:
The project begins upstream of Hollister Avenue and ends just upstream of Vieja Drive.

Setting:
Inspected on April 2, 2018.

Atascadero Creek originates in the foothills of the Santa Ynez Mountains. Upper Atascadero Creek drains an 1118 acre watershed above the confluence with Cieneguitas Creek which is capable of producing 1300 cfs during a 100 year return period precipitation event.

Upstream of Cathedral Oaks Blvd, the creek gradient is high and invert of Atascadero Creek is approximately 4 feet wide and bordered by very well vegetated steep, banks that are more than 20 feet tall, and in some cases up to 50 feet tall. The west side of this upper portion of Atascadero Creek is open space while the east side is developed residential.

Between Highway 154 and Highway 101 the creek goes through a trailer park and is mostly a grassy swale and concrete lined channel.

Downstream of Highway 101, the creek is quite degraded and contains limited riparian vegetation along most of the banks which are instead vegetated with ornamental species such as myoporum, ivy, introduced grasses and weedy species. Land uses adjacent to the creek include residential and business. Concrete sack walls and reinforced banks line sections of the creek in the semi-urban setting downstream of Highway 101. Low-gradient reaches of the creek exhibit patches of cattail and bulrush within a mixed willow canopy. The substrate consists of scattered rocks and gravel interspersed with silty areas.

Atascadero Creek was completely dry down to the confluence with Cieneguitas Creek, where it was flowing due to input from Cieneguitas Creek. During normal rainfall years the upper and middle portions of the creek will dry up during the summer months prior to the maintenance season, however the lower lengths remain wetted year round.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.
Atascadero Creek

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002/2003</td>
<td>5,400</td>
<td>6,500</td>
<td>4,000*</td>
<td>-5,400</td>
</tr>
<tr>
<td>2004/2005</td>
<td>4,500</td>
<td>3,800</td>
<td>300</td>
<td>-9,600</td>
</tr>
<tr>
<td>2005/2006</td>
<td>0</td>
<td>1,720</td>
<td>0</td>
<td>-9,600</td>
</tr>
<tr>
<td>2006/2007</td>
<td>0</td>
<td>3,920</td>
<td>0</td>
<td>-9,600</td>
</tr>
<tr>
<td>2007/2008</td>
<td>N/A</td>
<td>N/A</td>
<td>8,120</td>
<td>-1,480</td>
</tr>
<tr>
<td>2009/2010</td>
<td>90</td>
<td>1,600</td>
<td>1,600</td>
<td>120</td>
</tr>
<tr>
<td>2012/2013</td>
<td>50</td>
<td>0</td>
<td>50</td>
<td>120</td>
</tr>
<tr>
<td>2018/2019</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>120</td>
</tr>
</tbody>
</table>

*Understory vegetation was planted but in the end was not successful and had to be replanted in 2007.

Engineering Analysis:
Removing obstructive vegetation from the bankfull channel cross-section (active channel) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel can become mobilized during flood flows, raising the water surface elevation as well as plugging bridges and culverts located downstream. The bankfull discharge* for Atascadero Creek downstream of Highway 101 is approximately 77 cfs. With a velocity of approximately 4 fps and a typical depth of 2’, the width of clearing should be 10’ to maintain channel equilibrium.

*As defined in “Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

Project Description:

Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

Limbing/Down trees or limbs: A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access.

Brushing: A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

Mitigation: Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing
with riparian restoration. The District also does not provide restoration as mitigation for down
trees, broken branches, or dead trees. All sections that use these terms will not have any
restoration as mitigation associated with them. The District’s Maintenance Program incorporates
other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District
with riparian restoration. If a section includes brushing or removal of native vegetation, the
associated mitigation quantity will be quantified in that section’s description. If no mitigation
quantity is included in a Section description, no mitigation is required.

**Section 1**
Willow branches are projecting into the active channel and will be limbed.

**Section 2**
A down 24”DBH by 35’ sycamore will be removed from the channel.

**Section 3**
A down willow will be removed from the channel.

**Section 4**
A down willow will be removed from the channel.

**Section 5**
Willow branches are projecting into the active channel and will be limbed.

**Section 6**
Willow branches are projecting into the active channel and will be limbed.

**Section 7**
Willow branches are projecting into the active channel and will be limbed.

**Section 8**
Willow branches are projecting into the active channel and will be limbed.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation measures for each of the issue areas
impacted by this project as identified in the Updated Program EIR. See the Section entitled
“Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation
measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of
the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance
Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the
impacts listed below are considered Class I (unavoidable significant) under the worst-case
scenario assumptions of the Program EIR. However, due to the limited scope of this project
and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology</td>
<td>H-A, H-E</td>
<td>H-1</td>
</tr>
<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Quality</td>
<td>WQ-A, WQ-B, WQ-C, WQ-D, WQ-E</td>
<td>H-1, B-2, W-1, W-2, W-4, W-6, W-7, W-8,</td>
</tr>
<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetlands, Riparian Habitat, and Rare Plants</td>
<td>WRR-A, WRR-D, WRR-E, WRR-F</td>
<td>B-1, B-2, B-3, B-4, B-5, B-6, W-3</td>
</tr>
<tr>
<td>EIR sections 5.3.2, 5.3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish, Aquatic Species, and Wildlife</td>
<td>FAW-A, FAW-B, FAW-F, FAW-H, FAW-I, FAW-J</td>
<td>B-1, B-2, B-3, B-5, W-1, W-2, W-4, W-5, H-1,</td>
</tr>
<tr>
<td>EIR sections 5.4.2, 5.4.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Health</td>
<td>PH-A</td>
<td>W-2</td>
</tr>
<tr>
<td>EIR section 5.10</td>
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<td>Air Quality</td>
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<td>A-1, A-2</td>
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<tr>
<td>EIR Sections 5.5.2, 5.5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>N-A</td>
<td>N-1</td>
</tr>
<tr>
<td>EIR Sections 5.6.2, 5.6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td>V-A</td>
<td>V-1</td>
</tr>
<tr>
<td>EIR Sections 5.9.2, 5.9.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

Project Specifics:
The project will take 4 days to complete.
This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and site locations, distances and other sources used in deriving the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from the improper use of this document. No level of accuracy is claimed for the boundaries or their shapes, areas, or values, bearings or distances.
Location:
The project area begins at the most upstream trash rack on lower Canada De La Pila Creek and continues downstream approximately 800’.

Setting:
Inspected on March 29, 2018.

Canada de la Pila originates in the foothills of the Santa Ynez Mountains and flows through a 48” high density polyethylene pipe for approximately 2,700 feet around the west side of the Tajiguas Landfill. The 48” pipe discharges into a box culvert which discharges into the natural channel approximately 200 feet south of the maintenance shop. Three litter fences (trash racks) are present in the natural creek channel to control/collect litter.

The creek is degraded with the vast majority of the bank vegetation being weedy non-natives. The creek invert is approximately 4 feet wide and 3 feet deep sloping up to near shear banks for most of the project reach. This creek dries during the summer months, but contained a few inches of residual flow during the April inspection due to late-season rains. The creek bed has weedy and annual grasses, with sprouting mulefat, willows, and other woody natives. Immediately to the east, the bank abuts a very large hillside vegetated with coastal sage scrub mixed with a large amount of weedy vegetation while the access road into the landfill is at the top of the west bank (approximately 20 feet high).

The Resource Recovery & Waste Management Division has planted several sycamore and oaks along the west bank. Beyond the access road there is another very large hillside vegetated with coastal sage scrub. The hills surrounding the creek contain large areas of *Elymus condensatus*. This grass also occurs on the upper banks within the project reach. The lower end of the creek contains some arroyo and red willows on the lower portions of the banks and within the invert. Vegetation near the Highway 101 culvert consists of dense willows, coyotebrush, and occasional sycamore trees.

Revegetation:
Beginning with the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District began a new reporting and accounting program for the restoration component of the Annual Routine Maintenance Program. Since that time, the District has been tracking the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the 2011/2012 Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

The management of Canada de la Pila Creek is performed by Resource Recovery and Waste Management Division and the Flood Control District (both part of County Public Works Dept). The District’s role involves planning and permitting for creek-related projects, but much of the field work and mitigation are performed by RRWMD. RRWMD has ongoing restoration efforts at the landfill entrance and along the banks of the creek from 2004 and 2008. These plantings have produced over 1100 square feet of high
quality oak and sycamore groves that mitigated for small temporal impacts within low-quality habitat cover during annual maintenance of the trash racks.

The proposed project will not result in impacts to native vegetation, therefore restoration is not proposed as mitigation for this project.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003/2004</td>
<td>0</td>
<td>0</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>2005/2006</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>480</td>
</tr>
<tr>
<td>2006/2007</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>480</td>
</tr>
<tr>
<td>2007/2008</td>
<td>0</td>
<td>0</td>
<td>620</td>
<td>1100</td>
</tr>
<tr>
<td>2008/2009</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1100</td>
</tr>
<tr>
<td>2010/2011</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1100</td>
</tr>
<tr>
<td>2011/2012</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1100</td>
</tr>
<tr>
<td>2012/2013</td>
<td>300</td>
<td>0</td>
<td>0</td>
<td>800</td>
</tr>
<tr>
<td>2016/2017</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>800</td>
</tr>
<tr>
<td>2017/2018</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>800</td>
</tr>
<tr>
<td>2018/2019</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>800</td>
</tr>
</tbody>
</table>

Wildlife Survey:
The drainage is a degraded roadside ditch along the access road to the landfill. California red-legged frogs (RLF) were known in the upper watershed, but not likely in the project area because the channel only flows very briefly during rainfall events and quickly dries up. The creek is completely dry during the spring and summer months, and is separated from the upper watershed by the development of the landfill itself. A pre-project inspection will be completed to confirm that the work sites are dry with no RLF potential during the work. Biomonitoring will be implemented if necessary based on habitat conditions. No other special status species are known or likely in the work area.

Engineering Analysis:
There are 3 existing trash racks in Canada de la Pila Creek that are in place in compliance with the Tajiguas Landfill Litter Containment Work Plan. The first and second trash racks have sediment plugging the wire mesh at the base of the rack causing the trash racks to function like check structures. This resulted in impounding 2’-3’ of sediment upstream of the racks for approximately 150’ each. The sediment has reduced the capacity of the creek by approximately 30% in this section and should be removed. In addition, the sediment removal will preserve the trash rack’s function.

Removing obstructive vegetation projecting into the active channel is important to reduce the debris load associated with higher flows that could become mobilized during flows, raising the water surface elevation as well as plugging the two culverts located downstream. Overhanging vegetation will be removed to reduce the chances of a driveway culvert and the Highway 101 culvert from plugging.

Project Description:
Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

**Brushing:** A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
In this length of approximately 800’ willow branches are projecting into the active channel and will be limbed.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project
would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology</td>
<td>H-A, H-D, H-E</td>
<td>H-1, H-2, B-7</td>
</tr>
<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Quality</td>
<td>WQ-A, WQ-C, WQ-D</td>
<td>H-1, B-2, W-1, W-4</td>
</tr>
<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetlands, Riparian Habitat, and Rare Plants</td>
<td>WRR-A, WRR-D, WRR-E</td>
<td>B-1, B-2, B-3, B-4, B-5, B-6,</td>
</tr>
<tr>
<td>EIR sections 5.3.2, 5.3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish, Aquatic Species, and Wildlife</td>
<td>FAW-A, FAW-E, FAW-I</td>
<td>B-1, B-2, B-3, B-5, B-6, W-1</td>
</tr>
<tr>
<td>EIR sections 5.4.2, 5.4.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Quality</td>
<td>AQ-A, AQ-B</td>
<td>A-1, A-2</td>
</tr>
<tr>
<td>EIR sections 5.5.2, 5.5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>N-A</td>
<td>N-1</td>
</tr>
<tr>
<td>EIR sections 5.6.2, 5.6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td>V-A</td>
<td>V-1</td>
</tr>
<tr>
<td>EIR sections 5.9.2, 5.9.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Project Specifics:**
This project will take 1 day to complete.
SECTION 1

This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and
road names may be incorrect. Sources used in creating the database may be reflected on the map. Santa Barbara
County shall not be liable for any error, omission, or damage that results from the use of this document. No
level of accuracy is claimed for this document. These lengths should be used for general information purposes
only.

Legend

Canada De La Pila Creek

Department of
Public Works
County of
Santa Barbara

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.
CARPINTERIA CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins approximately where Carpinteria Creek runs under Highway 192 and terminates approximately 500 feet downstream of the 8th Street Bridge in the City of Carpinteria.

Setting:
Inspected April 4, 2018.

Carpinteria Creek originates in the foothills of the Santa Ynez Mountains and drains a 9,680 acre watershed capable of producing 8,900 cfs during a 100 year return period precipitation event.

The upper watershed was burned during the Thomas Fire and the entire creek was affected by the January 9, 2018 debris flow. Due to the volume of material moving through the system, a large amount of vegetation growing within the creek banks was lost.

The portion of Carpinteria Creek proposed for maintenance flows through agriculture and low-density residential areas above Highway 101 and high-density residential areas below Highway 101. Upstream of Highway 101, the creek supports a relatively narrow yet well developed canopy of riparian vegetation with dense mature stands of arroyo and yellow willow. Stands of sycamore, Fremont cottonwood and black cottonwood are scattered along the top of the bank. Occasional coast live oaks are also scattered along the entire length of the creek. Woody riparian understory vines and shrubs include species such as poison oak, coyote bush, blackberry, mugwort and many non-native species as well. Small drier areas along the top of the bank support shrubs typical of the coastal sage scrub habitat. Avocado and citrus orchards are common along the tops of banks.

Large residential lots border the creek in the lower reaches of the watershed and invasive non-native vegetation is more abundant than in the largely agricultural areas upstream. Much of the riparian canopy in the urban portion of the creek has been removed beyond the top of the bank for apartments, businesses and roads. Mature cottonwood, white alder and western sycamore trees occur in scattered patches along the lower portions of the project reach. In general, the understory component consists of species such as mugwort, mustard, nettle, monkey flower and ivy.

Carpinteria Creek is designated critical habitat for the Southern California Distinct Population Segment of steelhead (Oncorhynchus mykiss). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries Service (NMFS), which describes the District’s approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

The District’s Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly...
sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width, including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel. The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper, and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

Carpinteria Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bankfull width may be considered.

Revegetation:
Beginning with the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District began a new reporting and accounting program for the restoration component of the Annual Routine Maintenance Program. Since that time, the District has been tracking the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002/2003</td>
<td>2,710</td>
<td>4,750</td>
<td>3,750</td>
<td>1,040</td>
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<td>2003/2004</td>
<td>900</td>
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<td>2008/2009</td>
<td>1,250</td>
<td>16,750</td>
<td>0</td>
<td>-1250</td>
</tr>
<tr>
<td>2009/2010</td>
<td>1,500</td>
<td>6,750</td>
<td>6,750</td>
<td>4,000</td>
</tr>
<tr>
<td>2010/2011</td>
<td>550+100</td>
<td>1,400</td>
<td>Carp Valley: 22,464</td>
<td>25,814</td>
</tr>
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<td>2012/2013</td>
<td>5,200</td>
<td>1,800</td>
<td>1,800</td>
<td>22,414</td>
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<td>565, Incl 3 Trees &gt;3&quot; dbh</td>
<td>600</td>
<td>14 alders (voluntary extra planting)</td>
<td>21,849</td>
</tr>
<tr>
<td>2014/2015</td>
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<td>0</td>
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<td>TBD</td>
</tr>
<tr>
<td>2018/2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Engineering Analysis:
Vegetation tends to colonize the streambed during years when there is insufficient flow to scour the active channel. In an effort to reduce the potential for plugging downstream bridges and the creation of debris plugs and bank erosion, downed trees/limbs and obstructive vegetation that could be mobilized during high flows should be removed.
The bankfull discharge* for Carpinteria Creek downstream of Casitas Pass Road is approximately 625 cfs. With a velocity of approximately 6 fps and a typical depth of 3’, the width of clearing should be 35’ to maintain channel equilibrium.
*As defined in “Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

**Project Description:**

Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

**Brushing:** A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
There is a 25’ section of metal pipe that was historically used as "pipe and wire" bank stabilization that was destroyed by the 1/9 debris flow. The pipe will be removed from the channel.

**Section 2:**
A down 18”DBH by 12’ alder will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.

**Section 3:**
A down 15”DBH by 10’ sycamore will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.
Section 4:
Due to the 1/9 debris flow for a length of 300’ the low flow channel has been pushed toward the nearly vertical left bank. Rock and sediment will be pushed from the right side of the channel toward the left vertical bank and the low flow will be restored to the center of channel. The work area will be 300’L by 30’W with no impact to native vegetation.

Section 5:
A down 15”DBH by 20’ sycamore will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.

Section 6:
A down 5”DBH by 20’ willow limb will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.

Section 7:
Due to the 1/9 debris flow and subsequent emergency creek work there is an approximately 200’ section where rock has been cast to the right side of channel (looking downstream) within the historic creek banks essentially creating a false bank and constrained channel.

Using an excavator and working from the top of bank, the rocks will be pulled toward and tied into the historic bank to widen the channel approximately 8’. Willow poles that are intertwined with the rock and have started to sprout will be pulled over with the rock and allowed to grow. This will result in no impact to native vegetation.

Section 8:
Due to the 1/9 debris flow and subsequent emergency creek work there is an approximately 150’ section where rock has been cast to the left side of channel (looking downstream) within the historic creek banks essentially creating a false bank and constrained channel.

Using an excavator and working from the top of bank, the rocks will be pulled toward and tied into the historic bank to widen the channel approximately 10’. If available, sediment will be placed in rock voids to allow native vegetation growth. This will result in no impact to native vegetation.

Section 9:
A down 18”DBH by 7’ alder will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.

Section 10:
A down willow will be removed from the channel.

Section 11:
A down 12”DBH by 14’ sycamore will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.
Section 12:
Approximately 35’ of “pipe and wire” structure was destroyed during the 1/9 debris flow and is within the active channel. The structure will be removed.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology</td>
<td>H-A</td>
<td>H-1</td>
</tr>
<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Quality</td>
<td>WQ-A, WQ-B, WQ-C</td>
<td>H-1, B-2, W-2, W-4, W-6, W-7, W-8,</td>
</tr>
<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
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<tr>
<td>Wetlands, Riparian Habitat, and Rare Plants</td>
<td>WRR-A, WRR-B</td>
<td>B-1, B-3, H-9</td>
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<tr>
<td>Fish, Aquatic Species, and Wildlife</td>
<td>FAW-A, FAW-F, FAW-I</td>
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<td>EIR sections 5.4.2, 5.4.3</td>
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<tr>
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<td>AQ-A</td>
<td>A-1</td>
</tr>
<tr>
<td>EIR sections 5.5.2, 5.5.3</td>
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<tr>
<td>Noise</td>
<td>N-A</td>
<td>N-1</td>
</tr>
<tr>
<td>EIR sections 5.6.2, 5.6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td>V-A</td>
<td>V-1</td>
</tr>
<tr>
<td>EIR sections 5.9.2, 5.9.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Project Specifics:**
This project will take 4 days to complete.
This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and place names, and boundaries, the sources used in creating the database may be subject to error. Santa Barbara County shall not be liable for any errors, omissions, or damages resulting from the use of this document. The information is intended only as a planning tool and is not a determination of the boundary lines shown on this map. Use of coordinate values for purposes of determining boundary lines or property values, bearings or distances is not permitted.
LAGUNITAS CREEK ROUTINE MAINTENANCE
ADDITION TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins just upstream of Via Real and ends just downstream of Carpinteria Avenue.

Setting:
Inspected on April 4, 2018.

Lagunitas Creek originates in the foothills of the Santa Ynez Mountains and drains a watershed of approximately 200 acres. To better describe the setting of the creek scheduled for maintenance, the creek has been divided into two segments: the stream reach upstream of Via Real runs along a nursery and a commercial building tract. Immediately to the east of the drainage is an access road. The creek banks are steep and eroded with a thin band of mostly weedy vegetation. From Via Real, the creek flows through a culvert under the Highway 101, and Carpinteria Avenue. The drainage below Carpinteria Avenue is very well vegetated with a wide corridor of willows and an understory of blackberry, nasturtium and miscellaneous grasses. The drainage continues downstream through another culvert at the railroad crossing and drains onto the beach.

Revegetation:
Beginning with the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District began a new reporting and accounting program for the restoration component of the Annual Routine Maintenance Program. Since that time, the District has been tracking the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the 2011/2012 Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>Lagunitas Creek</th>
<th>Annual Plan Year</th>
<th>New Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2003/2004</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>2008/2009</td>
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<td>2018/2019</td>
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</tr>
</tbody>
</table>

* The restoration site was slated for private development and was not completed as planned. The maintenance area for this watershed is small and no other restoration options have become available. The District contributed to restoration efforts in the Carpinteria valley in 2009/2010 which will be used to provide credit for the 100 ft² of impact.

Engineering Analysis:
The culvert on Via Real and Under Highway 101 is very susceptible to plugging which would
cause significant flooding of the adjacent homes, agricultural areas, Via Real, and Highway 101. In an effort to reduce the potential for plugging the culverts, downed trees and obstructive vegetation that could be mobilized during high flows should be removed. Additionally, a downed tree in the channel downstream of Carpinteria Avenue will be removed so the water can flow through the system unobstructed.

**Project Description:**

Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

**Brushing:** A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
A nonnative acacia branch is down in the active channel and will be removed.

**Section 2:**
There is a down tree limb just below the culvert that will be removed. Sediment has also accumulated in the culvert and has reduced the capacity to approximately 25%. Using an excavator or backhoe staged on the road above, an area of 4’W x 2-3’D x 15’L will be desilted, removing approximately 6 cy of material. Material will be taken to an upland disposal site. This project will result in no impact to native vegetation as there is none within the desilting footprint.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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</tr>
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<td>A-1</td>
</tr>
<tr>
<td>EIR sections 5.5.2, 5.5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td>N-A</td>
<td>N-1</td>
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<tr>
<td>EIR sections 5.6.2, 5.6.3</td>
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<tr>
<td><strong>Visual</strong></td>
<td>V-A</td>
<td>V-1</td>
</tr>
<tr>
<td>EIR sections 5.9.2, 5.9.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Project Specifics:**
The project will take 1 day to complete.
MARIA YGNACIO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins downstream of Old San Marcos Road approximately 500 feet upstream of Via
Regina, and terminates just upstream of the confluence with Atascadero Creek.

Setting:
Inspected on March 27, 2018.

Maria Ygnacio Creek originates in the foothills of the Santa Ynez Mountains and drains a 4,535
acre watershed capable of producing 7,200 cfs during a 100 year return period precipitation event.

Maria Ygnacio Creek is characterized by steep banks vegetated with native and ornamental
species such as willow, mulefat, sunflower, periwinkle and pepper trees. Portions of the banks
are denuded of vegetation and do not provide riparian habitat while other portions of the creek
contain high quality habitat with a mature canopy comprised of willow, oak, sycamore and
cottonwoods. Land use adjacent to the creek is residential and agriculture with varying
setbacks from the riparian corridor. In some cases, backyards extend to the base of the creek
banks, while other areas (downstream of Hollister Avenue) the riparian corridor is fairly wide
and intact. In the upper reaches of the creek the channel bottom contains cobbles interspersed
with gravel and silt while other areas are sandy silt without larger cobbles or rocks.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for
the Updated Routine Maintenance Program, the District has been tracking and reporting the
impacts and associated restoration on creeks included in each Annual Routine Maintenance
Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to
more easily display and track the District’s restoration efforts.

The District has 1.18 acres of surplus restoration on Maria Ygnacio Creek associated with
several large restoration sites installed since 2003.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002/2003</td>
<td>1,060</td>
<td>7,500</td>
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<td>6,440</td>
</tr>
<tr>
<td>2003/2004</td>
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<td>0</td>
<td>4,230</td>
</tr>
<tr>
<td>2005/2006</td>
<td>1,425</td>
<td>0</td>
<td>0</td>
<td>2,805</td>
</tr>
<tr>
<td>2006/2007</td>
<td>800</td>
<td>1,800+1.17 acres</td>
<td>1.21 acres</td>
<td>1.25 acres</td>
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<tr>
<td>2007/2008</td>
<td>375</td>
<td>0</td>
<td>0</td>
<td>1.24 acres</td>
</tr>
<tr>
<td>2009/2010</td>
<td>1,975</td>
<td>0</td>
<td>0</td>
<td>1.19 acres</td>
</tr>
<tr>
<td>2011/2012</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.19 acres</td>
</tr>
<tr>
<td>2013/2014</td>
<td>345</td>
<td>0</td>
<td>0</td>
<td>1.19 acres</td>
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<tr>
<td>2015/2016</td>
<td>340</td>
<td>0</td>
<td>0</td>
<td>51,400</td>
</tr>
</tbody>
</table>
### Engineering Analysis:
Removing obstructive vegetation from the bankfull channel cross-section (active channels) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel and downed trees can become mobilized during flood flows, raising the water surface elevation as well as plugging bridges and culverts located downstream. The bankfull discharge* for Maria Ygnacio Creek is approximately 363 cfs. With a velocity of approximately 6 fps and a typical depth of 3’, the width of clearing should be 20’ to maintain channel equilibrium.

* As defined in “Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

### Project Description:
Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access.

**Brushing:** A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
A landslide has occurred on the right bank leaving an 8”DBH by 24’ willow growing in the channel that will be removed. This size tree requires a 10-1 mitigation. In order to fulfill this, 20 willow poles will be taken from the willow when it is being removed and planted on the right bank outside of the active channel. This will also aid in stabilizing the bank that has failed.
Section 2:
There is a down 10"DBH by 30’ alder and 3 down willows that will be removed from the active channel. This is an area where LWD will not be left in the channel.

Section 3:
In a 4’ by 30’ area within the active channel, 50 square feet of mulefat is growing and will be brushed. This will result in 50 square feet of mitigation.

Section 4:
The creek is channel is narrow in this reach due to a landslide on the right bank and flows are being directed toward the left bank which is nearly vertical and a pipe and wire structure has been undermined here. Using an excavator or dozer, a cobble bar just downstream will be pushed into the undermined bank. Then an approximately 6’W by 75’L section of the right bank which has encroached into the channel will be pushed to the left and placed over and mixed with the cobble. The right bank is vegetated with mostly poison oak which will be allowed to reestablish on the newly established left bank. Willow cuttings will be placed behind the pipe and wire to help secure the new bank area. The channel will be dry during maintenance activities.

This will result in 200 square feet of impacts to native mitigation which will be offset by planting 200 square feet of vegetation onsite.

Section 5:
Two down willows will be removed from the active channel.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
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Mitigation Measures:
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<td><strong>Fish, Aquatic Species, and Wildlife</strong>&lt;br&gt; EIR sections 5.4.2, 5.4.3</td>
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<tr>
<td><strong>Visual</strong>&lt;br&gt; EIR sections 5.9.2, 5.9.3</td>
<td>V-A</td>
<td>V-1</td>
</tr>
</tbody>
</table>

*Residual Impacts:*
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 5 days to complete.
SECTION 3

SECTION 4

SECTION 5
MISSION CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins in Rocky Nook Park and terminates downstream of Montecito Street.

Setting:
Inspected on March 27, 2018.

Mission Creek originates in the foothills of the Santa Ynez Mountains and drains a 7,589 acre watershed capable of producing between 5,800 and 7,500 cfs during a 100 year return period precipitation event.

The maintenance area of Mission Creek begins at Rocky Nook Park and continues downstream through the Santa Barbara Museum of Natural History, residential areas and the downtown corridor of Santa Barbara. The creek network includes several road crossings, bridges, culverts, and storm drains within the maintenance area. Adjacent land use includes medium and high density residential, commercial, and parks.

Within Rocky Nook Park and the Museum property, riparian vegetation is a mix of native willows, bay, sycamore, elderberry, ash, and patches of non-native ivy, arundo, and other non-native species. Substrate is large cobbles and boulders. As Mission Creek enters the urban areas of downtown Santa Barbara, non-native species become more predominant with nasturtium and other landscape species encroaching into the creek from adjacent residences. Portions of the creek are lined with hard bank protection on one or both sides.

At Arrellaga Street and downstream to Canon Perdido Street, Mission Creek enters a concrete lined channel that does not typically require extensive maintenance or management. From Canon Perdido to the Santa Barbara train station, Mission Creek passes under several bridges and partially lined channels. At several bridges, cattails, bulrush, sedges, and watercress have colonized the creek invert, in some cases with nearly 100% cover.

The lower portions of Mission Creek are degraded with trash, debris, human waste, and invasive species without much riparian canopy. However, the condition of the creek is improving, most likely due to efforts by the City of Santa Barbara and the County’s Project Clean Water. Mission Creek features several restoration projects and arundo removal areas along the maintenance area.

The creek was wet through the majority of the maintenance areas during the assessment.

Mission Creek is designated critical habitat for the Southern California Distinct Population Segment of steelhead (Oncorhynchus mykiss). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries
Service (NMFS), which describes the District’s approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

The District’s Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width, including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel. The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper, and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

With the possible exception of areas within Oak Park and near the Natural History Museum, Mission Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bankfull width cannot be tolerated due to flooding and/or erosion concerns. The creek is very urban in the maintenance reach with low banks and undersized culverts.

**Revegetation:**
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
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Engineering Analysis:
Removing obstructive/silt trapping vegetation from the bankfull channel cross-section (active channel) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel and downed trees can become mobilized during flood flows, raising the water surface elevation as well as plugging bridges and culverts located downstream.

The bankfull discharge* for Mission Creek upstream of Highway 101 is approximately 351 cfs. With a velocity of approximately 6 fps and a typical depth of 2.5’, the width of clearing should be 24’ to maintain channel equilibrium.

* As defined in "Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams", URS Corporation-March 2002.

Project Description:

Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

Limbing/Down trees or limbs: A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

Brushing: A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

Mitigation: Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

Section 1:
A dead tree has fallen into the channel and will be removed.

**Section 2:**
A 14”DBH by 40’ multi-trunk willow is down and will be removed from the channel.

**Section 3:**
Nonnative tree of heaven are growing in a 5’ by 100’ area of the active channel and will be brushed.

**Section 4:**
Eucalyptus sprouts and 25 square feet of willow sprouts will be brushed, resulting in **25 square feet of mitigation**

**Section 5:**
200 square feet of Sandbar willow is growing in a 5’ by 50’ area on the left side of the channel and will be brushed. 100 square feet of mitigation has already been accounted for under the 14/15 AP, **so this will result in 100 square feet of new mitigation.**

**Section 6:**
A down willow will be removed from the channel.

**Section 7:**
200 square feet of willow sprouts are growing in the active channel and will be brushed. 50 square feet of mitigation was accounted for in Section 19 of the 15/16 AP. **This will result in 150 square feet of new mitigation.**

**Section 8:**
500 square feet of willow sprouts are growing on sediment on the left side of this concrete channel and will be brushed. This section was previously mitigated for under Section 20 of the 15/16 AP.

**Mission Channel Habitat Improvement:**
This section represents a joint project between the District and the City of Santa Barbara Creeks Division. The District and City have developed a project to improve shading and native riparian habitat along the downtown corridor of Mission Creek. The project will remove invasive species and help maintain cooler water temperature within the newly constructed fish-passage channel through this reach.

The project includes two reaches along the existing concrete-lined portions of the Creek. The upper liner runs from Los Olivos Street to Pedregosa. The work in this reach includes removing several dead snags from the upper banks, as well as removal of approximately 25 non-native myoporum, eucalyptus, landscape yucca, arundo, palms, pine trees, pepper trees, and a cluster of English ivy. Approximately 70 native trees will be planted to replace the non-native trees as well as to fill gaps in the canopy. Existing native oak sprouts will be maintained in place. Removal and planting will occur along both sides of the upper banks, leaving a 5-foot gap between the existing concrete and any new trees.

The lower section runs from Arrellaga Street downstream to Canon Perdido Street. In this section, approximately 60 trees would be removed (dead snags, myoporum, pines, palms, eucalyptus, tree tobacco, pepper trees, ash, and arundo colonies). Approximately 250
new trees would be installed to replace the removed trees and fill existing gaps in the canopy. Removals and planting will occur along both sides of the channel.

The District and City have worked together to identify priority areas for removal and new plantings within the reaches. Some areas cannot be planted due to access constraints, maintenance concerns, or proximity to roadways or culverts. Tree removal will be performed by District crew, City crew, California Conservation Corps, and contractor crews, using chain saws and hand tools. Native trees will be installed from acorns and container stock. Species will include mostly coast live oak, sycamores, with a few California bay trees, alder, and willows at locations that are appropriate for these species. The crews will install an irrigation system, connected to City water lines, running through PVC pipes and drip lines. Some portions of the irrigation system will be buried shallowly to protect the pipe from damage; other lines will run along the ground surface. The area will be watered and maintained for 3 to 5 years, or until the trees are well-established. Trees planted by the District will be credited for future revegetation and replacement trees according to RWQCB and DFG mitigation ratios as described in the Annual Plan permits.

**Impact Analysis and Mitigation Measures:**

Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

**Impacts:**

Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**

Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.
<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydrology</strong></td>
<td>H-A</td>
<td>H-1</td>
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<td>EIR sections 5.1.2, 5.1.3</td>
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<td><strong>Water Quality</strong></td>
<td>WQ-A, WQ-B, WQ-C</td>
<td>H-1, B-2, W-2, W-4, W-6, W-7, W-8,</td>
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<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
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<tr>
<td><strong>Wetlands, Riparian Habitat, and Rare Plants</strong></td>
<td>WRR-A</td>
<td>B-1, B-2, B-3</td>
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<tr>
<td><strong>Fish, Aquatic Species, and Wildlife</strong></td>
<td>FAW-A, FAW-F, FAW-I</td>
<td>B-1, B-2, B-3, B-5, W-1, W-2,</td>
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*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 5 days to complete.
Mission Creek-A

Legend

Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and omissions may occur. Sources used in creating the database may be referenced in the map. Santa Barbara County shall not be responsible for errors or omissions in the database. Santa Barbara County will not be liable for any loss or injury caused by information provided or omitted from this database. The level of accuracy is unknown for the boundaries shown herein and does not indicate measurement nor values, bearings or distances.
SECTION 4

SECTION 5

SECTION 6

SECTION 7

SECTION 8

Mission Creek-B

Legend

Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and name changes may have occurred since the map was produced. The map contains only a subset of data points. This map is intended for the general public, and the level of accuracy is estimated for the purposes of identifying general areas and does not represent the exact locations of structures or values, bearings or distances.

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared by:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by: the Public Works Enterprise CIB.
MONTECITO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins in Cold Spring Canyon just south of East Mountain Drive and terminates near Jameson Lane.

Setting:
Inspected April 6, 2018.

Montecito/Cold Springs/Hot Springs Creek originates in the foothills of the Santa Ynez Mountains and drains a 3,890 acre watershed (excluding the La Vereda Creek Watershed) capable of producing 5,700 cfs during a 100 year return period precipitation event.

The maintenance area runs from the debris basin off of Mountain Drive downstream to the culverts at Highway 101, where the creek enters a concrete lined channel. The Montecito Creek corridor was completely denuded by the January 9th debris flow. All vegetation within the creek channel is gone. The District anticipates that native vegetation will regrow within the channel on its own. The creek was wetted and flowing throughout the maintenance area and generally dries up each summer in the vicinity of where the creek flows under Olive Mill Road.

Montecito Creek is designated critical habitat for the Southern California Distinct Population Segment of steelhead (Oncorhynchus mykiss). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries Service (NMFS), which describes the District’s approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

The District’s Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width, including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel. The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper, and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

Montecito Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bank full width may be considered. They will not be considered under the 2018/2019 Annual Plan due to the burned watershed above and potential for future flood flows.
Revegetation: 
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

Restoration opportunities in the Montecito Creek watershed are limited, because the riparian corridor is mostly intact, and because property access is very difficult. The District is pursuing restoration sites in the vicinity, or will use credits from the Los Carneros Mitigation Bank to compensate for the required mitigation.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
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</table>

Engineering Analysis: 
Several culverts and small bridges on Montecito Creek are susceptible to plugging and causing significant flooding of the adjacent areas as well as Highway 101. In an effort to reduce the potential for plugging culverts and bridges, downed trees and obstructive vegetation that could be mobilized during high flows should be removed. The bankfull discharge* for Montecito Creek in the vicinity of East Valley Road is approximately 351 cfs. With a velocity of approximately 7 fps and a typical depth of 2.5’, the width of clearing should be 21’ to maintain channel equilibrium.

* As defined in “Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

Project Description: 
Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.
**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

**Brushing:** A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
A 15” x 40’ sycamore is down on the left side of the channel and will be removed.

**Section 2:**
A down sycamore limb will be removed from the active channel.

**Section 3:**
There is a down 8” x 20’ willow on the right side of the channel that will be removed.

**Section 4:**
A 14” x 10’ down tree will be removed from the right side of the channel directly upstream of the Ashley Road Bridge.

**Section 5:**
When equipment went through this section after the January 9th debris flow to reestablish the channel, the new channel was formed by pushing rock toward the right side of channel to form a bank. The bank has made the new channel to close to the left bank leading to a constricted channel.

Using a dozer or excavator for a length of approximately 275’, the rock will be pushed to the right side approximately 6-8’ to widen the creek channel and reestablish flow near the historic center of channel. There will be no impact to native vegetation as there is none growing in the work area.
Section 6:
A down tree will be removed from the left side of the active channel.

Section 7:
A down 15” x 10’ oak limb will be removed from the active channel.

Section 8:
A metal pipe and wire structure was damaged in the debris flow and is broken, laying in the active channel, and will be removed.

Section 9:
A debris plug on the left side of the channel will be cut up.

Section 10:
There are 2, 2” x 20’ down sycamore trees on the right side of the channel that will be removed.

Section 11:
Nonnative ivy is hanging into the active channel on the right side of channel and will be limbed.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
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<td>Wetlands, Riparian Habitat, and Rare Plants</td>
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*Residual Impacts:*
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 5 days to complete.
Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Montecito Creek-A

This map is for reference only. Although every effort has been made to ensure the accuracy of information, Street and
Natural features and other data sources used in creating the database may be altered or shifted. Santa Barbara
County shall not be liable for any errors, omissions or damages that result from the inappropriate use of
this document. No level of accuracy is claimed for this
boundary line data please allow for minor errors not
values, bearings or distances.
Montecito Creek-B

Legend

Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and
road names shown here are not necessarily complete or current. This map may be out of date due to things that happen after it
was generated. We cannot be held liable for any errors, omissions or damage that may result from the inappropriate use of
this document. No level of accuracy is claimed for the boundaries, street names, streets and other features.

Department

of

Public Works

County

of

Santa Barbara

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled By: the Public Works Enterprise GIS
SAN ANTONIO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
San Antonio Creek originates in the foothills of the Santa Ynez Mountains and drains a 3,230 acre watershed capable of producing 3,700 cfs during a 100 year return period precipitation event.

Setting:
Inspected on March 20, 2018.

From San Antonio Debris Basin downstream to Cathedral Oaks Blvd, the creek flows through County-owned parks and open space. The open space has become very well vegetated since it burned extensively the 1990 Painted Cave fire. Common native species of the creek corridor and adjacent banks are coast live oak, sycamore, willow, elderberry, California wild rose, blackberry, and mugwort. Downstream of Cathedral Oaks Blvd, the condition of the creek corridor is degraded with residences and yards running up to the top of the bank. Native riparian canopy is sparse, while landscape species, vinca, and eucalyptus trees are common. Near the confluence with Maria Ygnacio Creek, the corridor is better vegetated with a native canopy of willow shrubs and trees.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>San Antonio Creek</th>
<th>Annual Plan Year</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002/2003</td>
<td>660</td>
<td>6,000</td>
<td>6,000</td>
<td>5,340</td>
</tr>
<tr>
<td></td>
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<td>2009/2010</td>
<td>900</td>
<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td></td>
<td>(check structure construction = 300 sq. ft at 3:1 replacement ratio)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2012/2013</td>
<td>2,015</td>
<td>0</td>
<td>0</td>
<td>3,545</td>
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<tr>
<td></td>
<td>2015/2016</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>2018/2019</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Engineering Analysis:
Removing obstructive vegetation from the bankfull channel cross-section (active channel) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel and downed trees can become mobilized during flood flows, create debris plugs, raise the water surface elevation as well as plug bridges and culverts located downstream. The bankfull discharge for this section of San Antonio Creek is approximately 270 cfs. With a velocity of approximately 6 fps and a typical depth of 3’, the width of clearing should be 15’ to maintain channel equilibrium.

* As defined in “Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

Project Description:
Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

Limbing/Down trees or limbs: A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access.

Brushing: A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

Mitigation: Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

Section 1:
In this section there is a concrete Arizona crossing with double culverts. A gravel sediment bar (15’ wide x 30’ long x 2’ deep) has accumulated in front of the culverts and has nonnative weeds and tree tobacco growing on it.

An excavator or backhoe will remove the gravel sediment bar and place the material just downstream of the Arizona crossing so it can continue to move through the system and potentially provide spawning gravels for steelhead. There will be no impact to native vegetation.
Section 2:
Mulefat is growing on the right bank and has branches projecting into the active channel for approximately 100’. The mulefat will be limbed.

Section 3:
Lower willow branches will be limbed from the right side of channel.

Section 4:
Lower mulefat branches will be limbed from the right side of channel.

Section 5:
Pepper tree branches will be limbed on the right side of the channel and willow branches will be limbed from the left side of channel.

Section 6:
Mulefat and castor bean will be brushed from the left side of the active channel resulting in 25 square feet of impact to native vegetation.

Section 7:
A dead partially down willow tree will be removed from the left side of the channel.

Section 8:
A 10” x 25’ down willow will be removed from the active channel.

Section 9:
A down willow will be removed from the active channel.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered, at the most, Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.
<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydrology</strong></td>
<td>H-A, H-D, H-E</td>
<td>H-1, H-2, B-7,</td>
</tr>
<tr>
<td>EIR sections 5.1.2, 5.1.3</td>
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<td></td>
</tr>
<tr>
<td><strong>Water Quality</strong></td>
<td>WQ-A, WQ-C, WQ-D</td>
<td>H-1, B-2, B-7, W-4, W-1</td>
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<tr>
<td>EIR sections 5.2.2, 5.2.3</td>
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<td></td>
</tr>
<tr>
<td><strong>Wetlands, Riparian Habitat, and Rare Plants</strong></td>
<td>WRR-D, WRR-E, WRR-F</td>
<td>B-1, H-8, B-4, W-3</td>
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<tr>
<td>EIR sections 5.3.2, 5.3.3</td>
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</tr>
<tr>
<td><strong>Fish, Aquatic Species, and Wildlife</strong></td>
<td>FAW-A, FAW-B, FAW-C, FAW-E, FAW-G</td>
<td>B-1, B-2, B-3, H-1, B-5, B-6, F-1</td>
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<tr>
<td><strong>Air Quality</strong></td>
<td>AQ-A</td>
<td>A-1</td>
</tr>
<tr>
<td>EIR sections 5.5.2, 5.5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td>N-A</td>
<td>N-1</td>
</tr>
<tr>
<td>EIR sections 5.6.2, 5.6.3</td>
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<td></td>
</tr>
<tr>
<td><strong>Visual</strong></td>
<td>V-A</td>
<td>V-1</td>
</tr>
<tr>
<td>EIR sections 5.9.2, 5.9.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 4 days to complete.
San Antonio Creek-Goleta

Legend

Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and site names may not be 100% correct. Sources used in creating the database may not be reflected on this map. Santa Barbara County Flood Control and Water Conservation District shall not be liable for errors, omissions, or damages that may result from the use of this document. No level of accuracy is claimed for the boundaries or their shapes beyond the areas shown on this map.

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared by:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by: the Public Works Enterprise GIS.
SAN JOSE CREEK ROUTINE MAINTENANCE 
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA 
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins 500’ upstream of Patterson Avenue and terminates 300’ upstream of Hollister Avenue.

Setting:
Inspected on April 3, 2018.

San Jose Creek originates in the foothills of the Santa Ynez Mountains and drains a 5,503 acre watershed capable of producing 5,300 cfs during a 100 year return period precipitation event.

Creek flow was minimal and any flow went subsurface approximately half way through the creek length. Many of the pools are usually at least 3 feet deep with several up to 5 feet deep, but were much shallower this year with some dried up due to consecutive drought years and high sediment loaded flows with 2017 rains. The lower portions of the creek, below Cathedral Oaks Road, usually dry up towards the later part of the summer.

San Jose Creek is characterized by a relatively deep channel with banks vegetated with many mature sycamores, cottonwoods, oaks and willows and a well developed understory of poison oak, blackberry, wild rose and numerous non-native species such as nasturtium and grasses. San Jose Creek contains some of the best riparian habitat on the south coast due to the buffer zones left between the creek and residential areas. Downstream of Highway 101, the creek becomes somewhat degraded with development, lawns, or pavement all the way to the tops of the banks in some areas, along with a much narrower riparian corridor.

Downstream of Hollister Avenue, San Jose Creek transitions into a concrete lined channel and then into the Goleta Slough system.

San Jose Creek is designated critical habitat for the Southern California Distinct Population Segment of steelhead (Oncorhynchus mykiss). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries Service (NMFS), which describes the District’s approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

The District’s Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width, including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel. The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper,
and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

San Jose Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bankfull width may be considered.

**Revegetation:**
Beginning with the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District began a new reporting and accounting program for the restoration component of the Annual Routine Maintenance Program. Since that time, the District has been tracking the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>San Jose Creek</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,380</td>
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<td>12,600</td>
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<td>12,600</td>
<td>6,200</td>
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<tr>
<td></td>
<td>18,580</td>
<td>18,580</td>
<td>18,580</td>
<td>18,580</td>
</tr>
</tbody>
</table>

**Engineering Analysis:**
Removing obstructive vegetation from the bankfull channel cross-section (active channel) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel and downed trees can become mobilized during flood flows, raising the water surface elevation as well as plugging bridges and culverts located downstream. The bankfull discharge for this portion of San Jose Creek is approximately 375 cfs. With a velocity of approximately 6 fps and a typical depth of 3’, the width of clearing should be 21’ to maintain channel equilibrium.

* As defined in “Regional Curves for Bankful Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.
**Project Description:**

Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

**Brushing:** A crew with chainsaws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
25 square feet of willow sprouts are growing in a 10’x30’ area in the active channel and will be brushed. This section was previously mitigated for under Section 1 of the 15/16 AP.

**Section 2:**
A down willow will be removed from the right side of the active channel.

**Section 3:**
A down willow limb will be removed from the active channel.

**Section 4:**
Multiple down willows will be removed from the active channel.

**Section 5:**
A down willow limb will be removed from the active channel.

**Section 6:**
A down willow limb will be removed from the left side of channel.

Section 7: 
50 square feet of cottonwood sprouts are growing in a 5'x35' area of the active channel and will be brushed. This section has been previously mitigated for under Section 7 of the 14/15 AP.

Section 8: 
A 10"x40' dead down alder will be removed from the active channel. This tree is too brittle to be left as KWD.

Section 9: 
A down willow limb will be removed from the active channel.

Section 10: 
A down willow is leaning on a live upright willow. The down willow will be removed and the live willow will be left in place.

Section 11: 
A down willow will be removed from the active channel.

Section 12: 
A down willow limb will be removed from the active channel.

Section 13: 
A down alder will be removed from the active channel.

Section 14: 
2 down willows will be removed from the active channel.

Section 15: 
2 down willow limbs will be removed from the active channel.

Section 16: 
A down willow limb will be removed from the active channel.

Section 17: 
A down willow limb will be removed from the active channel.

Section 18: 
A down willow limb will be removed from the active channel.

Section 19: 
A down willow limb will be removed from the active channel.

Section 20: 
A down willow limb will be removed from the active channel.

Section 21: 
Elderberry is projecting into the channel from the right bank and will be limbed.
Section 22:
A down willow limb will be removed from the active channel.

Section 23:
Down eucalyptus branches will be removed from the active channel.

Section 24:
A down eucalyptus limb will be removed from the active channel.

Section 25:
25 square feet of sandbar willow are growing in the active channel and will be brushed. This section was mitigated previously under Section 21 of the 13/14 AP.

Section 26:
A down willow will be removed from the active channel.

Section 27:
Nonnative arundo donax will be brushed.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology EIR sections 5.1.2, 5.1.3</td>
<td>H-A</td>
<td>H-1</td>
</tr>
<tr>
<td>Water Quality EIR sections 5.2.2, 5.2.3</td>
<td>WQ-A, WQ-B</td>
<td>H-1, B-2, W-2, W-6, W-7, W-8, W-4</td>
</tr>
<tr>
<td>Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3</td>
<td>WRR-A</td>
<td>B-1, B-2, B-3</td>
</tr>
<tr>
<td>Fish, Aquatic Species, and Wildlife</td>
<td>FAW-A, FAW-F, FAW-I, FAW-J</td>
<td>B-1, B-2, B-3, H-1, W-2, W-1, W-4</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------</td>
<td>----------------------------------</td>
</tr>
</tbody>
</table>

**Project Specifics:**
This project will take 4 days to complete.
Annual Routine Maintenance Plan
Fiscal Year 2018-2019

San Jose Creek-C

Legend

* Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, street and
site names, and other details used in creating the database may be reflected on this map. Santa Barbara County shall
not be liable for any errors, omissions, or damages that result from the inappropriate use of this document. No
level of accuracy is claimed for this bounded data shown herein and data should not be used for legal
purposes, hearings or decisions.
Location:
The project starts 200 feet downstream of Cathedral Oaks Road and terminates near the intersection of Fairview Road and Matthews Street.

Setting:
Inspected on April 3, 2018.

San Pedro Creek originates in the foothills of the Santa Ynez Mountains and drains a 4,555 acre watershed capable of producing 6,200 cfs during a 100 year return period precipitation event.

The maintenance area of San Pedro Creek runs from Cathedral Oaks Blvd near Carlo Drive, through residential Goleta and under Highway 101, and along Fairview Avenue near the Santa Barbara Airport. The upper portion of the maintenance area near Cathedral Oaks Blvd is characterized by steep banks with a well-developed canopy of willow, cottonwood, and sycamore along with some non-native eucalyptus and pepper trees. Several hundred feet downstream of Covington Way, the natural bottom of the creek feeds into a concrete trapezoidal channel for several hundred feet. After flowing under Highway 101, the channel bottom returns to a natural bottom. From the railroad bridge downstream to Hollister Avenue and beyond, the creek banks are sparsely vegetated with willows and cottonwoods.

San Pedro watershed typically has a high sediment load. The upper reaches of the San Pedro watershed (outside of the annual maintenance area) were burned in summer 2008 during the Gap Fire. A total of 63% of this watershed was burned. As part of emergency response and flood preparation, the District and partner agencies performed vegetation brushing, sediment excavation, and installed a debris rack. In the years following the Gap Fire, the stream channel showed high sedimentation. In 2018 creek inspections the sedimentation was substantially higher than years directly following the Gap Fire. This high sediment load may be directly related to the historic 5-year drought.

San Pedro Creek is designated critical habitat for the Southern California Distinct Population Segment of steelhead (Oncorhynchus mykiss). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries Service (NMFS), which describes the District’s approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

The District’s Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width, including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel.
The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper, and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

San Pedro Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bankfull width may be considered.

**Revegetation:**

Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>Annual Plan Year</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
</tr>
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<tbody>
<tr>
<td>2002/2003</td>
<td>6,680</td>
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<td>8,620</td>
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<td>0</td>
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</tr>
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**Engineering Analysis:**
The culvert on San Pedro Creek at Calle Real is susceptible to plugging causing significant flooding of the adjacent residential areas. In an effort to reduce the potential for plugging the culvert, obstructive vegetation that could be mobilized during high flows should be removed. The bankfull discharge* for San Pedro Creek downstream of Cathedral Oaks Road is approximately 234 cfs. With a velocity of approximately 6 fps and a typical depth of 2.5’, the width of clearing should be 16’ to maintain channel equilibrium.
The creek downstream of the UPRR track is relatively flat and prone to sedimentation. The area in the vicinity of Fairview and Hollister Avenue is very prone to siltation and flooding (including major portions of Old Town Goleta) so maintaining maximum hydraulic capacity is essential. Maintaining the channel bed clear of vegetation including breaking up any root mass that develops will help maintain capacity as well as provide for efficient sediment transport. Due to lower velocities associated with the relatively flat slope in this section, the bankfull channel width is approximately 20’ upstream of Hollister. The bankfull channel width is approximately 34’ downstream of Hollister due to the increase in watershed area including Las Vegas Creek.

As defined in “Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

**Project Description:**

Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

**Brushing:** A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
40 square feet of cottonwood sprouts will be brushed from the active channel. This section was previously mitigated for under Section 1 of the 13/14 AP.
Section 2:
Willow branches are projecting into the active channel from the right bank and will be limbed.

Section 3:
Willow branches are projecting into the active channel and will be limbed.

Section 4:
A down willow limb will be removed from the active channel.

Section 5:
This Section is a recurring project that is performed nearly every year as part of routine maintenance. Beginning downstream of the UPRR Bridge and continuing downstream to Matthews Street, the channel bed will be disced to improve sediment transport through this reach. Discing involves a tractor or light dozer pulling a blade over the compacted sediment to loosen accumulated rocks and sediment. The channel bed will be disced for a width of approximately 20’ upstream of the confluence with Las Vegas Creek and 40’ just downstream of the confluence and then slowly tapers back down to 20’ between Las Vegas Creek and Matthews Street. The creek widens into a sediment-retention basin immediately downstream of James Fowler Road and dislodging sediment in this section will facilitate sediment transport to the basin where it can be effectively managed, as part of the Goleta Slough Dredging Program, to prevent backing up the Goleta Slough system. While the channel is mostly dry during the summer months some water is released by the discing operation so turbidity will be managed by creating a temporary diversion trench along one side of the channel to contain any water before discing begins. Haybales, geotextile fabric and/or silt fabric will be placed at the downstream end of the project area to retain water. The haybales/silt fabric will be left in place at least one day after the completion of the project to allow suspended sediments to settle out of the water column.

An application of Aquamaster herbicide may be applied to silt trapping vegetation in the streambed to inhibit regeneration. Herbicide may be applied in the spring and summer. The creek bed had minimal almost exclusively non-native vegetation growing in this section. A few native species, such as mulefat sprouts, willow sprouts, and sedges, are scattered sporadically in a few areas. Less than 1% of the work area has native vegetation present. The work will result in a total of up to 500 square feet of temporal impacts to native vegetation.

This area was worked in the 12/13 AP and the impacts have previously been accounted for, therefore no new mitigation is required at this section.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are
included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Mitigation Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology EIR sections 5.1.2, 5.1.3</td>
<td>H-A</td>
<td>H-1</td>
</tr>
<tr>
<td>Water Quality EIR sections 5.2.2, 5.2.3</td>
<td>WQ-A, WQ-B</td>
<td>H-1, B-2, W-2, W-6, W-7, W-8,</td>
</tr>
<tr>
<td>Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3</td>
<td>WRR-A</td>
<td>B-1, B-2, B-3</td>
</tr>
<tr>
<td>Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3</td>
<td>FAW-A, FAW-F, FAW-I</td>
<td>B-1, B-2, B-3, B-5, W-1, W-2</td>
</tr>
<tr>
<td>Public Health EIR section 5.10</td>
<td>PH-A</td>
<td>W-2</td>
</tr>
</tbody>
</table>

*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 5 days to complete.
Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared by:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.
SAN ROQUE CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins in Stevens Park and terminates near the confluence with Barger Creek.

Setting:
Inspected on March 20, 2018.

San Roque Creek originates in the foothills of the Santa Ynez Mountains and drains a 3,032 acre watershed capable of producing 4,300 cfs during a 100 year return period precipitation event.

The portion of San Roque Creek included in this project is characterized by highly urbanized surroundings with residential and commercial development up to the top of the bank on both sides. Even though most of the businesses and residences are close to the top of the creek banks, the riparian corridor includes many very large sycamore and oak trees for a majority of the channel length. Most of the understory species are non-native ornamentals planted as backyard landscaping. The creek was dry from Stevens Park downstream to just above State Street and then has minimal flows, most likely from local business/landscaping runoff.

San Roque Creek is designated critical habitat for the Southern California Distinct Population Segment of steelhead (Oncorhynchus mykiss). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries Service (NMFS), which describes the District’s approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

The District’s Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width, including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel. The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper, and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

San Roque Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bankfull width cannot be tolerated due to flooding and/or erosion concerns. San Roque is very urban with structures near the top of bank with a very shallow channel and impassable culverts at Highway 101.
Revegetation
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

San Roque Creek meets with Barger Creek to form Arroyo Burro. These three watersheds are each part of the District’s Annual Maintenance Plan. Suitable mitigation sites are becoming more scarce in some parts of the District’s management areas; therefore mitigation for San Roque, Barger, and Arroyo Burro may be combined or shared across these watersheds.

<table>
<thead>
<tr>
<th>San Roque Creek</th>
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<tbody>
<tr>
<td><strong>Annual Plan Year</strong></td>
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<td>2004/2005</td>
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<td>2007/2008</td>
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</tr>
<tr>
<td>2016/2017</td>
</tr>
<tr>
<td>2018/2019</td>
</tr>
</tbody>
</table>

*This site was planted to mitigate impacts in Arroyo Burro watershed

Engineering Analysis:
Removing obstructive vegetation from the bankfull channel cross-section (active channel) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel and downed trees can become mobilized during flood flows, create debris plugs, raise the water surface elevation as well as plug bridges and culverts located downstream. The bankfull discharge* for this section is approximately 200 cfs. With a velocity of approximately 6 fps and a typical depth of 3’, the width of clearing should be 12' to maintain channel equilibrium.

* As defined in “Regional Curves for Bankful Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

Project Description:
Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

Limbing/Down trees or limbs: A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or
left on the upper banks, depending on access. If a down tree or limb is smaller than 4” diameter or shorter than 6’ long then no dimensions will be included in the description because it does not meet the threshold for either LWD or KWD.

**Brushing:** A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
3 sycamores and 1 willow that were brushed in the 16/17 AP are resprouting and will be brushed again. This section was mitigated for under Section 1 of the 16/17 AP.

**Section 2:**
A grape vine is hanging into the active channel from the right bank and will be limbed.

**Section 3:**
A down willow limb will be removed from the active channel.

**Section 4:**
A down willow limb will be removed from the active channel.

**Section 5:**
A debris plug on a bridge splitter wall will be cut up and a nonnative bush is overhanging into the active channel and will be limbed.

**Section 6:**
A down willow limb will be removed from the active channel.

**Section 7:**
A root wad in the center of channel is accumulating debris and will be cut up.

**Impact Analysis and Mitigation Measures:**
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Program EIR.

**Impacts:**
Impacts identified for this project have been taken directly from the Impact Summary Table of
the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

**Mitigation Measures:**
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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<tr>
<th>Resource</th>
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<td>B-1, B-2, B-3</td>
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<tr>
<td><strong>Fish, Aquatic Species, and Wildlife</strong></td>
<td>FAW-A, FAW-F, FAW-I, FAW-J</td>
<td>B-1, B-2, B-3, H-1, W-2, W-1, W-4</td>
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<td>PH-A</td>
<td>W-2</td>
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<td>EIR section 5.10</td>
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*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

**Project Specifics:**
The project will take 1 day to complete.
TECOLOTITO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins downstream of Glen Annie Road and terminates upstream of Los Carneros Road.

Setting:
The creek was inspected on March 15, 2018.

Tecolotito Creek originates in the foothills of the Santa Ynez Mountains and drains a 3,858 acre watershed capable of producing 4,600 cfs during a 100 year return period precipitation event.

From the area upstream of Cathedral Oaks Blvd. downstream to Del Norte Drive the creek has well vegetated steep banks. Coast live oak, eucalyptus and willow shade the creek channel. The creek usually contains at least some water year round. Land use is residential and open space with Glenn Annie Golf Course located upstream and to the west of Cathedral Oaks Blvd. From Del Norte Drive downstream to Highway 101 the creek flows through an on-ramp/off-ramp intersection to the highway with portions of the channel completely concrete lined. Downstream of the northbound 101 on-ramp, the creek is concrete lined along the south bank. The north bank is vegetated with willows which do provide some shading to the invert. The creek invert is vegetated with occasional clumps of cattails. Downstream of Highway 101 the creek is lined with pipe and wire revetment. This entire stretch of the drainage contains a well vegetated canopy that has been restored by the District and nearby developments over the last ten years. The land use adjacent to the creek downstream of the Highway is commercial. Land use upstream of Glen Annie Road is residential and open space.

Revegetation:
Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

<table>
<thead>
<tr>
<th>Tecolotito Creek</th>
<th>Temporal Impacts to Native Vegetation (square feet)</th>
<th>Proposed Restoration (square feet)</th>
<th>Restoration Implemented (square feet)</th>
<th>Surplus Restoration (square feet)</th>
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<tr>
<td>2018/2019</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
**Engineering Analysis:**
Tecolotito Creek is prone to sedimentation and associated colonization by obstructive vegetation throughout the project reach. The creek has been improved to convey the Q100 and allow for adjacent development. Silt trapping vegetation consisting primarily of cattails and bulrush are growing in the active channel reducing capacity. Removing silt and silt trapping vegetation from the bankfull channel cross-section (active channel) is important to maintain the design capacity of the creek. The bankful discharge for this section is approximately 300 cfs. With a velocity of approximately 6 fps and a typical depth of 3’, the width of clearing should be 17’ to maintain channel equilibrium.

* As defined in “Regional Curves for Bankfull Channel Dimensions-Selected South Coast Streams”, URS Corporation-March 2002.

**Project Description:**
Below is an explanation of typical Annual Plan maintenance practices for vegetation removal and mitigation. These explanations will not be included within each corresponding project description section. If the section number in the Annual Plan requires more explanation than below, it will be included within that individual section in the project descriptions. Otherwise, please refer to these descriptions for typical maintenance and mitigation.

**Limbing/Down trees or limbs:** A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation will be cut up and hauled out of the creek or left on the upper banks, depending on access.

**Brushing:** A crew with chain saws and loppers will brush the (insert vegetation name). The vegetation will be removed with hand tools and an application of Aquamaster herbicide will be applied to inhibit regeneration. A follow-up application of herbicide may be done in the spring/summer if the vegetation begins to resprout and needs additional treatment.

**Mitigation:** Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District’s Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

Brushing and complete live tree removals (native vegetation only) are mitigated for by the District with riparian restoration. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in that section’s description. If no mitigation quantity is included in a Section description, no mitigation is required.

**Section 1:**
A debris plug is within the active channel and will be cut up.

**Section 2:**
This length of 200’ is adjacent to Highway 101 and has concrete lined banks with and earthen bottom. Cattail is growing in the invert in an area of 3-4’ wide x 200’ long. A gradall working from
the access road on top of the left bank will mow the cattail. This will result in no impact to native vegetation as the cattail will not be sprayed.

Section 3:
A down willow limb will be removed from the active channel.

Section 4:
A down willow limb will be removed from the active channel and nonnative tree of heaven will be brushed.

Section 5:
A down willow limb will be removed from the active channel.

Section 6:
Willow branches are projecting into the active channel and will be limbed. Nonnative palm trees will be brushed.

Section 7:
A down willow limb will be removed from the active channel.

Section 8:
50 square feet of cottonwood sprouts are growing in a 5’x20’ area in the active channel and will be brushed. This will result in 50 square feet of mitigation.

Section 9:
A down willow limb will be removed from the active channel and nonnative palm trees will be brushed.

Section 10:
A down willow limb will be removed from the active channel.

Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled “Impacts and Mitigation Measures” for definitions of the specific impacts and mitigation measures.

Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control
Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

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<th>Mitigation Measures*</th>
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<td>B-1, B-3,</td>
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<tr>
<td>Visual EIR sections 5.9.2, 5.9.3</td>
<td>V-A</td>
<td>V-1</td>
</tr>
</tbody>
</table>

**Project Specifics:**
This project will take 3 days to complete.
This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and omissions may exist. Sources used in creating the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from the inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown herein and these lines are not intended for valuation, hearings or distances.

Tecolotito Creek

Legend

- Sites
- Lengths

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared By:
The Santa Barbara County Flood Control Water Conservation District
Compiled By: the Public Works Enterprise GDB