ANNUAL ROUTINE MAINTENANCE PLAN

FISCAL YEAR 2016-2017

Prepared by

The Santa Barbara County Flood Control and Water Conservation District

SANTA BARBARA COUNTY FLOOD CONTROL DISTRICT
HISTORY AND PROCESS FOR THE
ANNUAL ROUTINE MAINTENANCE PLAN

ORIGIN OF THE PROGRAM

The Santa Barbara Flood Control District's (District) Annual Routine Maintenance Program was developed after many years of environmental study and coordination with the public, environmental groups, and permitting agencies. In 1987, the Board directed District staff to prepare a Program EIR on routine maintenance activities to: *"… provide a systematic approach to reviewing future flood control activities…offer feasible mitigation and/or alternative maintenance techniques which provide adequate protection against flood damage in the least environmentally damaging way."* In May 1990, a draft Program EIR was issued for public review. A final Program EIR was issued in March 1991 which identified an Environmentally Superior Alternative. The PEIR included numerous mitigation measures (called Standard Maintenance Practices) to avoid or reduce specific impacts to botanical resources, wildlife, water quality, stream geomorphology, cultural resources, and aesthetics.

In June 1991, the Board convened an Interagency and Public Advisory Committee (IPAC) to work with the District to develop a revised Maintenance Program, based on the EIR's Environmentally Superior Alternative. The IPAC met on seven occasions and developed, through a consensus process, a revised list of Standard Maintenance Practices (SMPs) and an annual planning and project approval process. Together, these products represented the revised Environmentally Superior Alternative that was recommended to the Board. The project was ultimately approved in March 1992 when an Addendum to the 1991 Program EIR was completed.

In 2001, after successfully implementing the Maintenance Program for nine years, the District determined that the Program needed revision for the reasons described below.

- Include new information about threatened and endangered species.
- Address water quality impacts in a more sophisticated manner.
- Consider new analytic tools for assessing channel capacity and geomorphology.
- Include the Lower Santa Ynez River maintenance into the annual program.
- Replace the Standard Maintenance Practices with newly written mitigation measures that directly correlate to identify impacts.
- Improve the format and organization of the Program EIR.
- Include a variety of bank and grade stabilization measures in the program.
- Update the Habitat Restoration Plan
- Assess the Impacts of the Los Carneros Mitigation Bank.

Following public review and comment in 2001 a Final Program Environmental Impact Report for the Updated Routine Maintenance Program was approved by the Board of Supervisors on December 11, 2001.

The 2016/2017 Annual Routine Maintenance Plan marks the 25th Annual Plan that has been implemented since the Program's inception.

The District is providing the following history and process information on the Annual Routine Maintenance Plan to further explain the Program and demonstrate the District's commitment to avoidance, minimization and compensation.

ANNUAL ROUTINE MAINTENANCE PLAN

OBJECTIVES

The objectives of the routine maintenance program are to maintain the capacity of key watercourses in the County, to preserve existing conveyance capacity and prevent the accumulation of obstructing vegetation and sediments that could increase existing flood hazards that could then result in damage to life, and public property and infrastructure. The extent and frequency of maintenance are dependent upon many factors including the availability of funds from individual flood zones, the degree of flood hazard, and the environmental impacts of the maintenance actions. The planning process undertaken to formulate the annual maintenance plan and the maintenance practices that are used by the District first avoid and then minimize environmental impacts to natural habitats, water quality, sensitive species, and natural fluvial processes.

It is extremely important to understand that the implementation of the District's maintenance program, with its approach to avoidance and minimization, avoids the severe environmental impacts of increased flooding, bank erosion, habitat loss, and the associated impacts to water quality that would occur if the District did not provide routine maintenance within key watercourses throughout the county.

PLANNING STEPS AND CRITERIA:

The District's process to determine what maintenance tasks are proposed each year follows the "A*void, Minimize, Compensate*" chain of logic. The process includes field surveys, engineering analysis, natural resource assessment, prioritization, impact assessment, and strategies to modify work methods to balance flood control objectives with environmental protection, riparian habitat health, sensitive species protection, and water quality protection. Also considered are qualitative criteria made by experienced Flood Control staff.

It is important to note that each work site is controlled by many factors, site-specific parameters, anticipated weather events, watershed processes, and overall County budget constraints.

STEP 1: Field Survey.

Each year in March and April, District staff inspects all of the County's maintained drainages. A total of 67 drainages are specifically inspected (36 on the south coast and 31 in North County) for a total of approximately 105 miles of inspected drainages. The staff includes the Maintenance Superintendent, Environmental Manager, District Biologist, Environmental Planner, and Maintenance staff. For difficult situations, engineering staff or consultants may also participate in the field inspections. The staff discuss maintenance needs and objectives in the field, determines what reasonable alternatives exist, and develops avoidance/minimization/compensation measures for each maintenance task. District environmental staff reviews the sites for sensitive habitat or special status species and determine if further surveys are warranted.

For simple maintenance tasks (eg: Brushing), the standard avoid/minimize/compensate practices from the PEIR and Annual Plan Mitigation Measures are applied. For more complex maintenance tasks (eg: earth-moving or operations in sensitive habitat), District staff develop site-specific strategies to avoid/minimize/compensate for incidental impacts, relying on the PEIR mitigation measures but fine-tuning the work method for each specific site.

Each site in the field is evaluated for criteria such as: height and width of open channel, density/height/and roughness of channel vegetation, depth of accumulated sediment, location/size of fallen limbs and trees, location/size of bridges and culverts, adjacent land uses, flood threats, erosion threats, vegetative cover on banks, flow regime, hydraulics, and comparison with previous year's conditions.

> Example: For removal of obstructive vegetation: Criteria for several south-coast streams include the bank full curves developed by URS in 2002, showing the stream width recommended to maintain channel equilibrium based on the watershed size and geomorphology.
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> Criteria also include: Height of overhanging vegetation (generally woody vegetation hanging below 6 feet within the bank full width can be considered a flood risk as this material can obstruct flows, become dislodged and create debris plugs along the drainage or at culverts or bridges which can lead to flooding and increased erosion along the banks), proximity to culverts or bridges, confined channels in urban areas, known problematic areas—such as undersized culverts, bends in the creek channels, weak spots in creek banks, and areas that frequently accumulate excess sediment. While the District uses the general statement that overhanging vegetation below 6 feet within the bankfull width can be considered a flood risk, not all vegetation within this zone is removed and this type of habitat (overhanging limbs, low canopy, etc) persists within most of the creeks every year. This type of habitat is not eliminated by the District's maintenance program and the removal of overhanging vegetation depends upon individual drainages' field conditions.
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> Problem areas are known based on extensive District experience walking creeks each year and managing flood hazards that have occurred in the past. In developing a work plan for each site, the District considers the degree of native vs non-native vegetation (or bare soil), sensitive habitats, sensitive species, cultural resources, trail crossings, bridges, and water quality parameters.
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> Example: A sediment bar at a bend in an urban area of the watershed, with only non-native cover, upstream of an undersized culvert, in a reach of the creek that has overtopped its banks in recent history or is severely diverting flows towards a bank increasing erosion and threatening riparian habitat on the bank—This site may be treated by excavating and exporting the excess sediment,
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> A sediment bar with the same dimensions, but with native tree cover in the upper rural watershed with no culvert or bridge within ½ mile downstream—This site may be treated by brushing to remove a strip of vegetation to maintain the bank full width (or may not be treated at all on a given year and simply watched to see how it responds from year to year).

As this example shows, no single criterion can be applied in all cases. For each maintenance site, the whole combination of criteria, impacts, and natural resources are considered in developing a work plan. (MINIMIZATION).

STEP 2: Prioritization.
Once the field surveys are completed for each watershed, District staff compiles a list of all proposed tasks in each watershed. Then staff determines which watersheds are in good-enough condition overall that no maintenance will be performed for the year. In a typical year, approximately ½ of the managed watersheds are omitted from all work (AVOIDANCE) because it is determined that flood threats are minimal enough to allow the drainage to remain unmaintained until at least the following year when it will be re-evaluated. The remaining watersheds are prioritized as "High" or "Medium" priority based upon the amount of proposed work and the associated flood threats that the work would eliminate. High priority watersheds are those in which conditions definitely require maintenance for the year. Medium priority watersheds are those that have several maintenance needs, but may be able to last one more year before maintenance is required.

The District evaluates the priority list in terms of severity of maintenance need, staff resources, budget, and workload and decides which watersheds to perform routine maintenance for the year. The remaining watersheds are omitted from maintenance (AVOIDANCE).

STEP 3: Develop Annual Plan/Further Evaluation.

Develop Annual Plan
An Annual Routine Maintenance Plan (Annual Plan) is prepared by the District staff in May and June of each year which includes the following chapters:

1. Introduction; Introduction, List of Creeks by Supervisorial District, and Chronic Maintenance Table.

2. Exempt Facilities; Notice of Exemption and description of exempt drainages.

3. North County Creeks; Individual Project Specific descriptions for each North County drainage to be maintained, including detailed information on the site conditions, biological resources, proposed maintenance actions, impact assessment, mitigation measures, maps, and photographs.

4. South County Creeks; Same as above for South County drainages.

5. CEQA Findings; CEQA Findings for the 2016/2017 Annual Plan.

6. District's Revegetation Plan

7. Impacts and Mitigations; In order to save paper and reduce the size of the Plan, an individualized Impacts/Mitigation Measures Table was developed for each addendum and the complete text of all impacts and mitigation measures is included once under this separate tab.

For those watersheds that are included for maintenance each year, the District then further refines the work methods. All activities that require earth-moving or equipment operating in the creek channel are assessed for access, timing, and the extent of maintenance required (MINIMIZATION). The District Biologist performs a field survey of such sites to determine if sensitive species or habitats are likely to be impacted, and then environmental staff confers with maintenance staff to develop AVOIDANCE and MINIMIZATION measures for each site. At this stage of the process, the District formulates dewatering plans, bio-monitoring requirements, and other BMPs to be applied. The BMPs are derived from the mitigation measures in the PEIR, but are tailored to each specific work site.

Routine maintenance can include brushing vegetation, herbicide application, desilting, shaping, bank protection, repair or creation of check structures, and habitat restoration. Following is a list of general terms used in the project descriptions to describe the vegetation management activities, as required in the 2012 Regional Water Quality Control Board 401B Water Quality Certification:

Brush: The cutting of live vegetation growing in the bottom of the creek within the active flow area. The stumps of the cut vegetation are generally sprayed with herbicide to inhibit regeneration of the live vegetation.
Cut: Same as Brush.
Cut Up: Used to describe cutting up "downed" or fallen (dead) vegetation within the active channel or live vegetation growing in the active channel (as in brush).
Key Woody Debris: KWD is a downed tree, or part thereof that has a length greater than or equal to the wetted channel width, or has an intact root wad. Naturally occurring KWD are intact unmodified trees that have fallen into the bankfull channel having trunk diameters greater than 4 inches.
Large Woody Debris: LWD is classified as pieces of wood measuring greater than 6-feet in length and greater than 4 inches in diameter.
Limb: the trimming or pruning (but not complete removal of the whole tree or shrub) of limbs that are projecting into the active flow area of the channel from vegetation that is growing on the creek bank or outside of the bankfull discharge width. Limbing is done to keep the flow area clear while at the same time retaining vegetation on the creek banks for shading and riparian canopy development.
Trim or Trim Back: Same as Limb.
Remove: Refers to the removal of live or dead vegetation from the active channel. Vegetation can be removed and placed on the banks or completely taken out of the channel and hauled away, depending upon access.
Seedling: A tree less than 3 feet tall and 1" DBH.
Sapling: A tree with DBH between 1-3".

At sites where impacts to riparian vegetation within the channel invert cannot be completely avoided, the District calculates the square footage of impacts to native vegetation and then identifies a location for habitat restoration (COMPENSATION). Often, the restoration occurs at the site of temporary disturbance. At some sites, this is not possible or desired (such as vegetation removal from the floor of the channel). In these cases, an alternate restoration site is developed to offset the impacts (COMPENSATION). Restoration occurs on creek banks first at or near the site where vegetation was removed, second at an alternate site along the drainage, thirdly on a nearby drainage as appropriate and lastly by either participating in Watershed based restoration projects led by other entities as these projects become permitted or by using

credits from the Los Carneros Mitigation Bank (LCMB) which the District formalized in 2004 with the Army Corps of Engineers and began implementing in 2005. The bank has 28 acres that are slated for restoration with 10 acres of riparian vegetation and 18.41 acres of upland habitat. The LCMB Banking instrument allows for a 1:1 credit ratio for riparian habitat and .75:1 credit ratio for upland habitat for a total of 24 acres of total credit availability for the bank. When 3-year success criteria are met in a given restored area, ½ of the available credits for that area can become available and once the 5-year success criteria are met, the remaining half of the credits become available. To date, restoration has been implemented on 6 acres The District has claimed a 4432 square feet of credit from the bank for the 2013/2014 Annual Plan and 2510 for 2014/15, and 3895 for 2015/16 (total to date = 10,837 square feet).

The details of the protective measures and restoration are written into the project descriptions for the Annual Plan.

Between 2002 and 2016 the District has implemented approximately 25.8 acres of restoration throughout the county directly related to the Annual Routine Maintenance Plan. That is made up of 9.4 acres on the south coast and 16.4 acres in North County. Within North County 13.5 of the 16.4 acres is within the Santa Maria River. The 12.3 acres of strictly creek-bank restoration that has been implemented throughout the county, just in the last 12 years, is equivalent to 8.2 miles of creek banks being restored (with an average creek bank site width of 12'). This restoration has occurred in areas that were either devoid of vegetation, were infested with non-natives (giant reed, castor bean, ivy etc.) or were sheer banks that without reshaping and protection, would have remained sheer, unvegetated, and would have continued to erode. This represents a very large improvement to riparian corridor health for water quality, stream shading, wildlife habitat, etc. The District will continue to implement restoration to mitigate temporal impacts to native vegetation for the duration of the Annual Routine Maintenance Program at a 1:1 ratio.

In the past twenty-five years, outside of the Annual Routine Maintenance Plan, and in association with other maintenance activities, the District has also implemented an additional 30+ acres of riparian restoration within Santa Barbara County.

STEP 4: Public Review.
An Annual Plan Summary is posted on the District website during the second week of May and letters are sent to interested individuals, public groups and the regulatory agencies to notify them that the Summary is available for review and comment. Public workshops (one in Santa Maria and one in Santa Barbara) are also held in May. During this period, additional AVOIDANCE/MINIMIZATION measures may be submitted by comment and incorporated into project design.

After initial review and comment, the Annual Plan is finalized and submitted for permits and authorization. The USFWS and NOAA Fisheries review sites which may have listed species present. In some isolated cases, FWS and/or NOAA request additional information, site visits, or plans to further review the projects. The District incorporates agency comments to further AVOID/MINIMIZE impacts to listed species and to ensure that the work falls within the District's Biological Opinions. Specialized biological contractors may be hired to perform survey and relocation work.

Step 5: CEQA Compliance

As noted above, the Annual Plan includes a description of each maintenance project to be conducted in the fall. In addition, it represents the environmental documentation under CEQA. The projects included in the Annual Plan are categorized as follows relative to CEQA:

- The project is exempt from CEQA and therefore no environmental review is necessary (CEQA Guidelines 15300 or 15061)
- No further environmental review is necessary because the project was adequately addressed in the Program EIR (CEQA Guidelines 15162).
- Considered under the 2001 Program EIR, and a project specific write-up is necessary to describe the project and ensure consistency with the Program EIR impact analysis and to apply the appropriate mitigation measures (CEQA Guidelines 15164)

As a CEQA lead agency, the District has the authority to determine which maintenance activities and projects are exempt from CEQA under the following two provisions of the CEQA Guidelines:

1. Under Section 15061(b)(3), a project or discretionary activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

2. The District may also determine that a project qualifies for CEQA Categorical Exemption Class 1 (CEQA Guidelines Section 15301, Existing Facilities):

   "Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. The types of "existing facilities" itemized below are not intended to be all-inclusive of the types of projects which might fall within Class 1. The key consideration is whether the project involves negligible or no expansion of an existing use. Examples include but are not limited to: … (b) Existing facilities of both investor and publicly-owned utilities used to provide electric power, natural gas, sewerage, or other public utility services…."

   There are exceptions to Categorical Exemptions, which are listed in Section 15300.2 of the CEQA Guidelines. For example, all exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant. In addition, a categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

Maintenance projects that are exempt from CEQA generally include the following categories of activities, as described by the District in the Annual Plan:

1. **Concrete Channels**. Maintenance activities in fully concrete lined channels without habitat.
2. **Flood Control Devices.** Cleaning, repair, and replacement of such flood control devices as check structures, drop structures, chute structures, culverts, weirs, or stream flow measuring stations.
3. **Access Ways**. Maintenance activities on access ways or roads outside of riparian corridors or estuaries.
4. **Earthen Channels.** Maintenance activities in earthen channels, which have been developed to convey urban stormwater, agricultural stormwater or tail water, and that support little to no vegetation and do not support listed species .
5. **Unvegetated Basins.** Maintenance activities in sediment, debris, and retention basins which have been constructed for such purposes and which support little to no vegetation and do not support listed species.

Non-exempt projects that were considered in the 2001 Program EIR are subject to environmental review in the Annual Plan. A project specific description is prepared by District staff for each drainage needing maintenance and includes the following elements:

Location – A description of the maintenance site is presented.

Setting – A description is presented of the environmental conditions along the drainage, including topography, vegetation, stream channel dimensions, and adjacent land use. District staff conducts a field investigation and records information on site conditions, including vegetation.

Revegetation – This section includes a listing of past restoration that was implemented as mitigation for maintenance since 2002 and a description of any proposed District revegetation associated with the current year's annual routine maintenance. This allows for accurate record keeping of restoration area on an ongoing basis.

Wildlife Surveys – The results of wildlife surveys that are conducted in April or May at the maintenance sites are summarized. The primary objective of these surveys is to identify any sensitive species at the maintenance sites. This section of the Addendum also includes a summary of all wildlife observed at or near the sites.

Engineering Analysis – A description of the site conditions that have caused the need for maintenance including: (1) the nature and extent of channel obstructions or damaged facilities; (2) the flooding and erosion hazards created by these conditions; and (3) the remedy for this situation. The analysis usually is based on visual observations of adverse conditions such as sediment deposits, significant in-stream vegetation, or damaged facilities. The District personnel that conduct the Annual Plan surveys is the same each year; as such, they have first-

hand knowledge of site conditions along drainages in the County over many years and under various conditions. Hence, they can readily assess the maintenance needs. The District does not typically conduct quantitative field measurements or hydrologic calculations or modeling to determine the maintenance needs at all sites, however pursuant to the 2012 RWQCB 401B Technically Conditioned Water Quality Certification, a sheer stress analysis is conducted for all bank protection sites and additional geomorphologic analysis is also completed.

The Engineering Analysis section also includes reference to bankfull calculations that were quantified in 2002 as part of the Updated PEIR. The bankfull widths are used to determine and document the desired clearing width within individual creeks along the south coast in particular. In areas where bankfull calculations are unavailable, District staff use field indicators to determine clearing widths.

Project Description - This section includes a description of the maintenance work to be performed, including descriptions of access. Precise descriptions of the areas to be treated (e.g., sprayed with herbicide or brushed) are provided using features in the field. GIS generated maps are provided to show the limits of work and access points. Photographs of representative maintenance areas are also included in each addendum. Figures showing water diversion, bank protection diagrams, and shaping project are also included.

Impact Analysis and Mitigation Measures - The Addenda refer to the list of impacts associated with specific maintenance activities developed in the 2001 Updated Program EIR. The latter identified numerous significant, unmitigable impacts (Class I), significant, but mitigable to less than significant impacts (Class II), and less than significant impacts (Class III). For maintenance projects proposed and implemented since 1992, the District has been able to avoid significant impacts by designing the projects or activities to avoid such impacts, and/or by implementing appropriate mitigation measures from the Program EIR to mitigate such impacts.

This section contains a list of impacts expected to occur due to the proposed maintenance activity using the impact number, impact description, and issue area presented in the 2001 Updated Program EIR. These issue areas include the following: Water Resources (Hydrology); Water Quality; Wetlands, Riparian Habitats, and Rare Plants; Aquatic Species, Fish; and Wildlife; Air Quality; Noise; Cultural Resources; Recreation, and Visual Resources. Specific impacts are listed under each issue area.

In addition, mitigation measures derived from the Program EIR are listed under each issue area.

Step 6 : Plan Approval

The Annual Plan may be revised to respond to public comments, and is then presented to the Board of Directors for approval in June or July of each year. There is a public hearing to adopt the Annual Plan and the Categorical Exemptions.

PERMITS

Local Land Use and Coastal Development Permits

Most of the maintenance activities occur in unincorporated portions of Santa Barbara County. The District is exempt from the land use permitting requirements of the County in areas outside the Coastal Zone. Section 35.10.040(G)(1)(b)-201 of Article III Zoning Ordinance (Non-Coastal Areas) states that the Zoning Ordinance does not apply to "Development by the County or any district of which the Board is the governing body."

Some maintenance activities occur in the Coastal Zone in unincorporated portions of the County. Under Section 35-51(4) of the Article II Zoning Ordinance (Coastal Areas), the District does not require a Coastal Development Permit for maintenance projects in the Coastal Zone, except when the project occurs in an Environmentally Sensitive Habitat (ESH) area. The latter is defined in the Coastal Act and Coastal Plan and generally includes rivers, streams, wetlands, riparian corridors, and sensitive species habitats. For most work in the Coastal Zone, the County has permit authority and issues Coastal Development Permits (CDP) on individual drainages. However, there are certain areas along the coast where the California Coastal Commission (CCC) retains primary permit authority. Maintenance projects in ESH areas must be designed and implemented in a manner consistent with the development standards in Section 35-97 of the Article II Zoning Ordinance. Work in the Coastal Zone within the cities of Santa Barbara, Goleta, and Carpinteria requires a CDP from these jurisdictions.

State and Federal Permits

Most maintenance activities occur in natural watercourses and involve modification to the channel bed, banks, and in-channel vegetation. These activities are regulated by the California Department of Fish and Wildlife (CDFW) under Section 1601 of the Fish and Game Code. Activities that result in the discharge of dredged or fill material in natural watercourses (such as bank stabilization and channel shaping) are regulated by the Army Corps of Engineers under Section 404 of the Clean Water Act. The District also receives a Section 401B Water Quality Certification from the State Regional Water Quality Control Board for those projects that also require a 404 permit from the Army Corps of Engineers.

The District submits the Annual Plan Summary to the CDFW, ACOE, and RWQCB to satisfy notification requirements in the permits and once the plan is finalized, the ACOE and RWQCB provide a written confirmation that the Annual Plan conforms to their permit. The Corps has the discretion to disallow certain maintenance projects from the programmatic permit and require a separate permit, and to issue new special conditions for each Annual Plan. As early as 2004 the District consulted with the U.S. Fish and Wildlife Service (USFWS) for the California red-legged frog and a Biological Opinion was

issued to the Army Corps of Engineers in 2005. Since then, the District has continued to consult on listed species including the California red-legged frog, Tidewater goby, least Bell's vireo, southwester willow flycatcher, La Graciosa thistle and Gambell's watercress. The most recent consultation was initiated with USFWS in 2010 and a finalized Biological Opinion was received in June 2014.

The District has also consulted with National Marine Fisheries Service since the original listing of endangered steelhead in 1997 with the most recent consultation initiated in 2010. A final Biological Opinion was issued by NMFS in March 2014 and accepted by the District in September 2015.

The development of a Vegetation Management Plan (VMP) for the Annual Routine Maintenance Plan is required by the National Marine Fisheries Service in the March 11, 2014 Biological Opinion (B.O.) for the endangered Southern California Distinct Population Segment of Steelhead (*Oncorhynchus mykiss*) and designated critical habitat for this species within the District maintenance areas. Implementation of the Reasonable and Prudent Alternative portion of the B.O. by the District would avoid the likelihood of jeopardizing the continued existence of steelhead or destroying or adversely modifying critical habitat. Specifically, the RPA states that the District shall develop and implement a Stream Vegetation Management Plan that would allow for the annual maintenance of stream vegetation yet in a manner that would restore and maintain freshwater spawning and rearing sites in areas of creeks within the action area. In accordance with the 2014 Steelhead B.O., the VMP is specifically written to address the routine vegetation management portion of the annual creeks maintenance program in the twenty-four steelhead creeks within the District's maintenance area. The VMP describes the District's creek maintenance reaches, the District's selective vegetation management strategy designed to maintain channel equilibrium, the decision criteria used for vegetation removal, and management methods for single-trunked trees.

The VMP pertains to vegetation management in the following steelhead drainages.

Arroyo Burro Creek
Arroyo Paredon Creek
Atascadero Creek
Barger Canyon Creek
Carpinteria Creek
Cieneguitas Creek
Gobernador Canyon Creek
Los Carneros Creek
Maria Ygnacio Creek
Mission Creek
Montecito/Cold Springs Creek
Rattlesnake Creek
Refugio Creek
Romero Creek
San Antonio Creek
San Antonio Creek
San Jose Creek
San Pedro Creek
San Roque Creek
San Ysidro Creek
Santa Maria River
Sycamore Creek
Tecolote Creek
Tecolotito Creek

The District takes managing flood threats for the citizens in Santa Barbara County very seriously and while District staff considers resource protection with the incorporation of mitigation measures when designing maintenance approaches, the District retains the authority to determine the level of flood protection chosen at any given site. In that context, in the course of implementing the VMP, not every maintenance need scenario

can be addressed by the plan and as such, the District continues to retain its authority to take action on maintenance needs that it deems necessary.

The Central Coast Regional Water Quality Control Board (RWQCB) issued a Section 401B Water Quality Certification for the Corps 404 permit in 2005. This 5-year permit was also extended for two years so the RWQCB and ACOE can coordinate for the issuance of the next round of permits. The District received a new RWQCB permit in 2012. Pursuant to new conditions in the 401B Water Quality Certification, the District has made several changes to the Annual Plan in order to provide more detailed information to RWQCB staff. In particular, the District provides more drawings of proposed shaping, bank protection and water diversion sites. Sheer stress and geomorphological analyses will also be performed for bank protection sites. Where bank protection/rebuilding is implemented with a native habitat restoration component, the District would also provide a pre- and post-project analysis to demonstrate increases in habitat function so the restored area can be used as mitigation for future impacts associated with the maintenance program. Additionally, the attached table for Chronic Maintenance locations is in response to the RWQCB's condition to identify chronic maintenance locations associated with the Annual Plan and subsequently pursue strategies to reduce repeat maintenance where feasible.

The CA. Coastal Commission staff will review the Corps permit in order to issue a Coastal Zone Consistency Determination Concurrence for work performed under the Corps permit in the Coastal Zone.

The District received a new updated Stream Alteration Agreement from the CDFW in 2015. This permit will need to be renewed in 10 years.

STEP 7: Work in Progress.
Between August 1 and December 15, the maintenance work occurs. This timing allows for AVOIDANCE of the migratory bird breeding season and the wet season for most of the maintained creeks. In creeks with standing water or flowing water, the amount of water is at its lowest for the year and thus impacts to aquatic habitat are MINIMIZED or in most cases, AVOIDED.

As described in in Step 1 above, District staff who participate in creek walks include the Maintenance Superintendent, Environmental Manager, District Biologist, Environmental Planner, Engineer, and Maintenance staff. Project descriptions are also developed with input from maintenance, engineering and environmental personnel. Maintenance personnel receive a copy of the Final Annual Routine Maintenance Plan so they know exactly where and what types of maintenance activities need to occur. The maintenance crews' copy of the Annual Plan contains maps with aerial photography as the background in order for the crew members to more precisely identify maintenance areas. Prior to the commencement of each creek's maintenance, maintenance personnel meet with the Maintenance Superintendent and/or the District Biologist to discuss the overall maintenance tasks identified, limits of work, mitigation measures that will be implemented to reduce any impacts to the furthest extent possible, etc. The District Biologist also actively monitors maintenance activities while they are occurring. For drainages known or suspected to contain listed species, specific direction is given to crew members prior to and during maintenance activities. District personnel are very familiar with the Annual Plan with most of the personnel having worked at the District for

over 10 years, many for more than 20 years. Not only are the personnel very familiar with the District's maintenance practices overall, including listed species identification and protection, they are also very familiar with individual drainages.

If the District hires a contractor to perform routine maintenance work, a training session will be given by the District Biologist that describes the District's maintenance approach, permit requirements, appropriate mitigation measures, sensitive species identification and protection, etc.

A copy of all maintenance permits are kept at each work site as well. .

Bio-monitoring, surveys and relocation, BMPs, and avoidance/mitigation measures are implemented as proposed through the above process. Field modifications are made to further protect environmental resources and water quality. Where unexpected events occur, notes are made to help guide future maintenance efforts.

> Example, in 2009 FWS required dewatering of a reach of Devereux Creek prior to maintenance as part of tidewater goby protective measures. However, during the process it became obvious that dewatering resulted in anoxia and caused fish stress and mortality. The situation was noted in the follow-up report, and dewatering in the system is no longer considered a reasonable protective measure for tidewater goby at this particular location.
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> This is just one example of how the District is committed to long-term adaptive management, not one-time work, and how the process allows for revision of work methods over time to best protect aquatic resources and water quality.
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> Example: Unit II Channel near Guadalupe is an engineered facility that drains into the Santa Maria River through a levee gate. Red-legged frogs are known in this facility. Over many years, the capacity of the channel has decreased as the channel banks have accumulated sediments from desilting operations. In order to re-establish the engineered capacity of this District owned channel, the District phased the regrading of the banks over a two year period so that half of the channel and associated cover and foraging habitat for red-legged frogs that exists at the base of the banks could be retained.
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> This is an example of how the District designs and implements maintenance to protect sensitive species and their associated habitats.

STEP 8: Reporting

Once the Annual Routine Maintenance is completed, the District Biologist provides a Maintenance Report to all regulatory agencies that the District holds permits from. The one Annual Maintenance Report is designed to incorporate all the information that each agency has requested.

SUMMARY

The District's planning process allows staff to determine what type of action is needed at the reach and site scale within the local physical constraints. The environmental aspects of the program identify and protect sensitive habitats and perform compensatory restoration when required and justified. The District minimizes repeat maintenance whenever feasible, but on-going maintenance is not necessarily problematic. The

Annual Routine Maintenance Program involves repeat maintenance at some locations because a minor project each year or every few years may actually have less environmental impact than a single larger project. For example, periodic sediment removal from a flat stream reach is preferable to lining the entire creek channel with concrete. The concrete lining may result in less frequent maintenance, but the environmental impacts are more substantial with that approach. The District's process involves a balance between the need for maintenance, natural creek processes and situations within creeks that the District has no control over.

The District surveys 67 drainage areas making up approximately 105 miles of drainage for potential maintenance. On average only half of these drainages are placed in the Annual Routine Maintenance Plan and of those only a small percentage of the actual drainages are physically touched by actual work. Over all, Santa Barbara County contains over 940 miles of major drainages and the District surveys only 11% of that area for potential routine maintenance to provide important flood protection through urban areas of the County and only approximately 5% of the county-wide major drainage area is even placed in the Annual Plan. To put this into perspective, if the District performs some sort of maintenance on 35% of the drainage area placed in the Annual Plan, this still amounts to only 1.9% of the County's major drainage area receiving, in most cases, very benign maintenance. For the 2016/2017 Annual Routine Maintenance Plan, it is estimated that approximately 15% of the maintained drainages length (16 miles of the 105 miles of potential maintained drainage length) will receive some level of maintenance or 1.7% of the 940 miles of major drainages within Santa Barbara County.

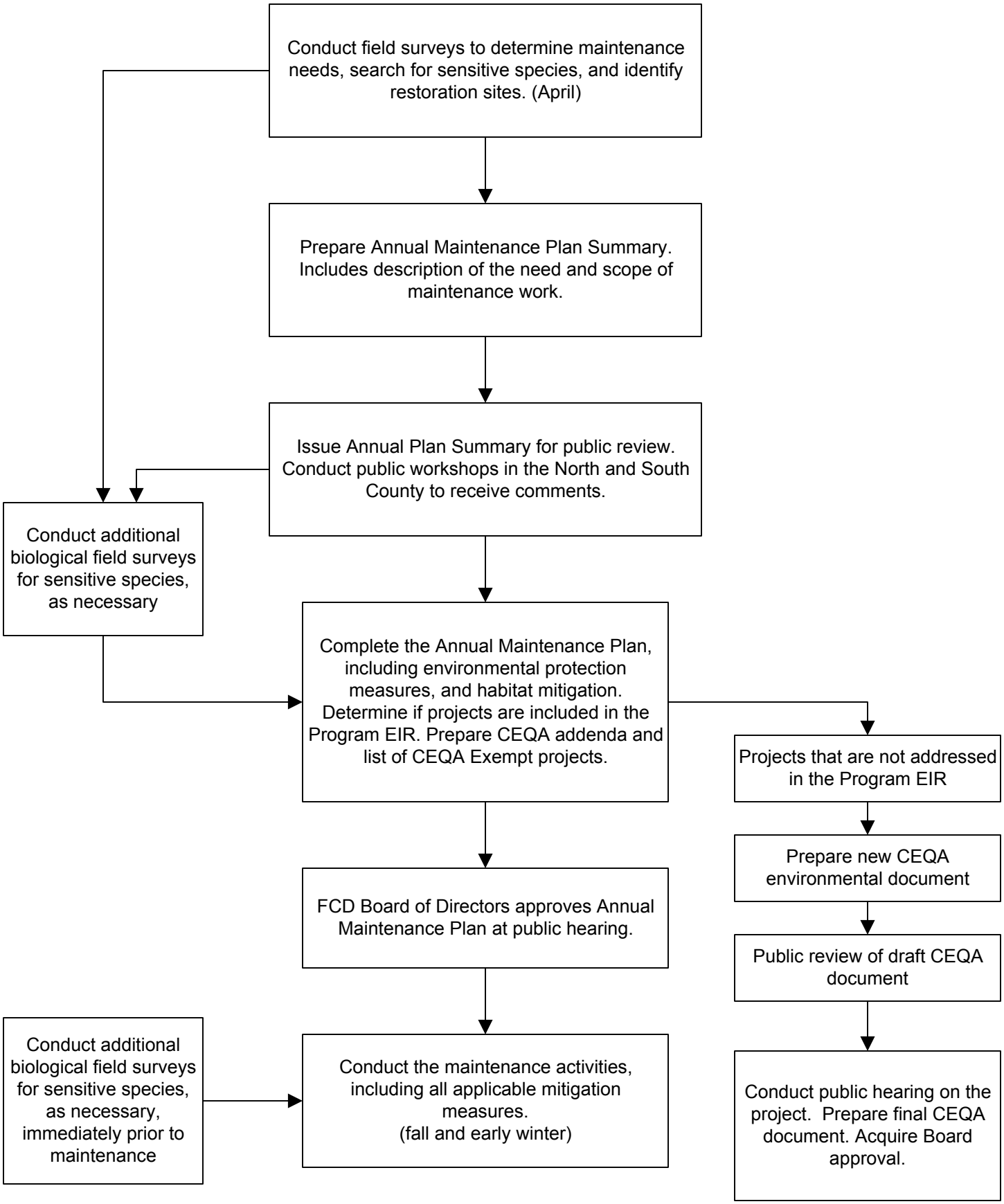


Chart 1. Annual Maintenance Program Process

Supervisorial Districts
2016-2017

First District

Arroyo Paredon Creek
Barger Canyon Creek
Carpinteria Creek
Montecito Creek
Hot Springs Creek
Lagunitas Creek
Mission Creek
Romero Creek
San Roque Creek
San Ysidro Creek

Second District

Arroyo Burro Creek
Barger Canyon Creek
Mission Creek
San Jose Creek
San Pedro Creek
San Roque Creek

Third District

Alamo Pintado Creek
Canada De La Pila Creek
El Encanto Creek
Middle Green Canyon Channel
North Green Canyon Channel
Orcutt/Solomon Creek
San Antonio Creek-Los Alamos
Santa Maria River
Santa Ynez River
Tecolote Creek
Winchester Creek
Zaca Creek

Fourth District

Airport/Abex Channel
Cebada Canyon Creek
Foxenwood 3 Basin
Orcutt/Solomon Creek
San Antonio Creek – Los Alamos
Pine Canyon Creek

Fifth District

Bradley Canyon Channel
Unit II/Unit II Tailwater/ West Main
East Ditch

Santa Barbara County Flood Control District
Annual Routine Maintenance Program
Chronic Maintenance[1]
2016/2017 Annual Plan[2]

Creek Name	Chronic Maintenance Need	Potential Causes of Chronic Maintenance	Potential Strategies to Research for Reducing Chronic Maintenance[3]	Site Owner(s)	Source Site(s) Owner(s)	Year Placed in Table	Rank	Progress
Bradley Channel	Control of excessive nutrients in runoff	1. Excessive nutrients in runoff cause algal blooms. Die-off of the blooms cause a massive shift in pH and dissolved oxygen within nearby Jim May Park basin and can cause fish kills.	1. City of Santa Maria to install a biofilter intake and outfall within Bradley Channel to convey runoff through a biofilter to remove nitrogen	County of Santa Barbara	Private	2016	1	Full scale filter scheduled to be installed 2016.
North Green Canyon	Desilting/Mowing	2. Very flat topography that naturally silts in and turbid agricultural tailwater and vegetation growing in the invert that traps vegetation.	2. The District experimented with mowing instream sediment trapping vegetation in the 14/15 and 15/16 Annual Plans rather than desilting with limited success. 3. Reduce turbid tailwater input from surrounding private property. 4. Create an instream sediment basin to concentrate desilting location.	Private	Private	2012	2	Sections of the 2014/2015 AP were mowed rather than desilted as a management experiment. Mowing improved channel capacity for several weeks to months; however rapid regrowth in the following spring resulted in the need for mowing and desilting in the 15/16 AP. Mowing may be appropriate in some conditions where vegetation is not too dense and sediment accumulation is minimal, however, mowing cannot completely replace desilting and doesn't eliminate chronic maintenance. In an effort to educate the farmers, the District will send letters to the land owners and leasers in 2016 to encourage them to reduce the amount of sediment that is in the tailwater. The District has regulatory authority and can only make suggestions to land owners.
Middle Green Canyon	Desilting/Mowing	1. Very flat topography that naturally silts in and turbid agricultural tailwater and vegetation growing in the invert that traps sediment.	1. The District experimented with mowing instream sediment trapping vegetation in the 14/15 and 15/16 Annual Plan rather than desilting 2. Reduce turbid tailwater input from surrounding private property. 3. Create an instream sediment basin to concentrate desilting location.	Private	Private	2012	3	Sections of the 2014/2015 AP were mowed rather than desilted as a management experiment. Mowing improved channel capacity for several weeks to months; however rapid regrowth in the following spring resulted in the need for mowing and desilting in the 15/16 AP. Mowing may be appropriate in some conditions where vegetation is not too dense and sediment accumulation is minimal, however, mowing cannot completely replace desilting and doesn't eliminate chronic maintenance. In an effort to educate the farmers, the District will send letters to the land owners and leasers in 2016 to encourage them to reduce the amount of sediment that is in the tailwater. The District has regulatory

								authority and can only make suggestions to land owners.
West Main Channel	Mowing weedy banks	1. Very narrow road-side drainage area whose capacity is easily overwhelmed by weedy growth				2012	4	
Unit II Tailwater	Mowing banks	1. No riparian vegetation on the banks to out compete weeds				2012	5	
Unit II Channel	Mowing banks	1. Unit II is an engineered channel with a specific design capacity that requires clean banks for capacity therefore vegetation must be kept low along the banks.				2012	6	
Santa Maria Airport	Mowing banks	1. South bank kept free of vegetation to maintain capacity and allow access from the top of the bank for equipment to reach into the channel.				2012	7	
Abex	Mowing banks and control of bulrush	1. No riparian canopy along steep north bank to block out cattail or bulrush growth. 2. Small but constant amount of urban drainage into the system keeps the channel wet enough to encourage growth of obstructive vegetation. 3. North Bank kept free of vegetation to maintain capacity and allow access from the top of the bank for equipment to reach into the channel.				2012	8	

[1]Chronic Maintenance is defined by the RWQCB as: Revisiting a site to conduct maintenance for the same issue in two consecutive maintenance years, or more than once per rainy season.

[2] Since Chronic Maintenance was first reported in the 2012/20123 Annual Plan, the District went back three years to determine chronic maintenance areas. Beginning with the 2013/1014 Annual Maintenance Plan, the District has used just the previous two years of maintenance to document chronic maintenance sites.

[3] "Potential Strategies" for reducing chronic maintenance have been determined for the top 2 areas. Beginning with the 12/13 Annual Plan, the District began researching the feasibility of strategy implementation for its highest priority and will continue doing so on an annual basis. If implementation does not result in the control of any sources at the highest priority site, the District will try to implement its strategies for the next highest priority site. This process will continue until reduction in maintenance has occurred at a site or the District has attempted to implement strategies on up to three sites each year depending upon how much time it takes to exhaust efforts on any one site. A summary of the District's efforts for the 2015/2016 maintenance season are included in the Annual Routine Maintenance Report.

Department of Public Works County of Santa Barbara

Green Canyon Ditches Chronic Maintenance

Legend

- Desilt
- Creeks

N W E S

775 387.5 0 775

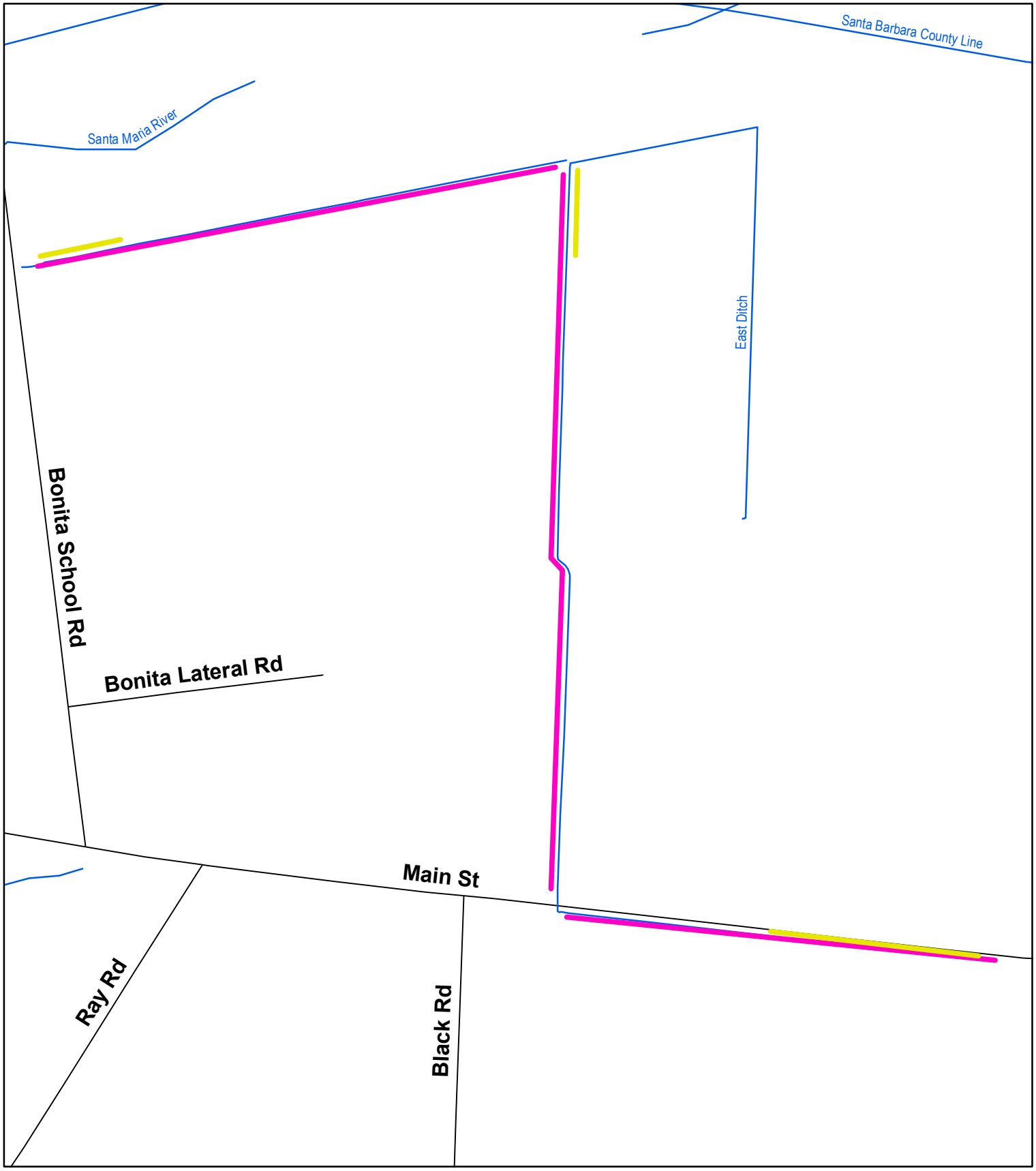
Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS in April 2012.



Department of Public Works County of Santa Barbara

Unit II, Tailwater, West Main, Chronic Maintenance

Legend

- Desilting
- Mowing
- Creeks

N W E S

1,500 750 0 1,500

Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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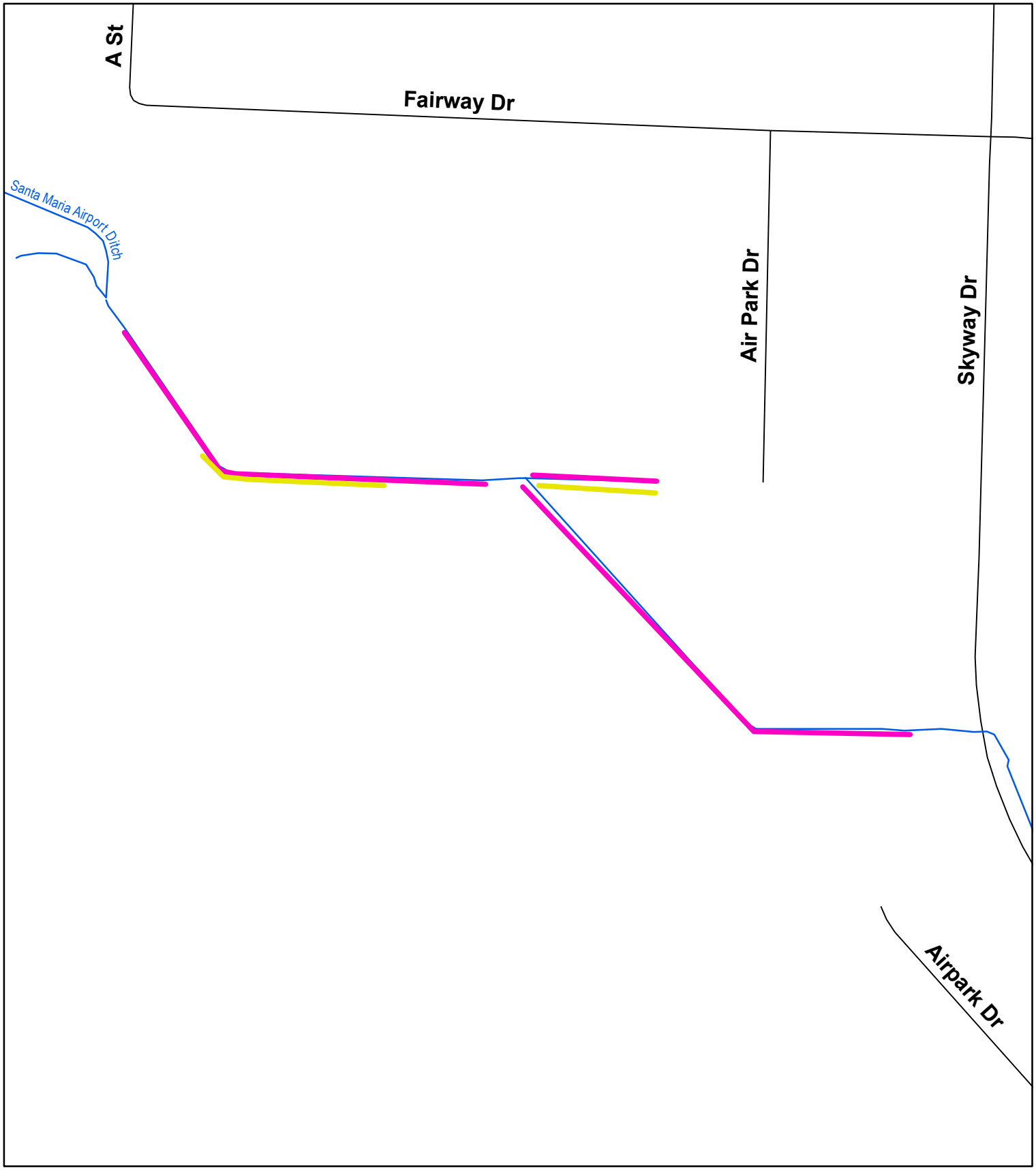


Department of Public Works County of Santa Barbara

Santa Maria Airport/Abex Ditches Chronic Maintenance

Legend

- Desilt
- Mowing
- Creeks

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

340 170 0 340

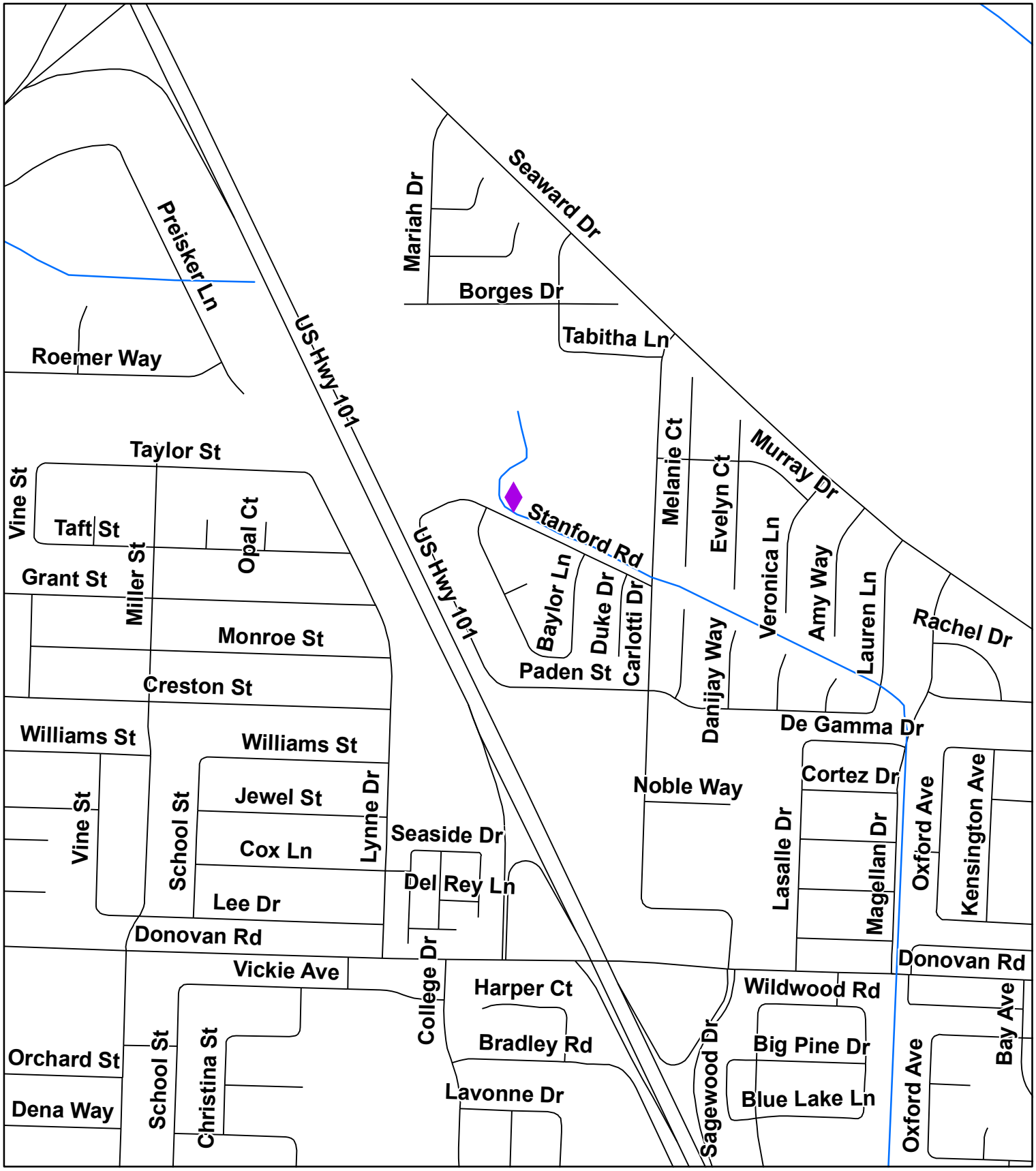
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2012.



Department of Public Works County of Santa Barbara

Legend

Filter

Bradley Channel Chronic Maintenance

N W E S

480 240 0 480 Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS in April 2012.

Santa Barbara County Flood Control District
Routine Maintenance in CEQA Exempt Facilities

The following facilities are maintained by the Santa Barbara County Flood Control District (District) on a routine basis. Most facilities are maintained in the summer and fall to prepare them for the winter rains though some facilities occasionally need to be desilted after large storm events to restore capacity lost to siltation. All spoils are either deposited on adjacent farm fields, within nearby erosion holes, used on flood control access roads or made available to the public. Deposited material is placed away from drainages so it cannot re-enter waterways. The District only uses Aquamaster and Roundup herbicides on exempt facilities and these products are used in very low amounts.

CEQA Notices of Exemption will be filed for these facilities. Locations of the projects are included on the attached maps. As indicated by their exempt status under CEQA, these drainages do not contain sensitive species or habitat, are dry for the vast majority of the year, contain no vegetation, very occasional nuisance vegetation or weeds and grasses. In many cases these drainages are concrete channels or dry washes. The maintenance conducted within these drainages is very sporadic. As an example, “spot spraying” is done with a back pack sprayer and in most cases consists of less than twenty seedlings that are sprayed which are most often non-native weedy species. Very little herbicide is used county-wide to conduct this maintenance. It is essential, however, to conduct this type of maintenance so the concrete structures or drainages do not deteriorate or become plugged and unable to convey flows during the winter months. The exempt basins are essentially basins that have been built as part of developments. Most of these basins are within upland areas and are dry weedy depressions or grassy areas that are used as play areas outside of the rainy season.

NOTICE OF EXEMPTION

TO: Santa Barbara County Clerk of the Board of Supervisors

FROM: Public Works Department/Flood Control and Water Conservation District

The project or activity identified below is determined to be exempt from further environmental review requirements of the California Environmental Quality Act (CEQA) of 1970, as defined in the State and County Guidelines for the implementation of CEQA.

APN(s) : Various Case No.: Not Applicable

Location: See project descriptions under the Exempt Facilities tab in the 2016/2017 Annual Routine Maintenance Plan.

(Include street address and cross street (if urbanized area) or attach specific location map)

Project Title: Routine operation and maintenance of existing public structures, facilities, or topographical features, involving negligible or no expansion of use beyond that which presently exists.

Project Description: See project descriptions in the 2016/2017 Annual Routine Maintenance Plan.

(Include nature, purpose, and beneficiaries of project)

Name of Public Agency Approving Project: County of Santa Barbara

Name of Person or Agency Carrying Out Project: Santa Barbara County Flood Control District

Exempt Status: (Check one)

___ Ministerial
___ Statutory Exemption
_X_ Categorical Exemption
___ Emergency Project
___ Declared Emergency

Cite specific CEQA and/or CEQA Guideline Section: 15301 Existing Facilities. CEQA Guideline Section 15301 (d): Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination.

Reasons to support exemption findings: Consistent with this exemption, the project is not located in any wetland or an officially designated (by federal, state, or local government action) scenic area, or in officially mapped areas of severe geologic hazard. There are no unusual circumstances which would create a possibility that there would be a significant effect. Therefore, this project can be found to be categorically exempt from CEQA.

There is no substantial evidence that there are unusual circumstances (including future activities) resulting in (or which might reasonably result in) significant impacts which threaten the environment. The exceptions to the categorical exemptions pursuant to Section 15300.2 of the State CEQA Guidelines are:

(a) **Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.**

These facilities are maintained on an as-needed basis and therefore not maintained every year. All impacts are temporary; therefore this exception does not apply.

(b) **Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.**

The project is the maintenance of existing facilities and not located in any wetland or an officially designated (by federal, state, or local government action) scenic area, or in officially mapped areas of severe geologic hazard. Therefore, this exception does not apply.

(c) **Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.**

The projects do not involve a scenic highway or a project which may result in damage to a scenic resource, removal of trees, rock outcropping or similar resource. Therefore, this exception does not apply

(d) **Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.**

There are no hazardous wastes sites within any of the project sites. Therefore, this exception does not apply.

Lead Agency Contact Person: Tom Fayram Phone #: (805) 568-3436

Department/Division Representative: Seth Shank Date: May 31, 2016

Signature: Seth Shank

Acceptance Date: _____

Note: A copy of this form must be posted at P&D 6 days prior to a decision on the project. Upon project approval, this form must be filed with the County Clerk of the Board and posted by the Clerk of the Board for a period of 30 days to begin a 35 day statute of limitations on legal challenges.

RECEIVED
MAY 31 2016
S B COUNTY
PLANNING & DEVELOPMENT

Date Filed with Planning & Development

Date Filed by County Clerk

North County Facilities

The North County exempt facilities include concrete channels, earthen road-side ditches, earthen channels, basins within developments, grassy swales, and facilities that are part of the Santa Maria Valley drainage network which include retention and recharge basins. General maintenance includes periodic silt management and the control of weeds. Over the past several years the District has been utilizing mowing for weed and fire control rather than the use of herbicides, although herbicides are still used, but in much lower amounts. The most common weeds that are controlled are Russian thistle, cat ear, wild radish, cape ivy, rape seed weed, myoporum, oleander, fennel, tree tobacco, and mustard. Non-native grasses are also mowed for fire control purposes. Occasionally, the District will remove cattail or bulrush seedlings if they begin to colonize wetted areas near the outlet of a basin. Also, occasional mulefat or coyote bush seedlings are sprayed.

Santa Maria/Guadalupe Area:

Ditches:

1. **Blosser Ditch:** This is an asphalt or concrete ditch from Fessler Road downstream to Blosser Basin, a distance of approximately 1.5 miles. The earthen portion of this channel begins downstream of the basin and continues downstream to the Santa Maria River where it enters a flap gate through the Santa Maria River Levee. Between Alvin Road and Donavan Road (a distance of approximately 2,600 feet) the channel is asphalt and sediment tends to settle out requiring annual desilting. Additionally, weep holes in the concrete lined section and cracks in both the concrete lined and asphalt sections are spot sprayed with herbicide on an annual basis so the cracks don't get larger from the weeds growing in them and the weep holes remain functional. The cracks and weep holes will be spot sprayed this maintenance season. Desilting is done on a biannual basis. Potential Area of impact for the 16/17 AP is less than 100 square feet from spot spraying and 500 square feet for desilting. Refer to Page 4 for the location of this facility.

2. **Bradley Ditch:** This ditch is approximately 3.5 miles long and is approximately 75% concrete and 25% earthen. From Main Street upstream to Battles Street, portions of the channel are desilted annually with equipment working from the top of the bank and within the concrete channel. From Main Street downstream to Donavan Street portions of the concrete channel are desilted approximately every 3 years. Within the most downstream earthen portion of the Ditch, the City of Santa Maria will install a biofilter intake and outfall to route runoff through an adjacent biofilter to remove nitrogen from the runoff. The earthern channel is sprayed on an annual basis to control silt trapping weeds and is not desilted. Potential area of impact for the 16/17 AP for desilting will be up to .7 acres (500 cubic yards) depending on the nearby water input from agriculture and less than 100 square feet for spot spraying. Refer to Page 5 for the location of this facility.

3. **California Street Ditch:** This is a concrete V-ditch with earthen sides above the concrete V. This ditch flows into Foxenwood 3 Basin in the Foxenwood Subdivision. On a biannual basis portions of the ditch are desilted and the banks are mowed for fire suppression purposes. This channel is not scheduled for desilting this year. Additionally, on a biannual basis, seedlings are sprayed in the

concrete V-ditch to keep the ditch from deteriorating. Potential Area of Impact for the 16/17 AP from mowing is .17 acres and less than 50 square feet for spot spraying seedlings in the V-ditch. Refer to Page 6 for the location of this facility.

4. **Crescent Avenue Ditch:** This is a concrete V-ditch with earthern sides. It is approximately .75 miles long. On a biannual basis a Kubota is used to desilt portions of the V-ditch. This channel is not scheduled for desilting this year There are also eucalyptus trees adjacent to the ditch that occasionally begin to grow too near the concrete ditch and have to be removed and the stumps spot sprayed so they don't regrow and damage the concrete. Potential Area of Impact for the 16/17 AP is less than 200 square feet for eucalyptus tree removal. Refer to Page 8 for the location of this facility.

5. **Deerfield Channel:** This is an earthen channel approximately 2,400' long. This channel flows into Deerfield Basin in the Foxenwood Subdivision. On an annual basis, seedlings are spot sprayed with herbicide in the earthen channel to keep unwanted vegetation growing in the active channel. Potential Area of Impact for the 16/17 AP is less than 100 square feet for spot spraying seedlings in the channel. Please refer to Page 27 for the location of this facility.

6. **Diaz Ditch:** This is an earthen ditch approximately 500 feet long. The District spot sprays this ditch on an annual basis to reduce silt trapping vegetation (weeds) and desilts portions of the channel approximately every 3 years. This channel is not scheduled for desilting this year. Potential Area of Impact for the 16/17 AP from spot spraying is less than 50 square feet. Refer to Page 9 for the location of this facility.

7. **Dutra Ditch:** This is an earthen ditch approximately 230' long. The District spot sprays this ditch\basin on an annual basis to reduce silt trapping vegetation (weeds) and desilts portions of the channel approximately every 3 years. This channel is not scheduled for desilting this year. Potential Area of Impact for the 16/17 AP from spot spraying is less than 50 square feet. Refer to Page 10 for the location of this facility.

8. **Industrial Parkway Ditch:** This is an earthen ditch that flows from Skyway Drive downstream into A Street Basin, a distance of approximately 1,400 feet. This ditch is sprayed with herbicide annually to keep sediment from accumulating or obstructive vegetation from colonizing the channel. The ditch is desilted approximately every 7-10 years. This channel is not scheduled for desilting this year. This ditch will be sprayed this year but not desilted. Potential Area of Impact for the 16/17 AP from spot spraying is less than 100 square feet. Refer to Page 1 for the location of this facility.

9. **Lake Marie Ditch:** This is an earthen ditch vegetated with grasses and weeds approximately 1,000 feet long. The District mows this ditch on an annual basis to reduce silt trapping vegetation (weeds). This ditch is spot sprayed with herbicide annually to keep sediment from accumulating or obstructive vegetation from colonizing the channel. The District only desilts approximately 250' of this ditch on an annual basis and removes 50 cubic yards of sediment. Potential Area of Impact for the 16/17 AP from mowing grass and weeds along the banks is .01 acres. Refer to Page 13 for the location of this facility.

10. **Patterson Rd Ditch**: This is a concrete bottom ditch with concrete vertical walls approximately 443' long. This ditch flows though the Patterson Rd subdivision. Weep holes and cracks in the concrete lined section are spot sprayed with herbicide on an annual basis so the cracks don't get larger from the weeds growing in them and the weep holes remain functional. The cracks and weep holes will be spot sprayed this maintenance season. Potential Area of Impact for the 16/17 AP is less than 100 square feet for spot spraying seedlings in the channel. Please refer to Page 29 for the location of this facility.

11. **Santa Maria River Levee:** The U.S. Army Corps of Engineers constructed this levee and the District is mandated to maintain it. Maintenance consists of annually spot spraying the river side of the levee rock area. Per ACOE regulations, the District also maintains a 15'-wide vegetation free zone along the 6.5 miles of levee that was repaired within Bradley Canyon downstream to Blosser Road, an area approximately 11.8 acres in size. Because this area was denuded during the levee construction, upkeep of the vegetation free zone only requires small amount of spot spraying. The backside of the levee (which does not contain rock like the front of the levee does), and the lower levee roads, are mowed annually for weed control. The backside of the levee and access roads are completely outside of the drainage. Impact from mowing this area outside of the channel is 130 acres. Potential area of impact is less than 1,000 square feet for spot spraying. The District applies pre-emergent herbicide on the front side of the levee and impacts associated with pre-emergent application are 81 acres. Refer to Page 21 for the location of this facility.

12. **Sonya St Ditch:** This is an earthen ditch approximately 1,300' long. The District spot sprays this ditch, and mows the slopes on an annual basis to reduce silt trapping vegetation and the banks are mowed for fire suppression purposes. (weeds) and desilts portions of the channel approximately every 5 years. This channel is not scheduled for desilting this year. Potential Area of Impact for the 16/17 AP is .25 acres for mowing the banks and less than 100 square feet for spot spraying. Please refer to Page 31 for the location of this facility.

13. **Thornberg Ditch:** This is a concrete ditch approximately 200 feet long. This ditch is spot sprayed with herbicide on an annual basis. Portions of this ditch require desilting on a very occasional basis. No desilting has occurred in the past 7 years and is not schedule for this year. Potential Area of Impact for the 16/17 AP from spot spraying is less than 50 square feet Refer to Page 11 for the location of this facility.

Basins

1. **A-Street Basin:** The basin is mowed annually and the low flow channel through the basin is spot sprayed on an annual basis. The basin is desilted approximately every 7-10 years. Potential areas of impact for the 16/17 AP is less than 50 square feet from spot spraying and .25 acres from mowing. Refer to Page 1 for the location of this facility.

2. **Basin B:** This is a retention basin. This basin is mowed on an annual basis for fire suppression purposes. The outlet structure is sprayed on an annual basis to eliminate vegetation from blocking the outlet structure. Potential Area of Impact for the 16/17 AP is 3 acres for mowing the banks and less than 100 square feet for spot spraying. Please refer to Page 24 for the location of this facility.

3. **Blosser Basin:** The upper access road around this basin in mowed annually for fire control and volunteer woody vegetation and cattails are spot sprayed. Potential Area of Impact for the 16/17 AP is .18 acres from mowing the access road around the top of the basin and less than 100 square feet for spot spraying. See Page 4 for the location of this facility.

4. **Bradley Basin:** The outlet structure on this basin is spot sprayed annually. Potential Area of Impact for the 16/17 AP is less than 100 square feet for spot spraying. Refer to Page 5 for the location of this facility.

5. **C2P2 Basin:** This is a retention basin located in an industrial area. This basin is mowed on an annual basis for fire suppression purposes. The outlet structure is sprayed on an annual basis to eliminate vegetation from blocking the outlet structure. Potential Area of Impact for the 16/17 AP is 3.5 acres for mowing the banks and less than 100 square feet for spot spraying. Please refer to Page 25 for the location of this facility.

6. **Country Hills Basin:** This is a retention basin located in an urban area. This basin is mowed on an annual basis for fire suppression purposes. The inlet structure is sprayed on an annual basis to eliminate vegetation from blocking the inlet structure. Potential Area of Impact for the 16/17 AP is 1 acre for mowing the basin and less than 100 square feet for spot spraying. Please refer to Page 26 for the location of this facility.

7. **Diani Basin:** The banks of this basin are mowed on an annual basis for weed and fire control. The bottom of this basin is spot sprayed on an annual basis. Potential Area of Impact for the 16/17 AP is less than 50 square feet from spot spraying and .25 acres from mowing. Refer to Page 11 for the location of this facility.

8. **Getty Basin:** This is a recharge basin. The upper banks of the basin are sprayed on a biannual basis and the slopes of the basin are disced on a biannual basis to retain the recharge capacity of this facility. Potential Area of Impact for the 16/17 AP is .35 acres from spraying the fence line and 11 acres for discing the basin slopes. Discing is schedule for this year. Refer to Page 11 for the location of this facility.

9. **Hummel Basin:** This is a retention basin located in an urban area. This basin's inlet and outlet are spot sprayed on an annual basis to eliminate vegetation from blocking the structures. Potential Area of Impact for the 16/17 AP is less than 100 square feet for spot spraying. Please refer to Page 26 for the location of this facility.

10. **Hobbs Fee Retention Basin:** Weeds in this basin are mowed every year for weed and fire control, and the area immediately adjacent to the inlet structure is sprayed to keep it from becoming blocked by cattails. Potential Area of Impact for the 16/17 AP is .28 acres for mowing and less than 100 square feet for spot spraying. Refer to Page 11 for the location of this facility.

11. **K-Mart Basin:** Weeds in this basin are mowed on an annual basis for fire and weed control. The bottom of the basin is also spot sprayed on an annual basis to eliminate the woody vegetation that may begin to colonize in the basin, and the basin is desilted approximately every 7 years. Potential Area of Impact for the 16/17 AP is .2 acres for mowing and less than 30 square feet for spot spraying. Refer to Page 12 for the location of this facility.

12. **Kovar Basin:** The area immediately surrounding the inlet of this basin is spot sprayed on a biannual basis. Potential area of Impact for the 16/17 AP for spot spraying is less than 100 square feet. Refer to Page 11 for the location of this facility.

13. **Lakeview Basin**: This is a retention basin located in an urban area. This basin is mowed on an annual basis for fire suppression purposes. The outlet structure is sprayed on an annual basis to eliminate vegetation from blocking the outlet structure. Potential Area of Impact for the 16/17 AP is 1 acre for mowing the banks and less than 100 square feet for spot spraying. Please refer to Page 28 for the location of this facility.

14. **Oak Knoll Basin:** On an annual basis, this basin is mowed for weed and fire control. The bottom of the basin is also spot sprayed on an annual basis to eliminate the woody vegetation that may begin to colonize the basin. Potential Area of Impact for the 16/17 AP is .28 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 18 for the location of this facility.

15. **Orcutt-Solomon Basin (also known as California Street Basin):** This is a sediment basin that is desilted approximately every two years. The banks of the basin are mowed on an annual basis for fire and weed control. Potential Area of Impact for the 16/17 AP is 1.8 acres for mowing and 1.3 acres for desilting. Approximately 7,000 cubic yard of sediment will be desilted this year if the District can find a company who wants the material and can haul it away. See Page 19 for the location of this facility.

16. **Prell Street Basin:** The banks of this basin are mowed on an annual basis for weed and fire control. The bottom of the basin is maintained vegetation free with annual spot spray. The basin is desilted approximately every 7 years. Potential Area of Impact for the 16/17 AP.23 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 20 for the location of this facility.

17. **Quail Meadows Basin:** This Basin is a retention basin located in an urban area. This basin is mowed on an annual basis for fire suppression purposes. The inlet structure is sprayed on an annual basis to eliminate vegetation from blocking the inlet. Potential Area of Impact for the 16/17 AP is 1 acre for mowing the banks and less than 100 square feet for spot spraying. Please refer to Page 28 for the location of this facility.

18. **Simas Park Basin:** This is a retention basin located in an urban area. The bottom of the basin is maintained vegetation free with annual spot spray. The basin is desilted annually, removing approximately 20 cubic yards of debris trapping sediment from the outlet structure. Potential Area of Impact for the 16/17 AP is less than 100 square feet for spot spraying and 300 square feet for sediment removal. Please refer to Page 30 for the location of this facility. .

19. **Tanglewood Basin:** The ditch running through the middle of the basin is spot sprayed on a 1-2 year basis and the basin is desilted approximately every 3-5 years. Desilting is not scheduled for this year. Potential Area of Impact for the 16/17 AP is less than 20 square feet for spot spraying. See Page 22 for the location of this facility.

20. **Union Valley Parkway Basin:** This is a retention basin located in an urban area. This basin is mowed on an annual basis for fire suppression purposes. The inlet structure is sprayed on an annual basis to eliminate vegetation from blocking the inlet. Potential Area of Impact for the 16/17 AP is 2 acres for mowing the basin and less than 100 square feet for spot spraying. Please refer to Page 26 for the location of this facility

21. **Village Hills Basin:** This is a retention basin located in an urban area. The basin is mowed on an annual basis for fire suppression purposes. The inlet structure is sprayed on an annual basis to eliminate vegetation from blocking the inlet. Potential Area of Impact for the 16/17 AP is .6 acres for mowing the banks and less than 100 square feet for spot spraying. Please refer to Page 26 for the location of this facility

Los Alamos:

Ditches:

1. **Los Alamos East Side Ditch:** This grassy swale is mowed annually. Potential Area of Impact for the 16/17 AP is 1.5 acres from mowing the ditch. Refer to Page 14 for the location of this facility.

Santa Ynez/Lompoc:

Ditches

1. **Airy-Skytt Channel:** This is a half concrete/half earthen channel. The earthen channel is spot sprayed annually to reduce silt trapping vegetation. Potential Area of Impact for the 16/17 AP is less than 50 square feet for spot spraying. Refer to Page 2 for the location of this facility.

2. **Amby Ditch:** This is an earthen ditch approximately 900 feet long and the District spot sprays the channel bottom on an annual basis. Portions of the channel are desilted approximately every 3-5 years. Desilting is not schedule for this year. Potential Area of Impact for the 16/17 AP is less than 50 square feet for spot spraying. Refer to Page 3 for the location of this facility.

3. **Calvert Ditch:** This earthern ditch runs parallel to Lompoc-Casmalia Road for approximately 1000 feet and then turns to the south and flows through cultivated fields to the Santa Ynez River, a total distance of 2,240 feet. The District spot sprays the invert and mows the banks on an annual basis for weed and fire control. Potential Area of Impact for the 16/17 AP is 0.5 acres for mowing and less than 100 square feet for spot spraying. Refer to Page 16 for the location of this facility.

4. **Cebada Canyon Channel:** This is a concrete channel approximately 1 mile long that has portions of the length desilted on an annual basis. The portions of the channel that are not desilted the District spot sprays the weeds growing in the cracks and weep holes on an annual basis so the concrete does not become damaged and the weep holes remain functional. Potential Area of Impact for the 16/17 AP is .10 acres for desilting (150 cubic yards) and less than 50 square feet for spot spraying. Refer to Page 7 for the location of this facility.

5. **Hoag-Santa Rita Ditch:** This is an earthen ditch, approximately .75 miles long, containing 4 concrete check structures. The District only maintains the check structures which is needed on a very infrequent basis. Maintenance, when needed, is usually fixing erosion along the edges of the structure. Refer to Page 7 for the location of this facility.

6. **Lilley-Hayes Ditch:** This is an earthen road-side ditch approximately 4,400 feet long that is a tributary to Cebada Channel. The District spot sprays the channel and mows the banks on an annual basis for weed and fire control. Potential Area of Impact for the 16/17 AP is less than 50 square feet for spot spraying. Refer to Page 7 for the location of this facility.

7. **Miguelito Channel:** This is a concrete channel that runs through the City of Lompoc and is a tributary to the Santa Ynez River. The lower 500 feet of the channel is earthen and is spot sprayed on an annual basis to remove obstructive vegetation clumps so they don't block the channel. Garbage and other debris are periodically removed from the concrete channel with a loader on an as needed basis, sometimes several times a year. Potential Area of Impact for the 16/17 AP is less than 100 square feet for spot spraying. No estimate on the amount of garbage as it is periodically tossed in by residents and cannot be predicted. Refer to Page 15 for the location of this facility.

8. **Mission Hills Channel:** This is an earthen channel that runs through the Mission Hills Subdivision and is approximately 1.6 miles. The District maintains 4 check structure on a very occasional basis. Maintenance of the check structure would be erosion repair around the structure. The District also mows the access road for weed and fire control on an annual basis and occasionally spot sprays the invert if it begins to become colonized with vegetation. Potential Area of Impact for the 16/17 AP is 1.5 acres for mowing the access road along the top of the channel and less than 100 square feet for spot spraying. Refer to Page 16 for the location of this facility.

9. **Rodeo Channel:** This is a concrete channel, approximately 2,100 feet long, that runs into Rodeo-San Pasqual Basin. On a biannual basis, small deposits of sediment are removed from the channel with a loader so sediment does not

accumulate. Weep holes and cracks in the concrete-lined section are spot sprayed with herbicide on an annual basis so the cracks don't get larger from the weeds growing in them and the weep holes remain functional. Desilting is not scheduled for this year. Potential Area of Impact for the 16/17 AP is less than 100 square feet for spot spraying. Please refer to Page 15 for the location of this facility.

10. **Rodeo-San Pasqual Channel:** This is a concrete channel, approximately 2.73 miles long, that runs across the Lower Lompoc Valley and is a tributary to the Santa Ynez River. On an annual basis, small deposits of sediment are removed from the channel with a loader so sediment does not accumulate. Potential Area of impact for the 16/17 AP is 6 acres from driving the loader down the concrete channel. Refer to Page 15 for the location of this facility.

11. **San Pasqual Channel**: This is a concrete channel, approximately 3,500 feet long that runs into Rodeo-San Pasqual Basin. On an annual basis, small deposits (approximately 20 cubic yards) of sediment are removed from the channel with a loader so sediment does not accumulate. Weep holes and cracks in the concrete-lined section are spot sprayed with herbicide on an annual basin so the cracks don't get large from weeks growing in them, and weep holes remain functional. Potential Area of Impact for the 16/17 AP is less than 200 square feet for spot spraying. Please refer to Page 15 for the location of this facility

12. **Thumbelina Ditch:** This is a concrete channel approximately 650 feet long with a short (120 feet) earthen channel portion. The concrete lined channel requires desilting approximately every 5-7 years, the earthen channel is occasionally spot sprayed, and access roads mowed on an annual basis. Desilting will not occur this year. Potential Area of Impact for the 16/17 AP is less than 50 square feet for spot spraying. Refer to Page 23 for the location of this facility.

Basins:

1. **Buellton Basins 1 & 2:** The banks of these basins are mowed on an annual basis for weed and fire control. The basins are desilted approximately every 3-5 years and spot sprayed occasionally to remove unwanted vegetation from the invert of the basin caused by nusance water. Desilting will not occur this year. Potential Area of Impact for the 16/17 AP is 2 acres for mowing and less than 100 square feet for spot spraying. Refer to Page 3 for the location of these basins.

2. **Cemetary Debris Basin:** This basin is mowed on an annual basis and spot sprayed occasionally to remove woody vegetation if it becomes established. Potential Area of Impact for the 16/17 AP is .04 acres for mowing and less than 100 square feet for spot spraying. Refer to Page 17 for the location of this facility.

3. **Fault Canyon Basin:** Weeds and grasses are mowed on an annual basis in the basin, the basin is desilted every 7-10 years, and spot sprayed occasionally to remove woody vegetation if it becomes established. Desilting will not occur this

year. Potential Area of Impact for the 16/17 AP is .04 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 17 for the location of this facility.

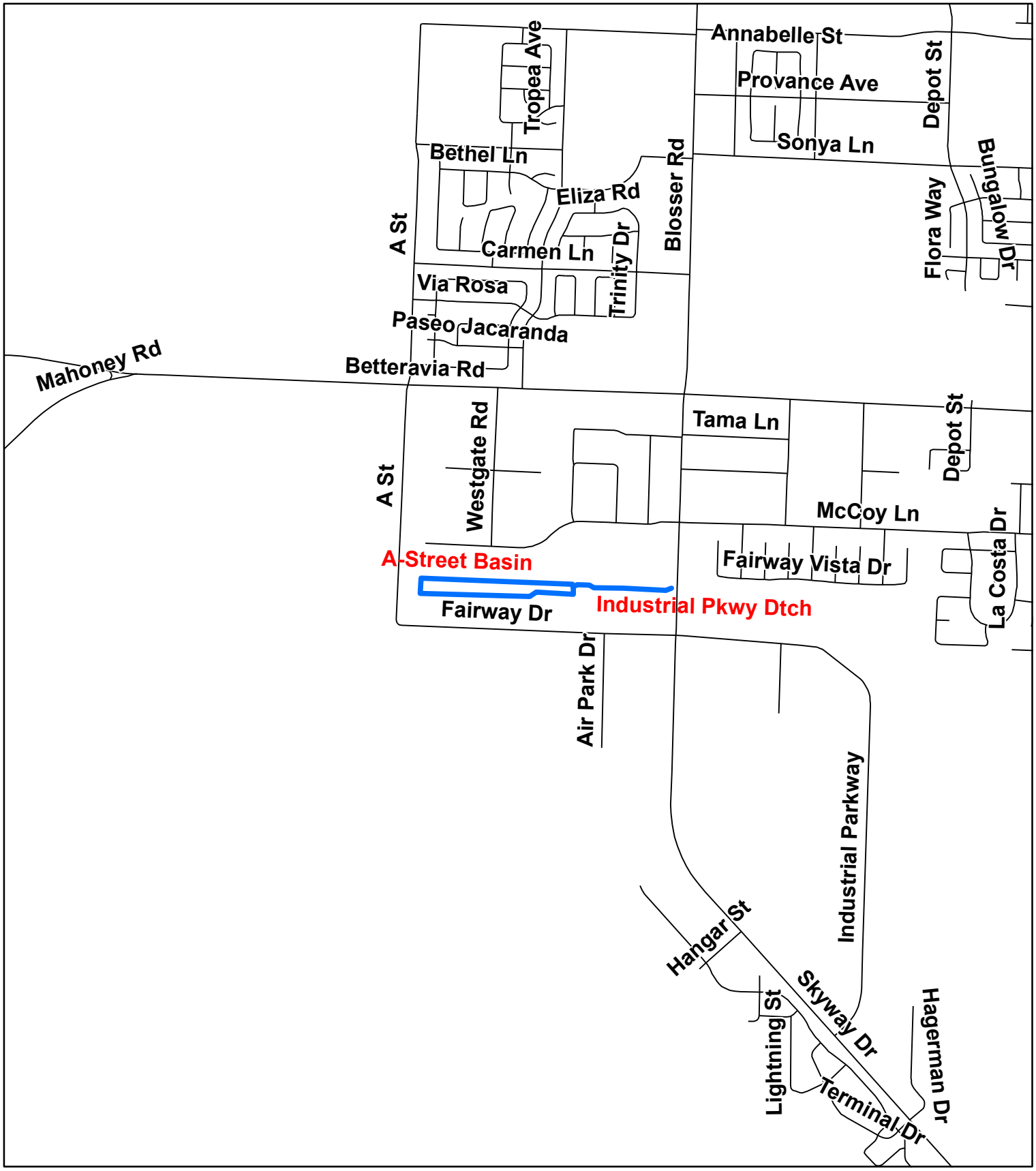
4. **Miguelito Basin:** The edge of the basin is spot sprayed on a biannual basin so it doesn't become colonized with bulrush. The basin is desilted approximately every 5-10 years.Desilting will not occur this year. Refer to Page 15 for the location of this facility. Potential Area of Impact for the 16/17 AP is less than 500 square feet for spot spraying. Refer to page 15 for the location of this facility

5. **Mission Hills Basin:** Mustard and poison hemlock are mowed annually within the basin for weed and fire control. Potential Area of Impact for the 16/17 AP is 1.5 acres for mowing. Refer to Page 16 for the location of this facility.

6. **Mormon Canyon Basin:** Weeds and grasses are mowed on an annual basis in the basin and the basin is desilted every 7-10 years. Desilting will not occur this year. Potential Area of Impact for the 16/17 AP is .04 acres for mowing. Refer to Page 17 for the location of this facility.

7. **R Street Basin:** Mustard and poison hemlock are mowed annually within the basin for weed and fire control. The basin is also spot sprayed every other year if woody vegetation begins to colonize the basin. Potential Area of Impact for the 16/17 AP is .04 acres for mowing and less than 100 square feet for spot spraying. Refer to Page 15 for the location of this facility.

8. **Rudolph Basin:** This basin is very occasionally mowed to control weeds. Potential Area of Impact for the 16/17 AP is 1 acre for mowing. Refer to Page 17 for the location of this basin.



Department of Public Works County of Santa Barbara

A-Street Basin
Industrial Parkway Ditch

Page 1

N W E S

Feet

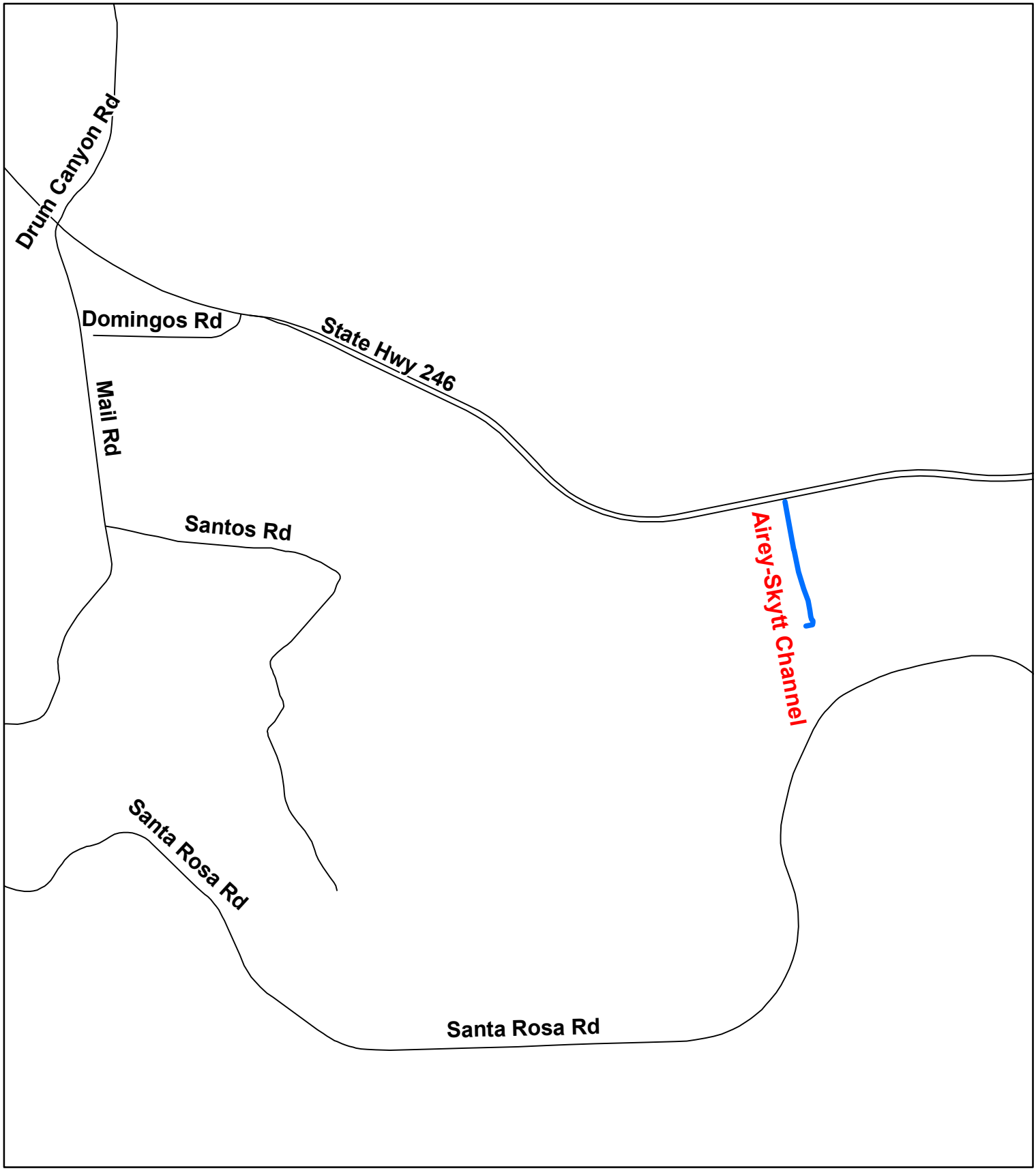
1,250 625 0 1,250

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Airey-Skytt Channel

Page 2

PUBLIC WORKS ENTERPRISE GIS

N W E S

1,900 950 0 1,900

Feet

Coordinate System: State Plane California Zone V NAD 1983

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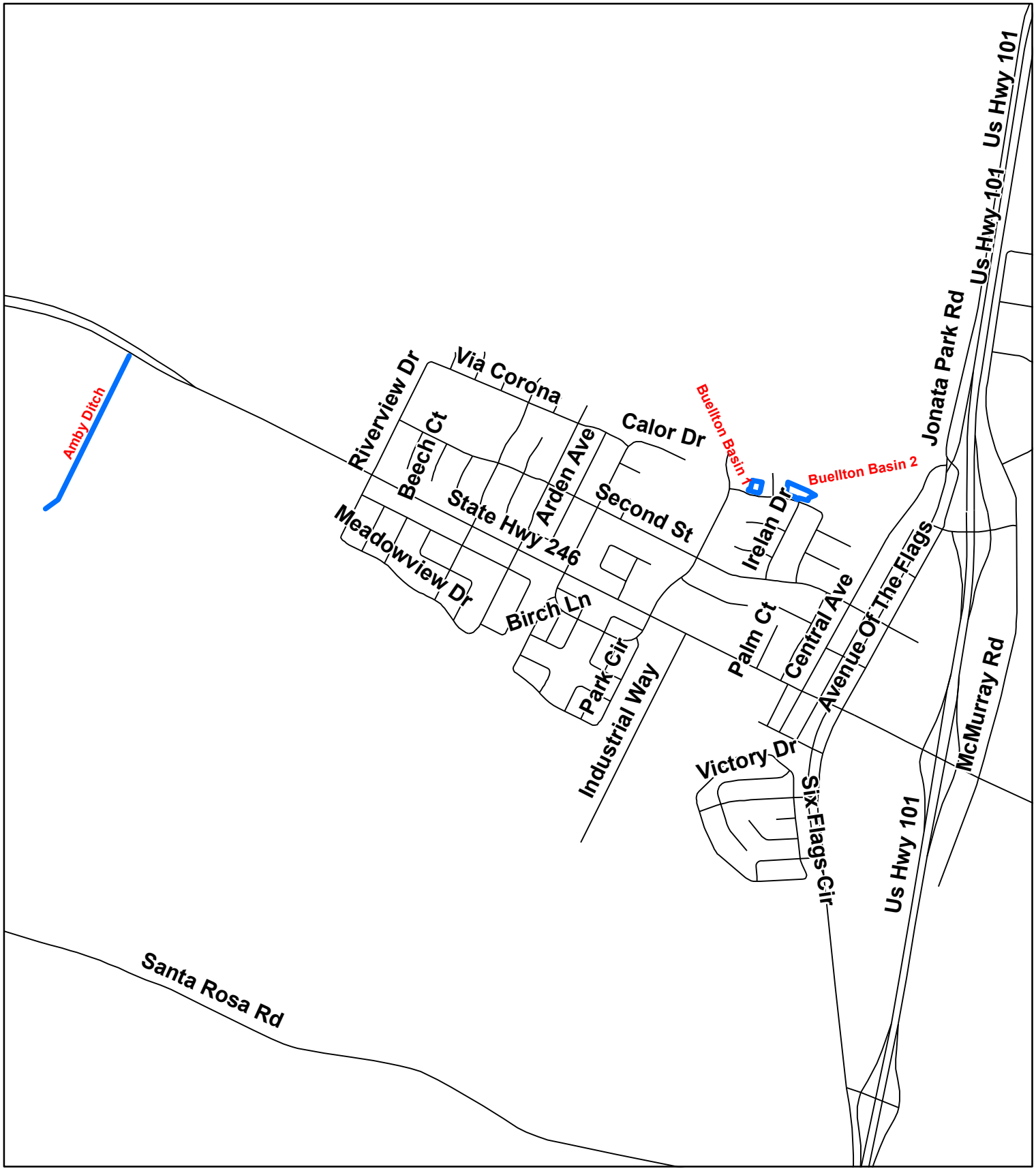

Department of Public Works County of Santa Barbara

Amby Ditch
Buellton Basins 1&2

N
W E
S
Feet
1,100 550 0 1,100

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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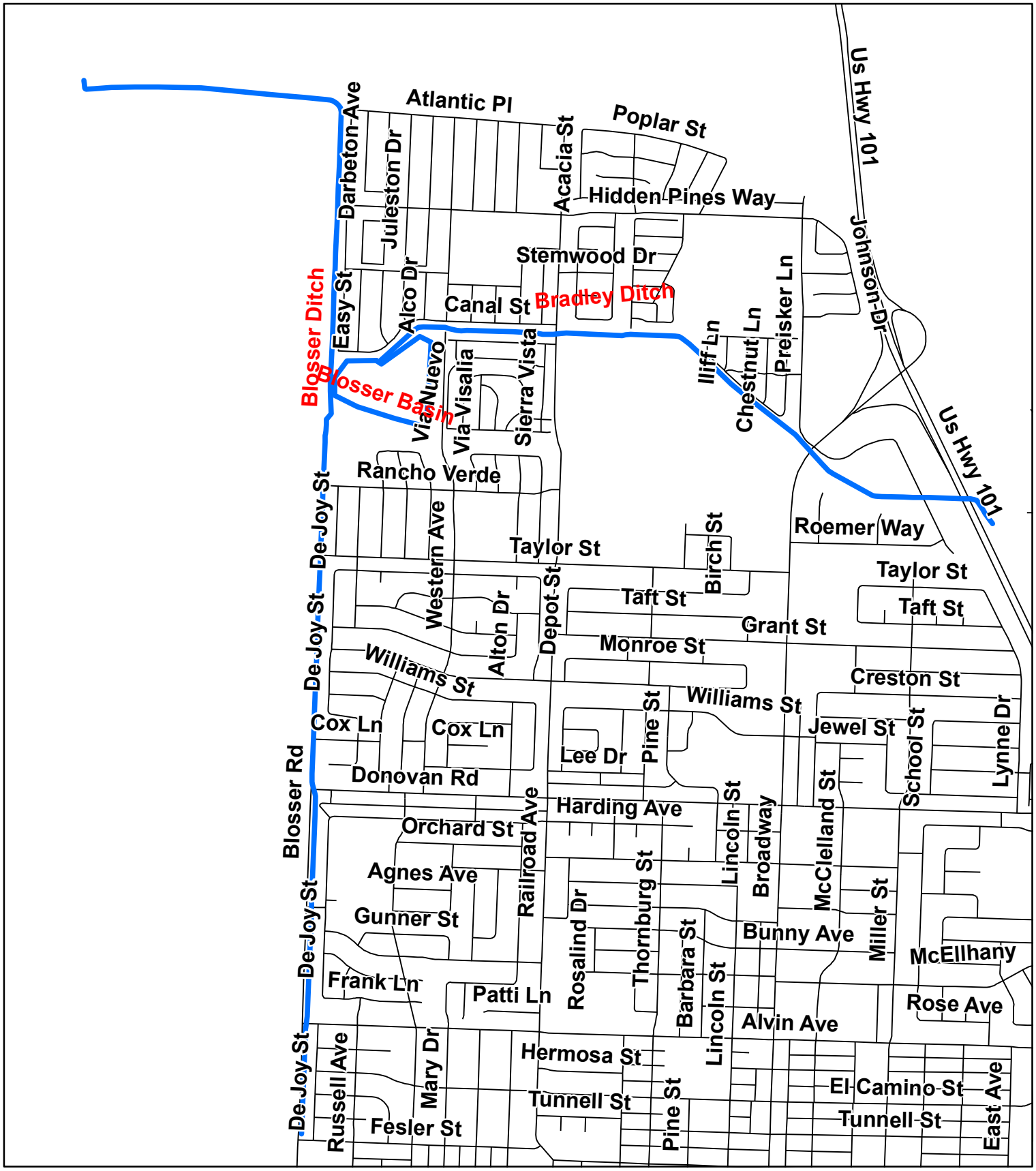

Department of Public Works County of Santa Barbara

Blosser Basin
Blosser Ditch

N W E S

Feet
1,250 625 0 1,250

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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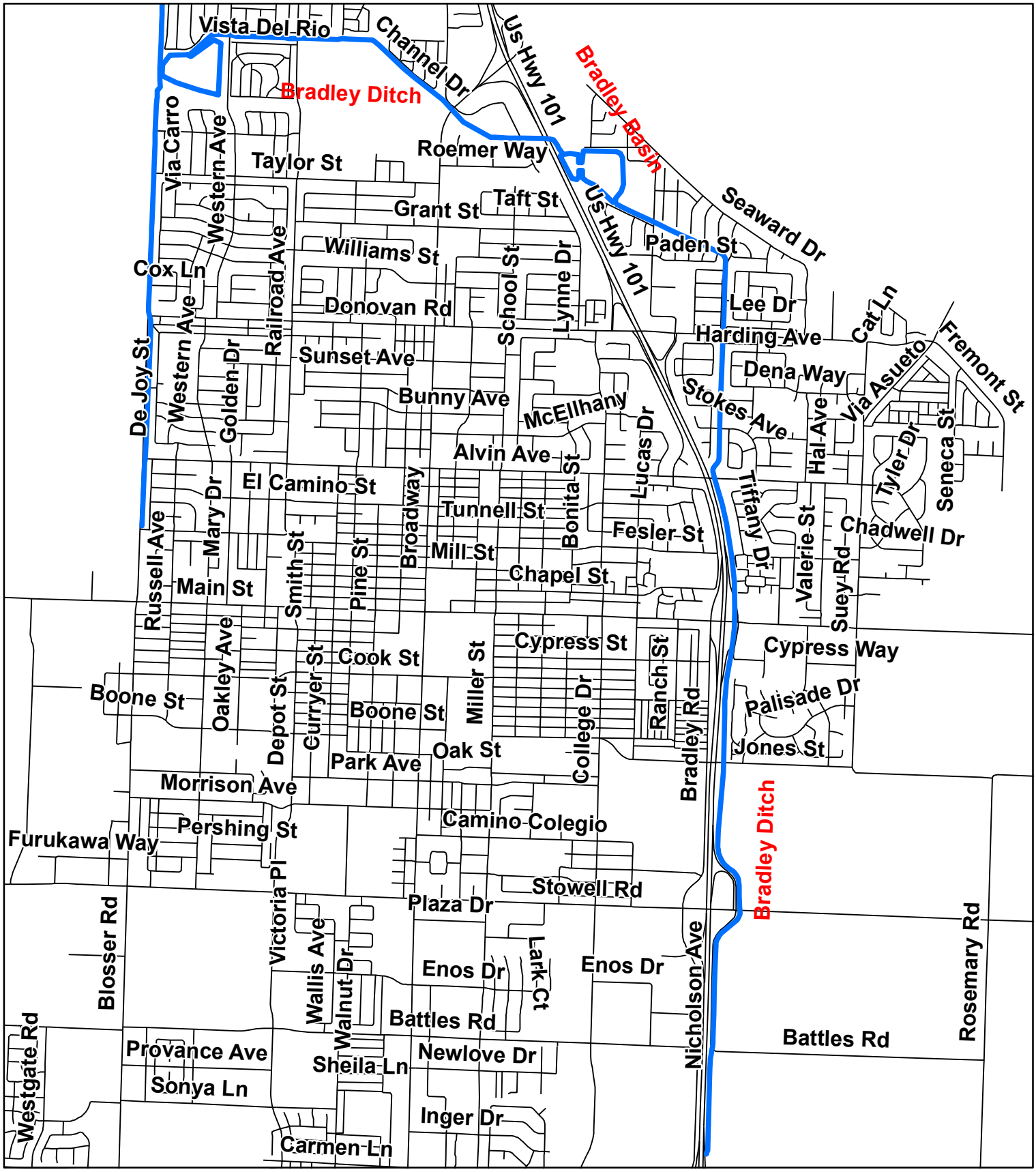

Department of Public Works County of Santa Barbara

Bradley Ditch
Bradley Basin

Page 5

N W E S

2,100 1,050 0 2,100
Feet

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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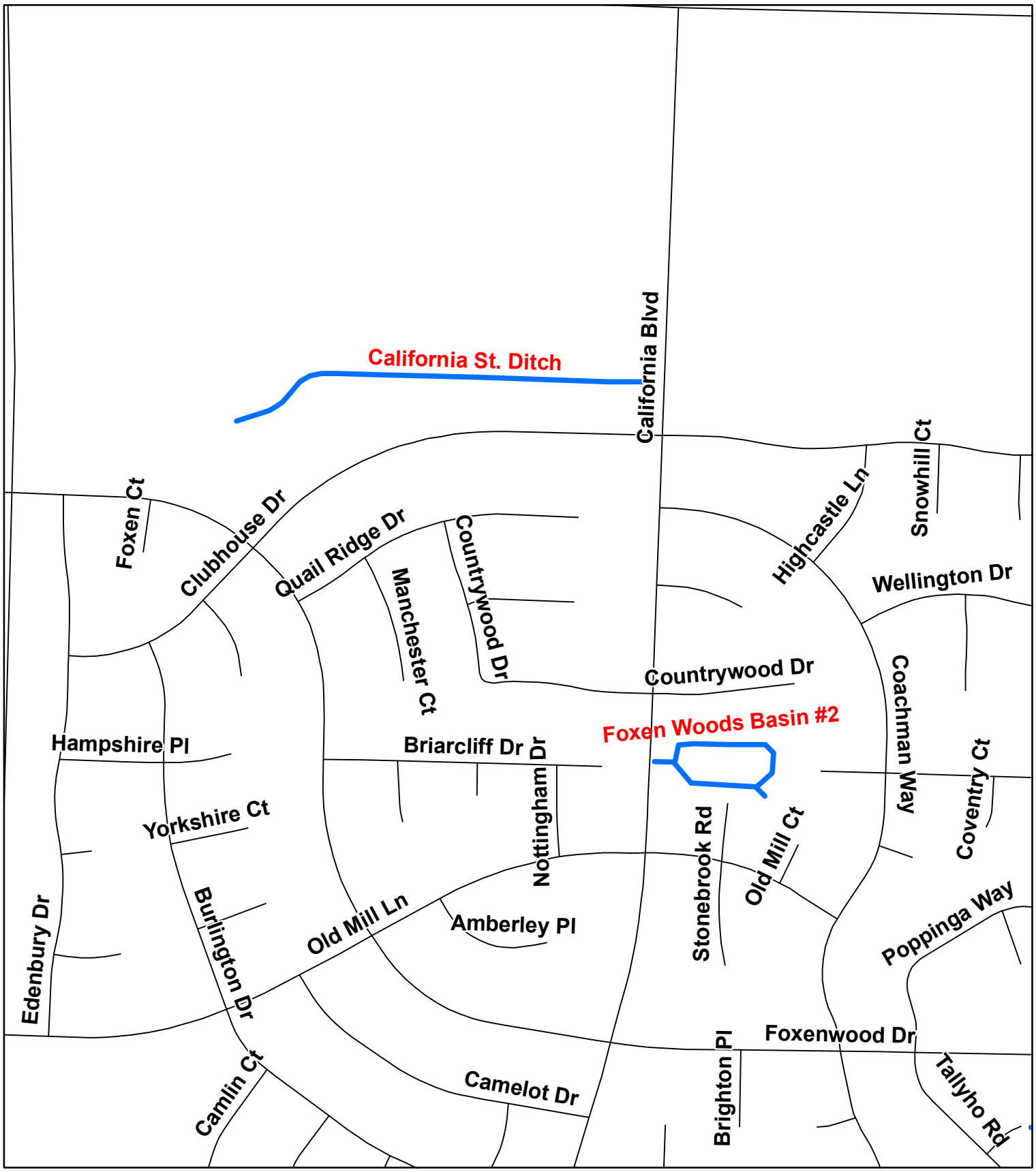

Department of Public Works County of Santa Barbara

California St. Ditch
Foxen Woods Basin #2

N W E S

Feet

425 212.5 0 425

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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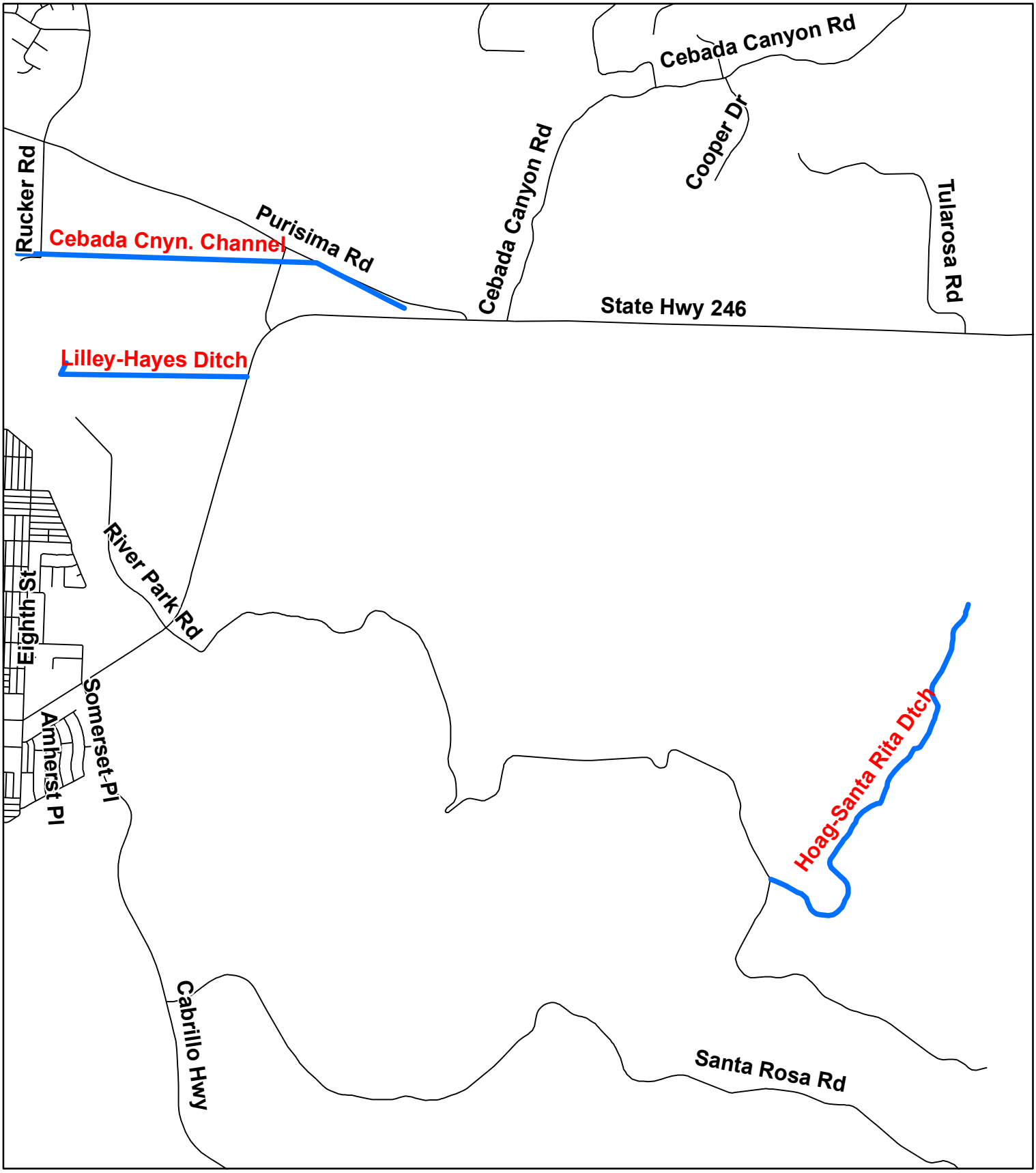

Department of Public Works County of Santa Barbara

Cebada Canyon Channel
Lilley-Hayes Ditch
Hoag-Santa Rita Ditch

PUBLIC WORKS ENTERPRISE GIS

N W E S

2,500 1,250 0 2,500
Feet

Coordinate System: State Plane California Zone V NAD 1983

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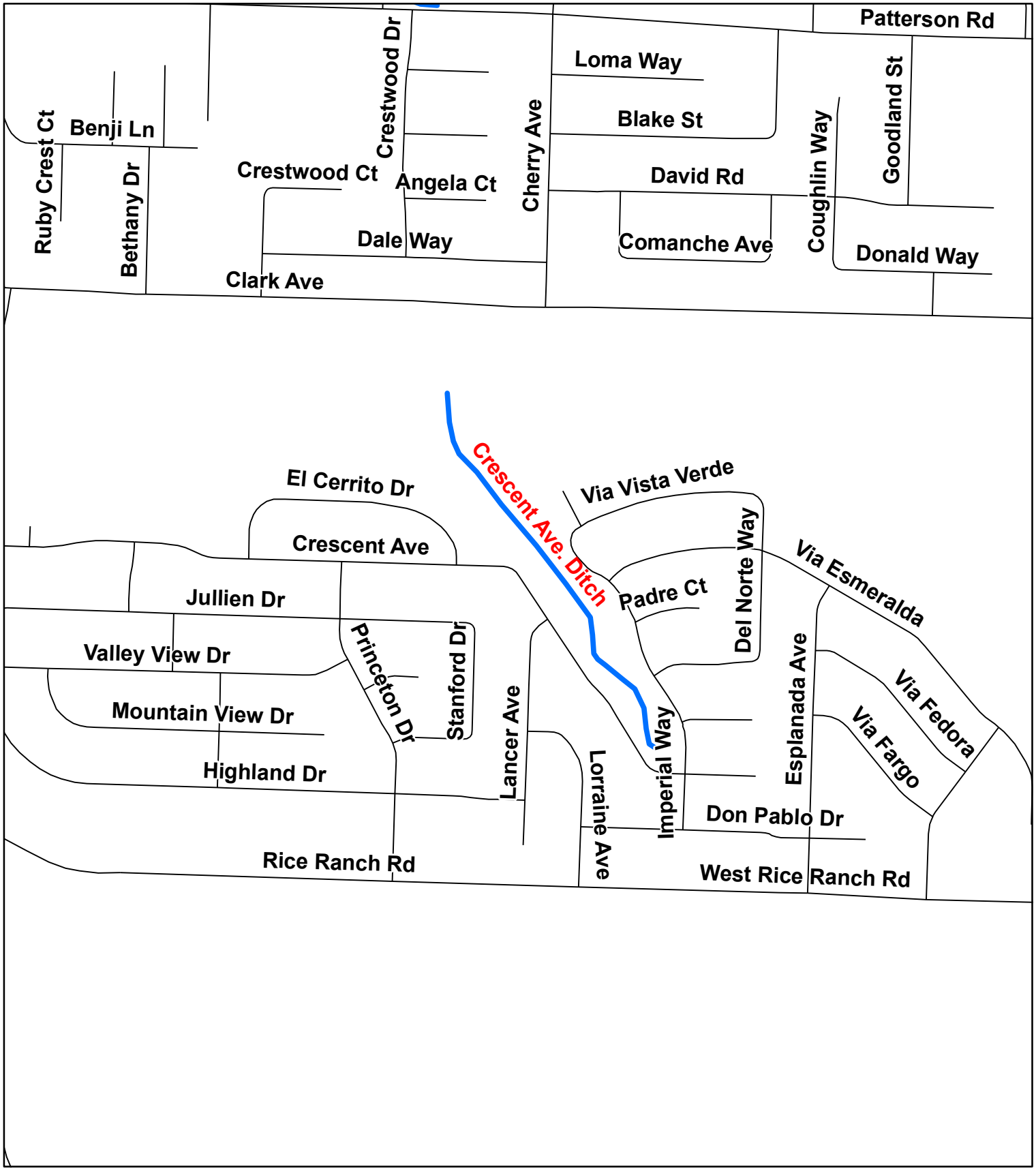

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Crescent Avenue Ditch

N W E S

510 255 0 510

Feet

Coordinate System: State Plane California Zone V NAD 1983

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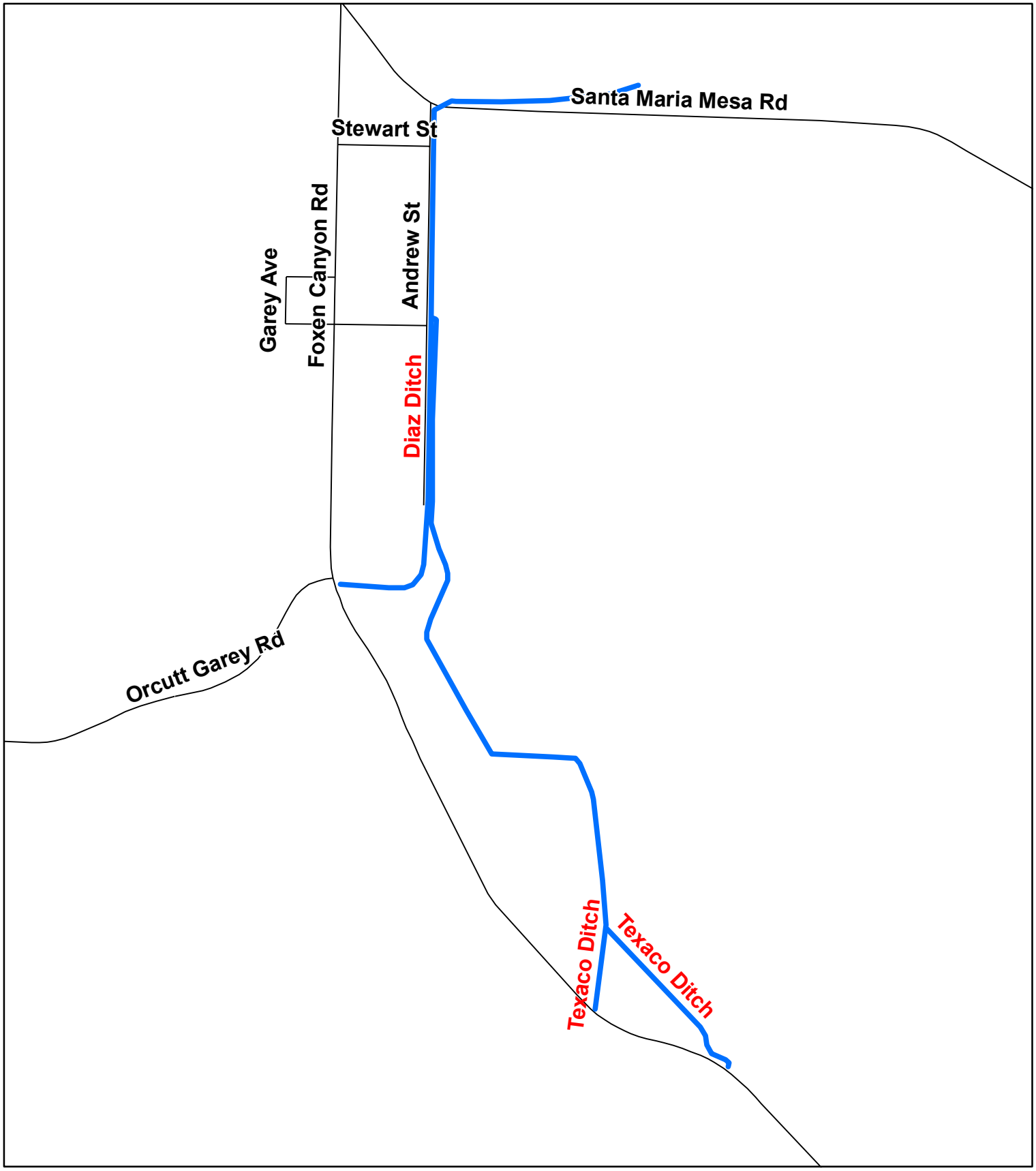

Department of Public Works County of Santa Barbara

Diaz Ditch
Texaco Ditch

N W E S

870 435 0 870

Feet

Coordinate System: State Plane California Zone V NAD 1983

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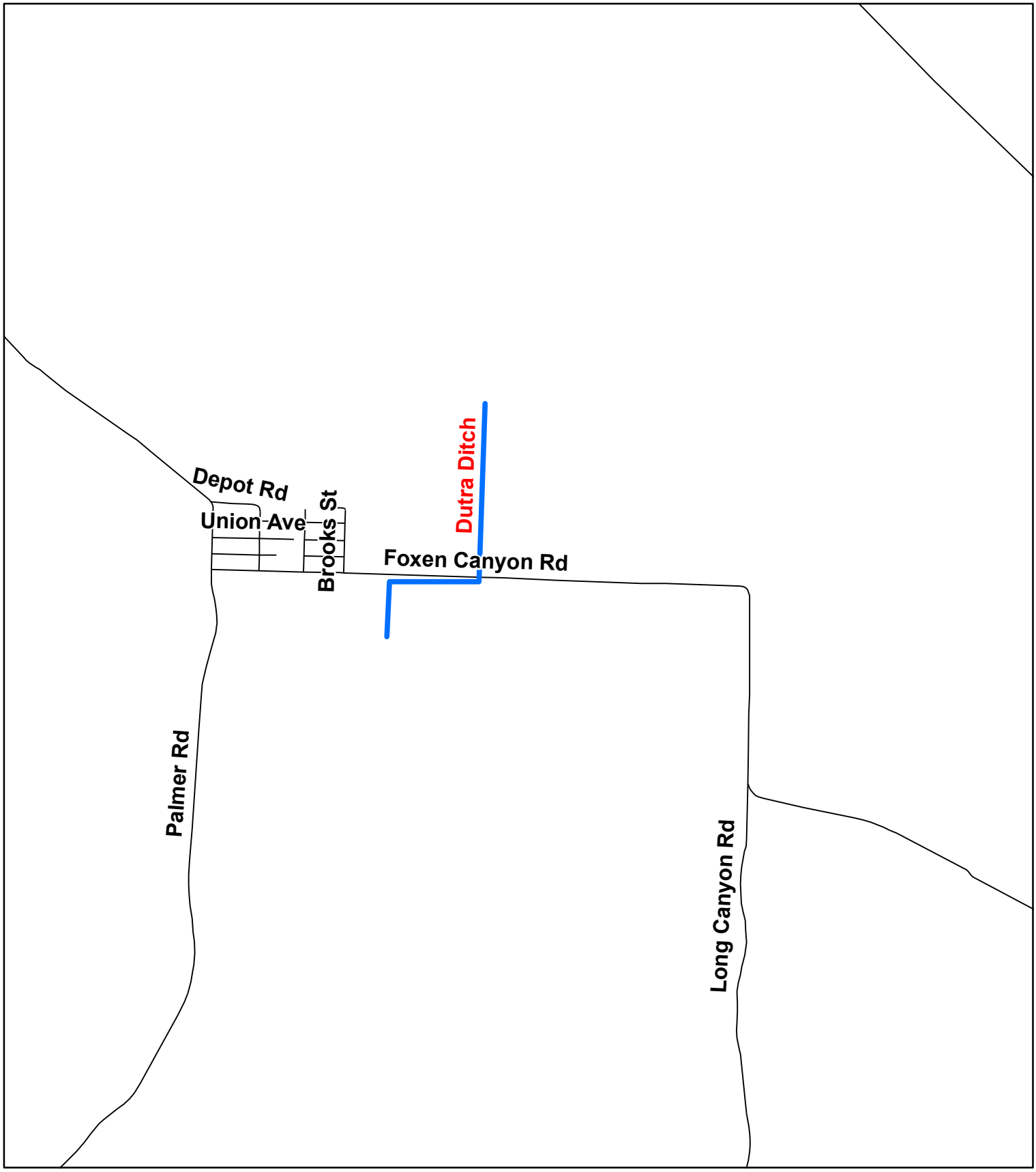

Department of Public Works County of Santa Barbara

Dutra Ditch

N
W E
S
Feet
1,100 550 0 1,100

Coordinate System: State Plane California Zone V NAD 1983

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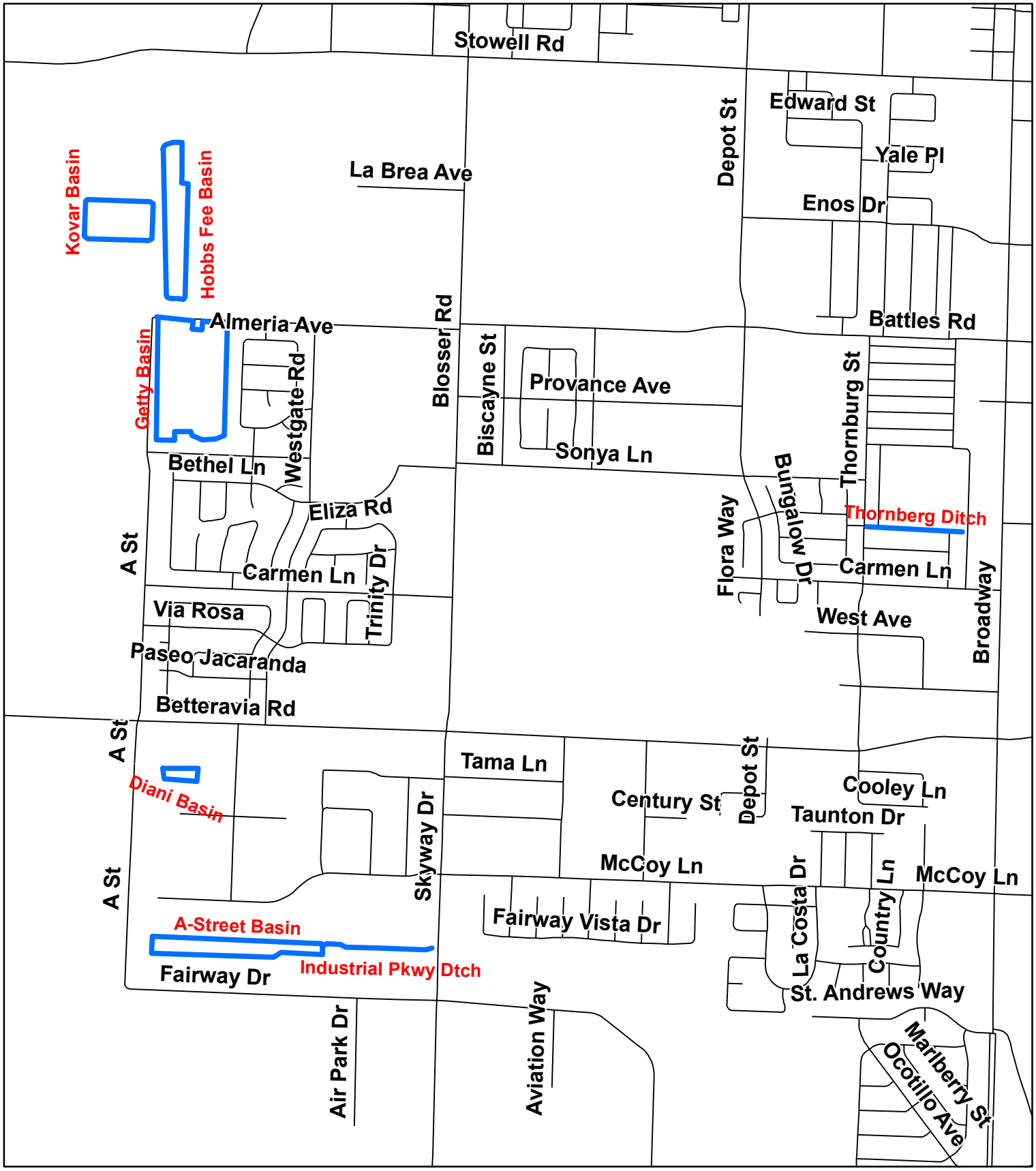

Department of Public Works County of Santa Barbara

Page 11

Getty Basin
Hobbs Fee Retention Basin
Kovar Basin
Thornberg Ditch
A-Street Basin
Industrial Parkway Ditch
Diani Basin

N
W E
S
Feet
1,100 550 0 1,100

Coordinate System: State Plane California Zone V NAD 1983

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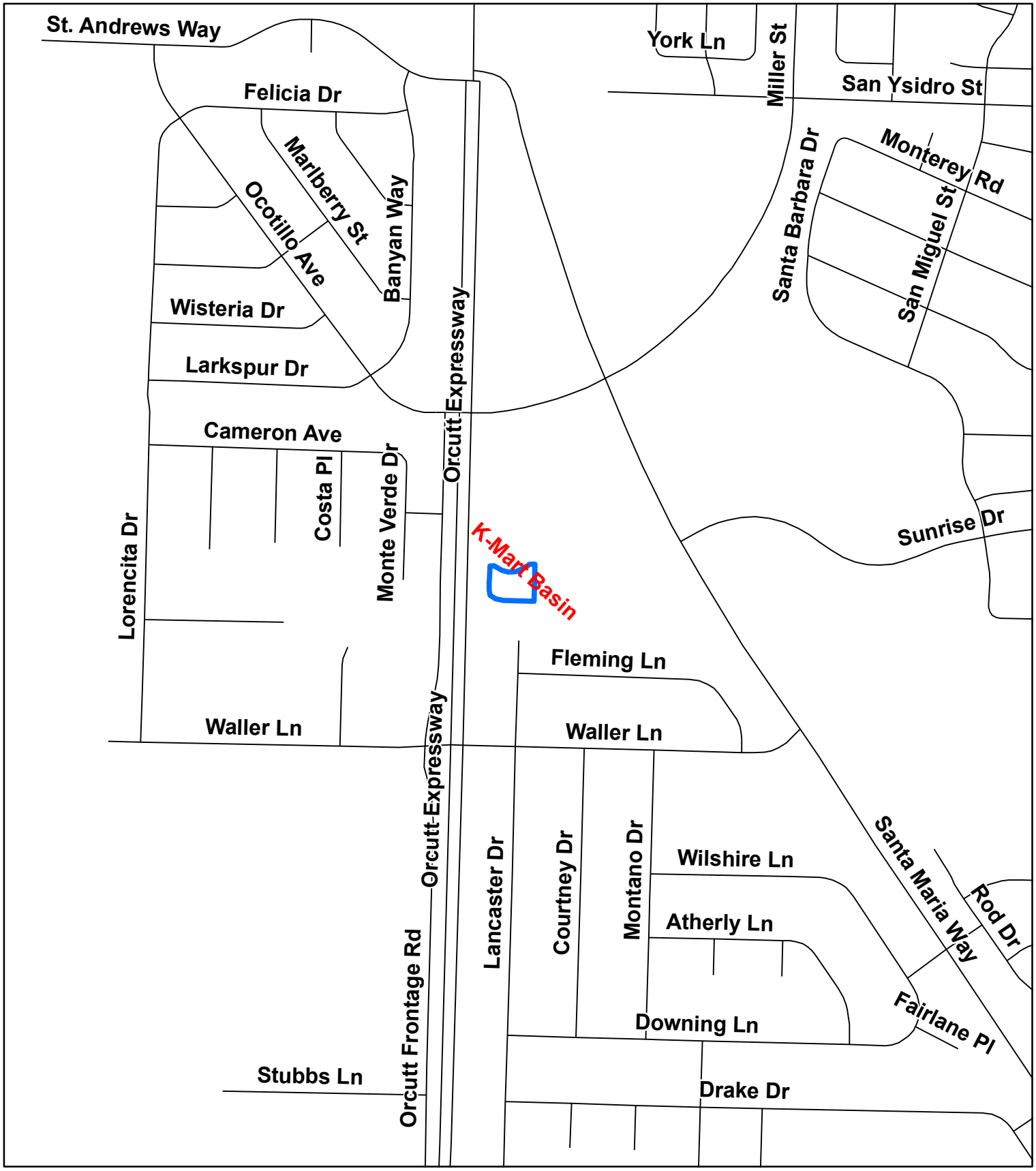

Department of Public Works County of Santa Barbara

K-Mart Basin

N W E S

460 230 0 460

Feet

Coordinate System: State Plane California Zone V NAD 1983

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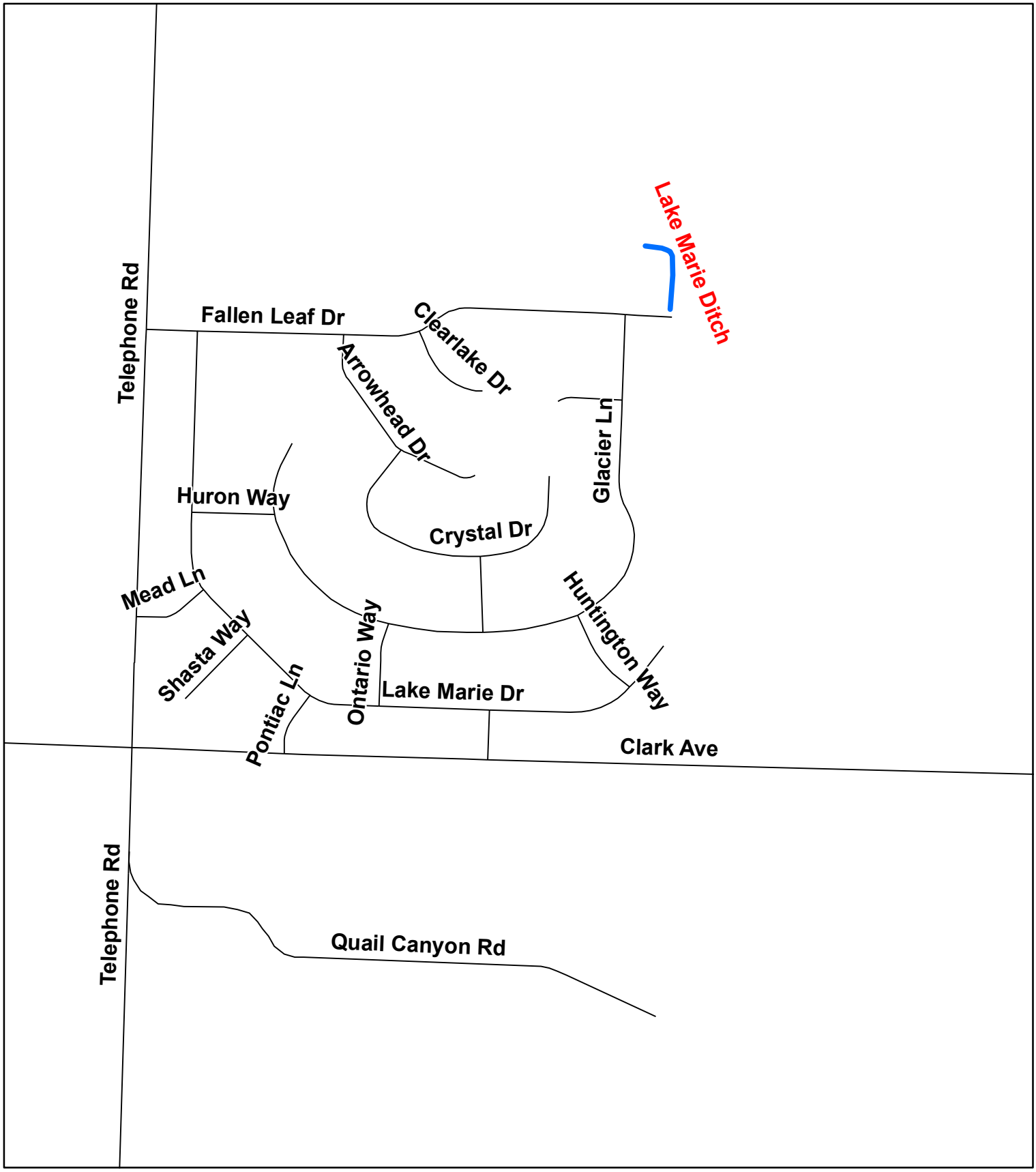

Department of Public Works County of Santa Barbara

Lake Marie Ditch

N W E S

560 280 0 560

Feet

Coordinate System: State Plane California Zone V NAD 1983

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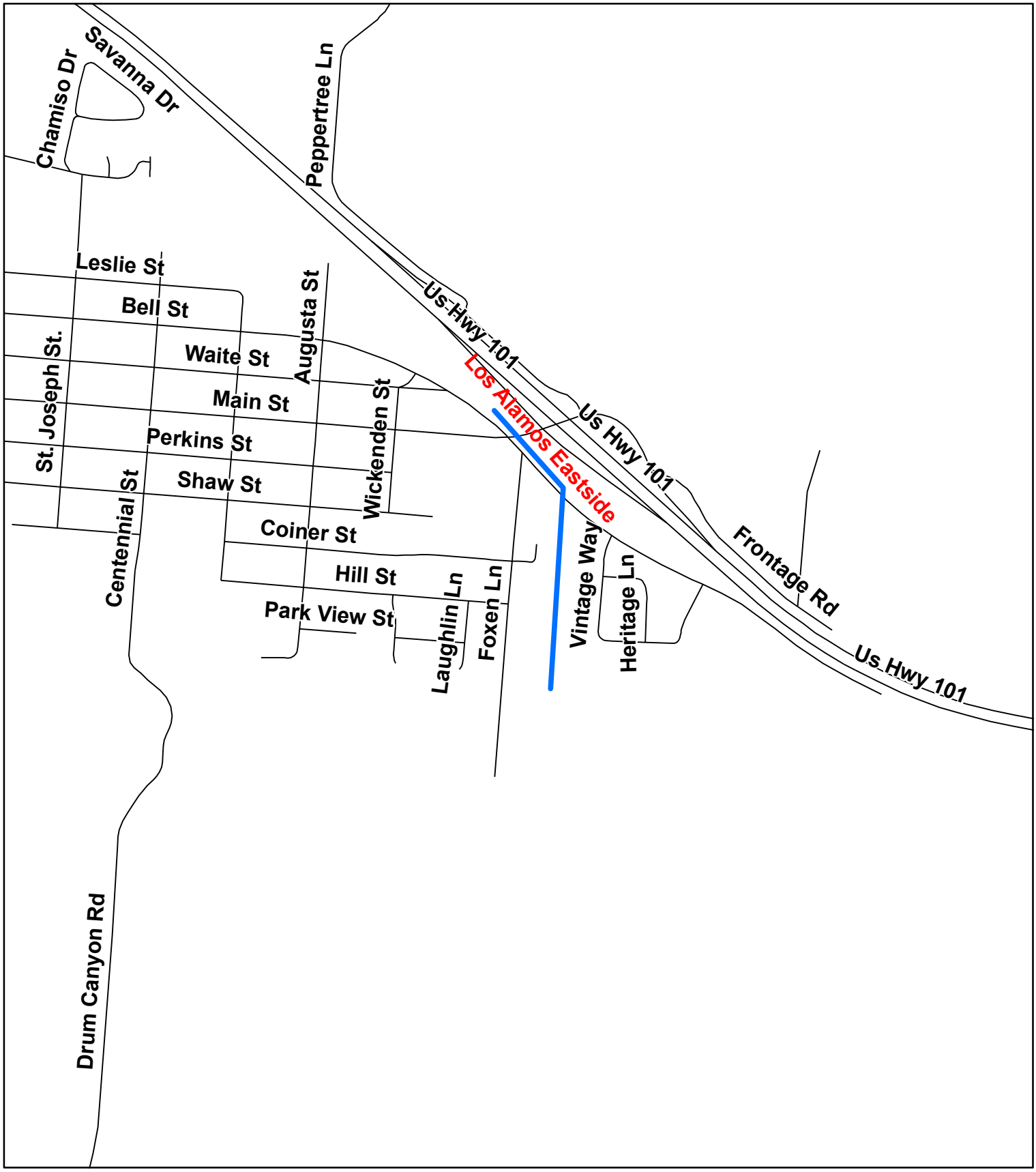

Department of Public Works County of Santa Barbara

Los Alamos Eastside Ditch

N
W E
S
Feet
725 362.5 0 725

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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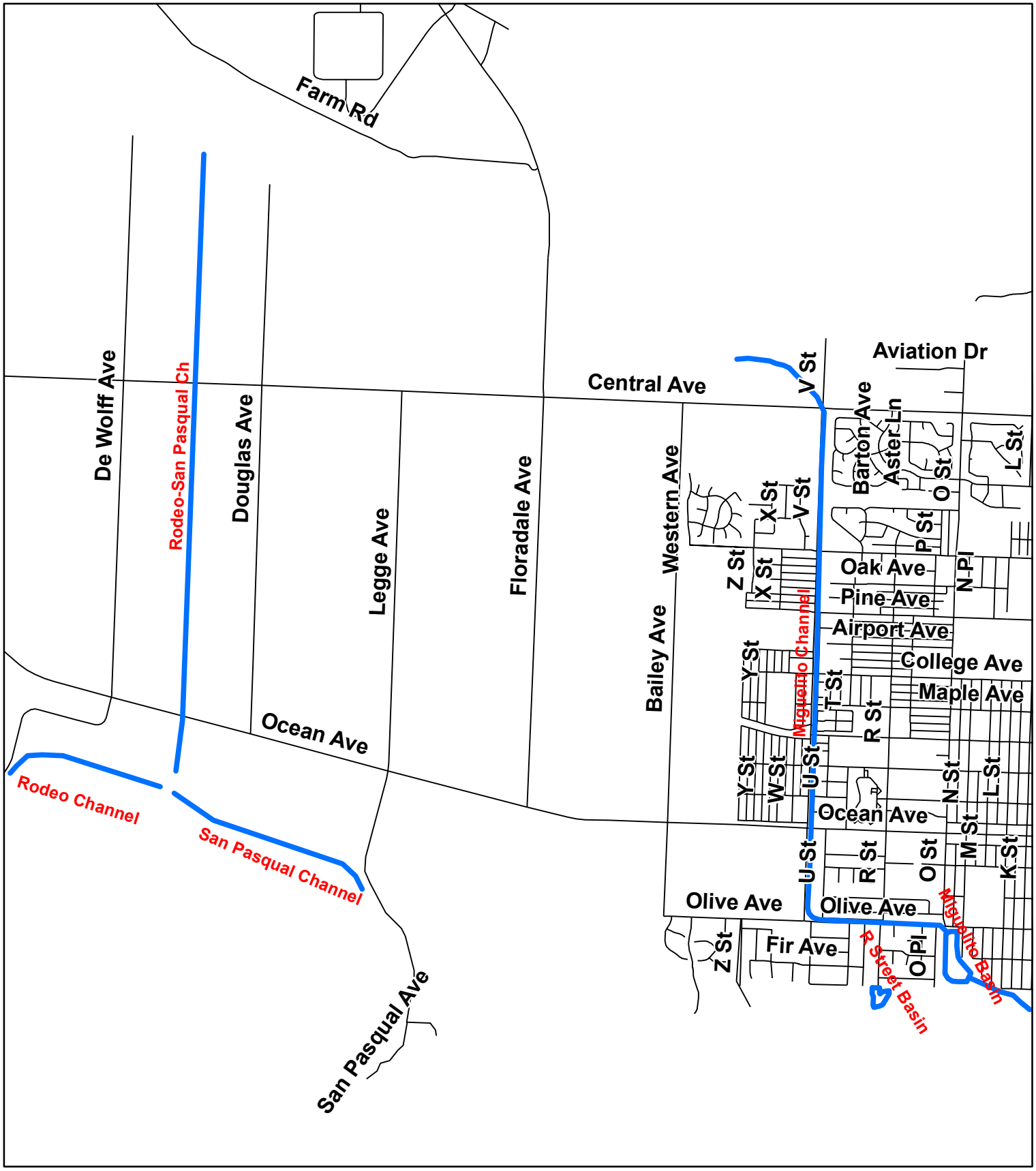

Department of Public Works County of Santa Barbara

Page 15

Miguelito Channel
Miguelito Basin
R Street Basin
Rodeo Channel
San Pasqual Channel
Rodeo-San Pascual Channel

N
W E
S
Feet
2,100 1,050 0 2,100

Coordinate System: State Plane California Zone V NAD 1983

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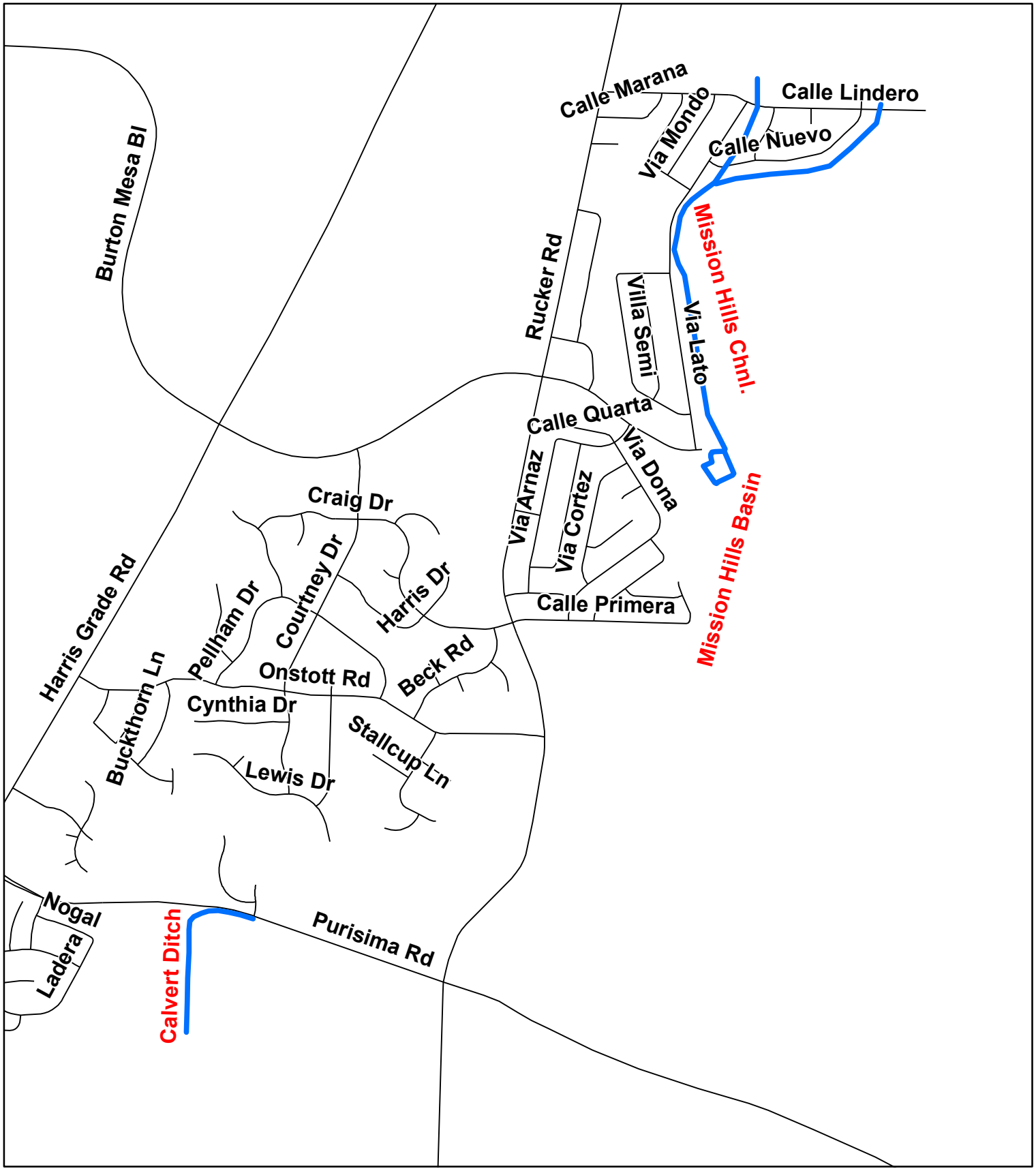

Department of Public Works County of Santa Barbara

Mission Hills Channel
Mission Hills Basin
Calvert Ditch

N W E S

1,200 600 0 1,200 Feet

Coordinate System: State Plane California Zone V NAD 1983

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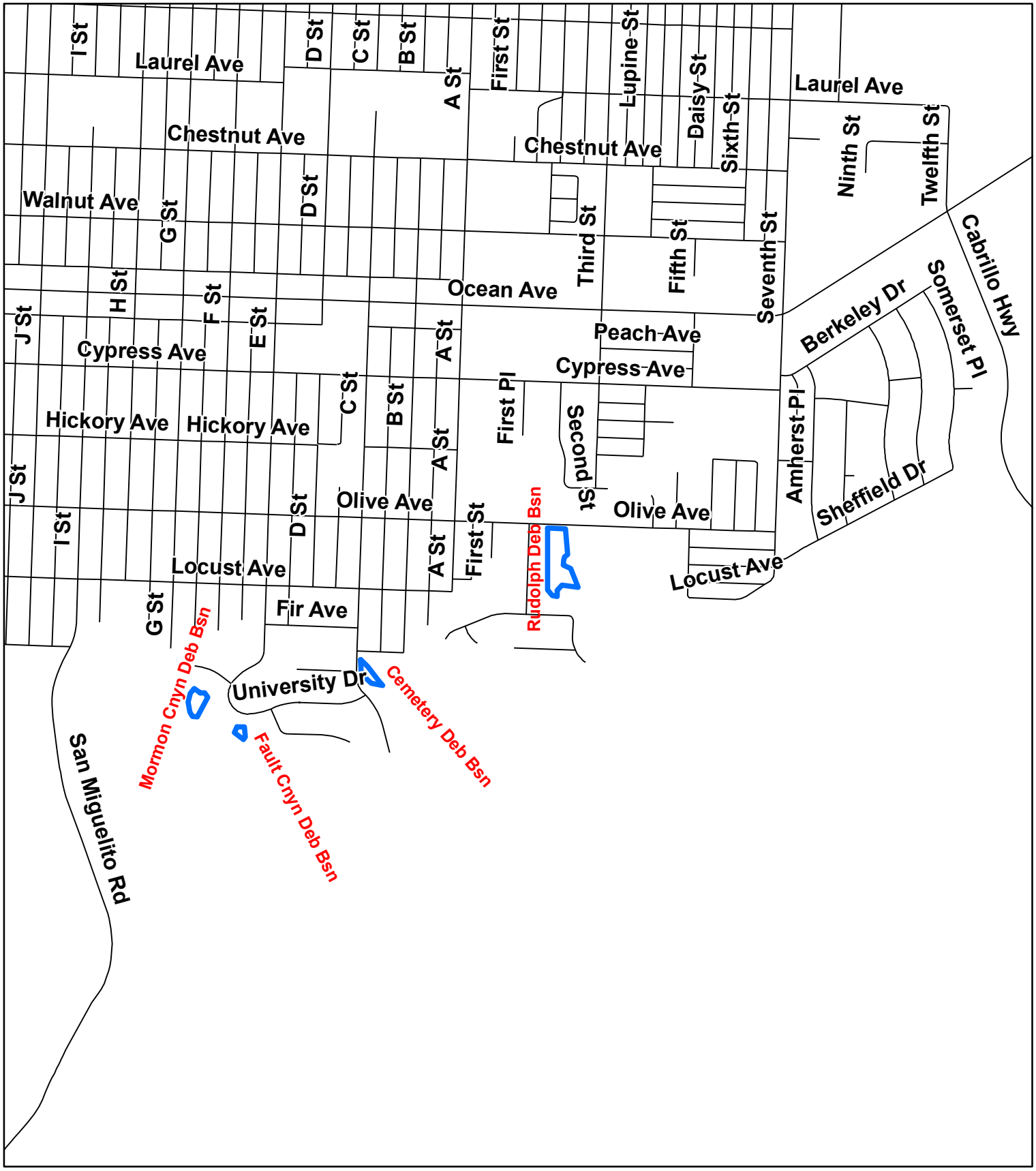

Department of Public Works County of Santa Barbara

Mormon Canyon Debris Basin
Fault Canyon Debris Basin
Cemetery Debris Basin
Rudolph Debris Basin

N W E S

950 475 0 950

Feet

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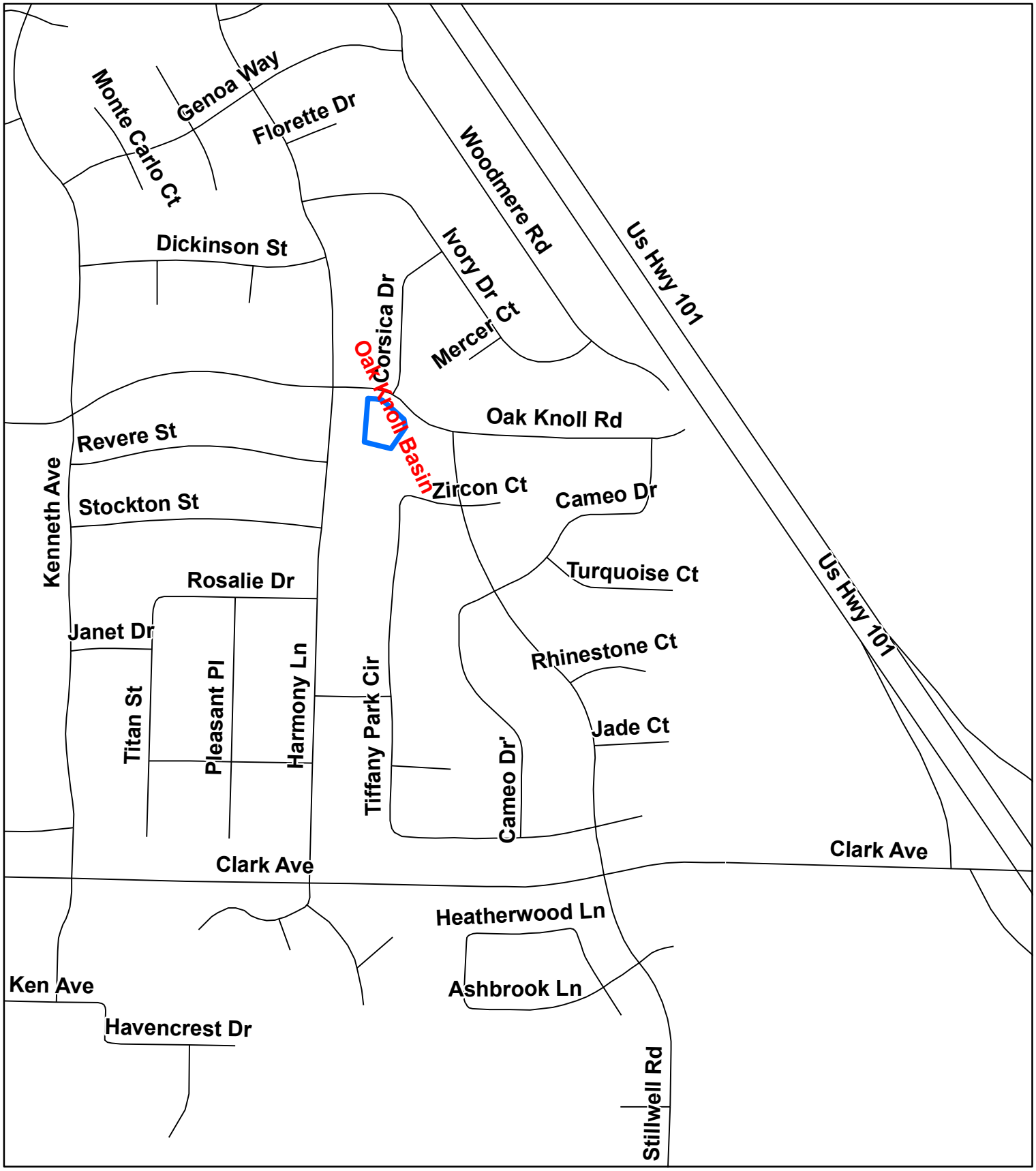

Department of Public Works County of Santa Barbara

Oak Knoll Basin

N W E S

460 230 0 460

Feet

Coordinate System: State Plane California Zone V NAD 1983

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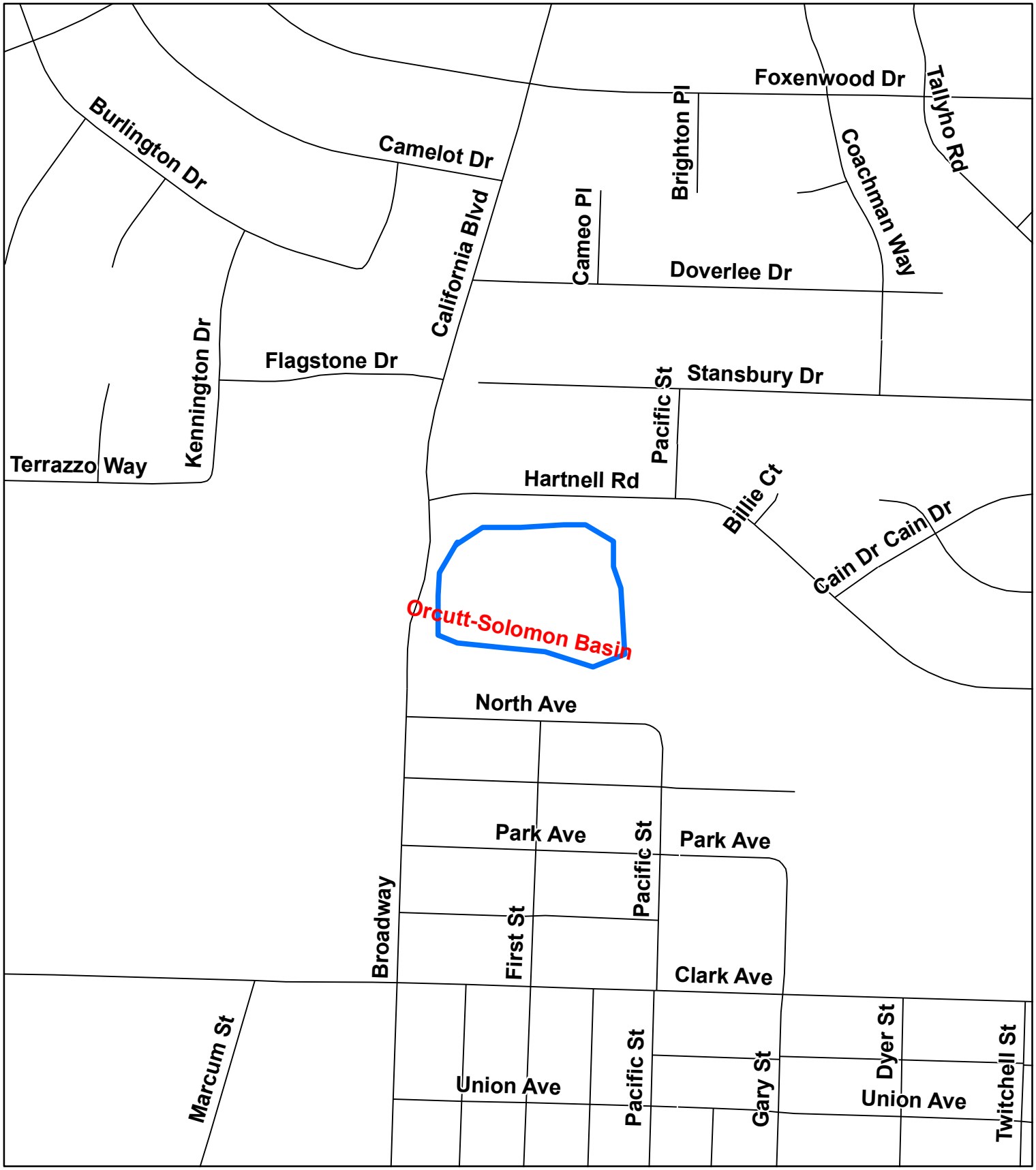

Department of Public Works County of Santa Barbara

Orcutt-Solomon Basin

N W E S

Feet

325 162.5 0 325

Coordinate System: State Plane California Zone V NAD 1983

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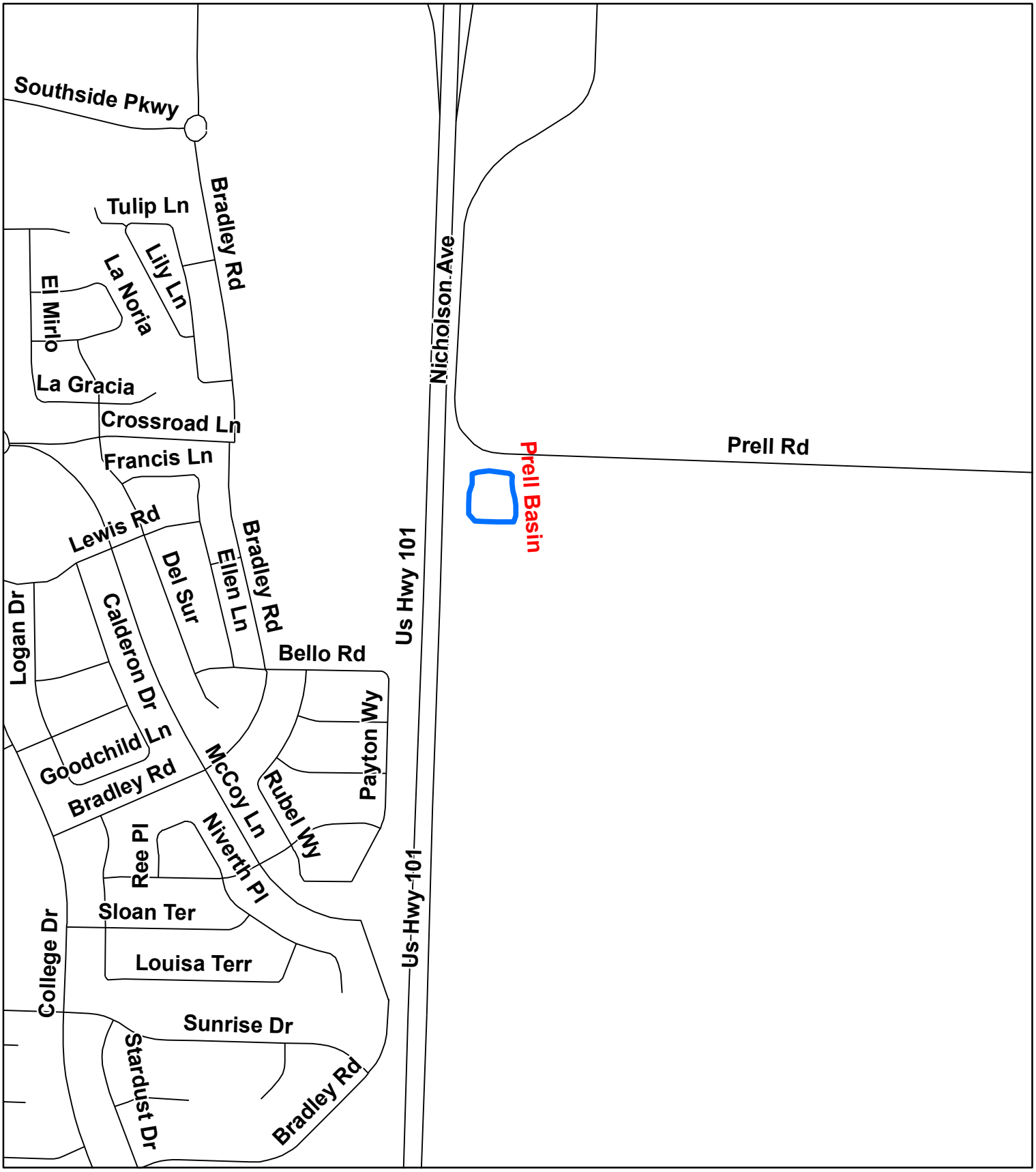

Department of Public Works County of Santa Barbara

Prell Basin

N
W E
S
Feet
525 262.5 0 525

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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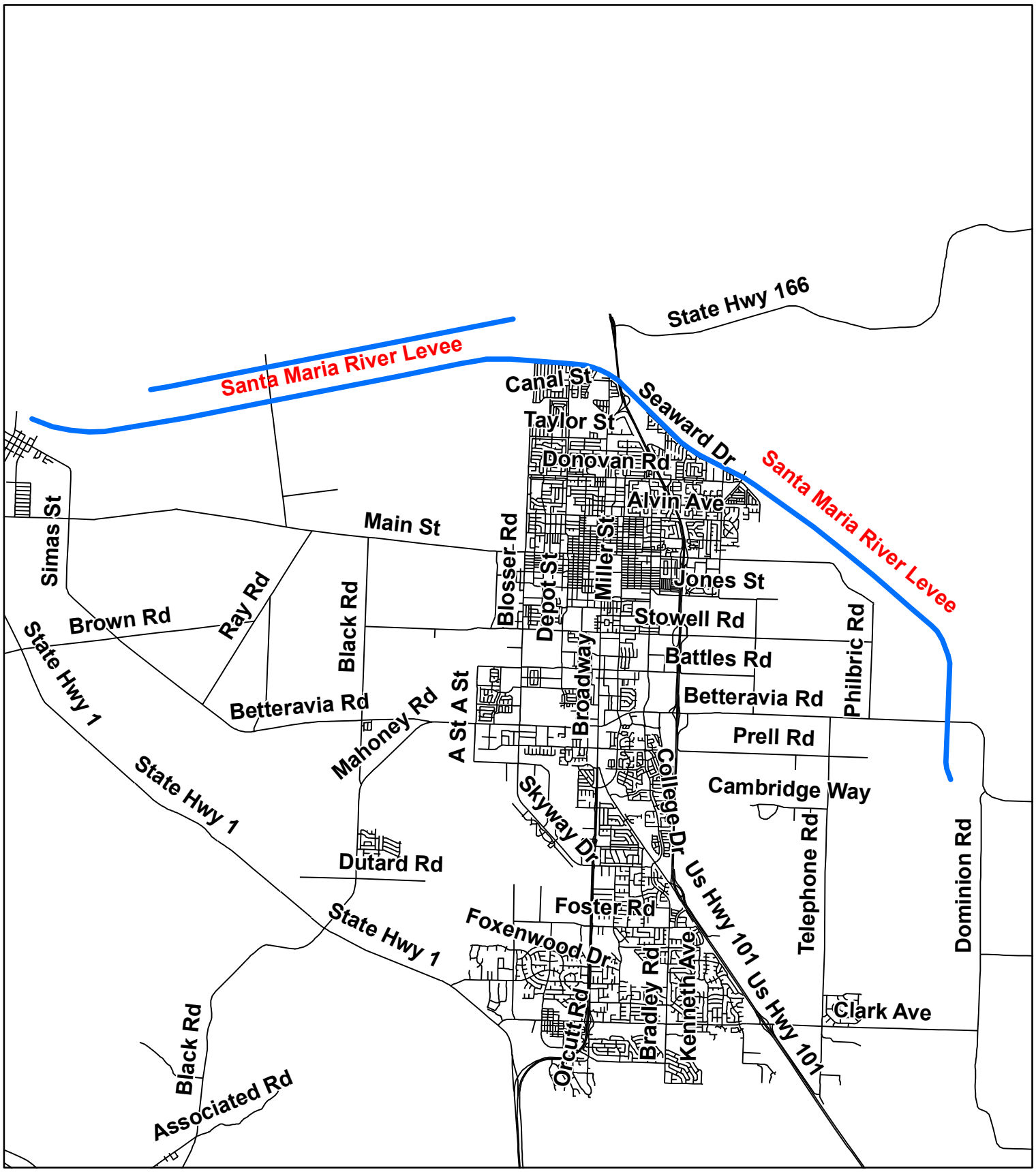

Department of Public Works County of Santa Barbara

Santa Maria River Levee

N W E S

Feet

7,300 3,650 0 7,300

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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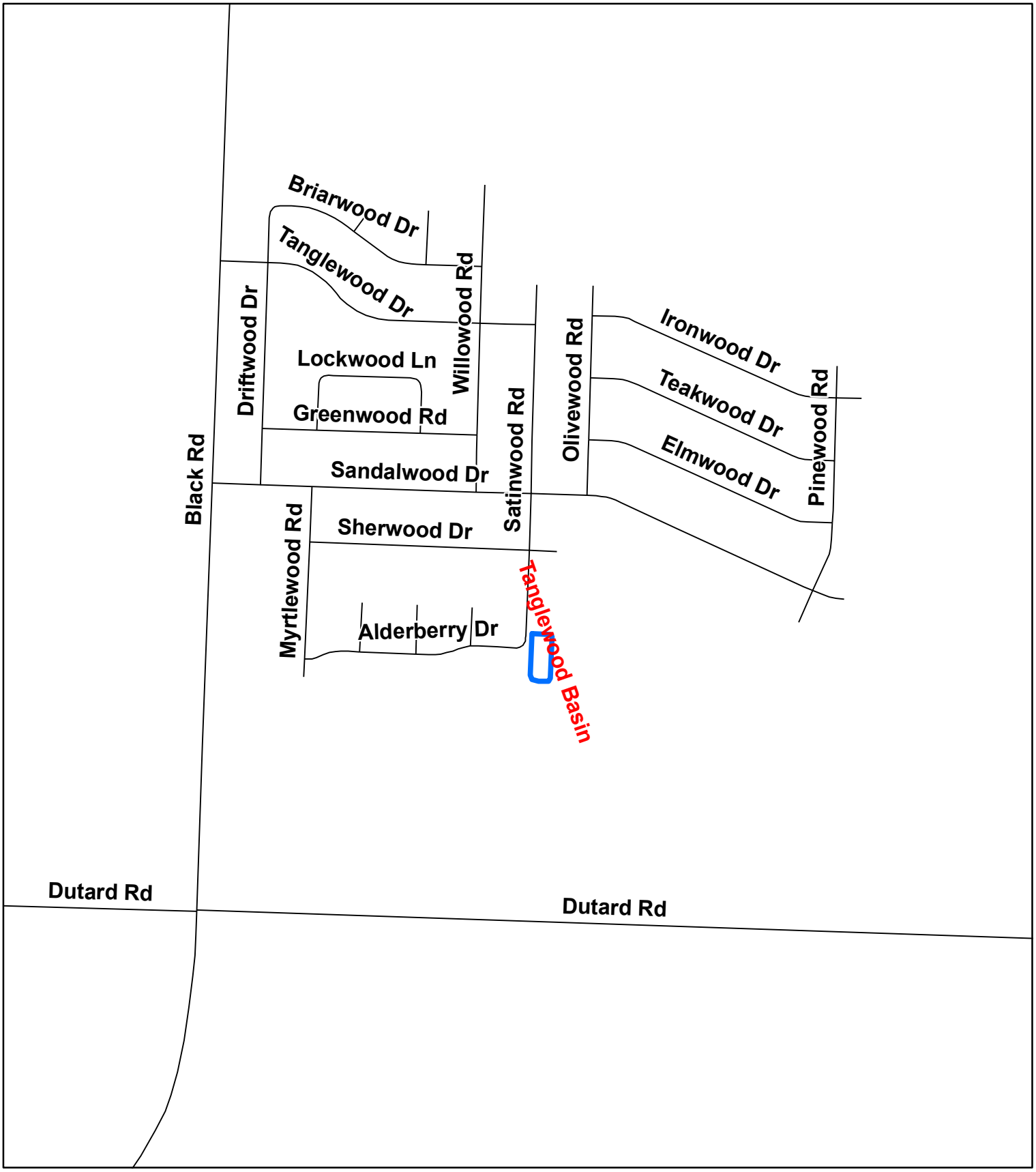

Department of Public Works County of Santa Barbara

Tanglewood Basin

N W E S

Feet

510 255 0 510

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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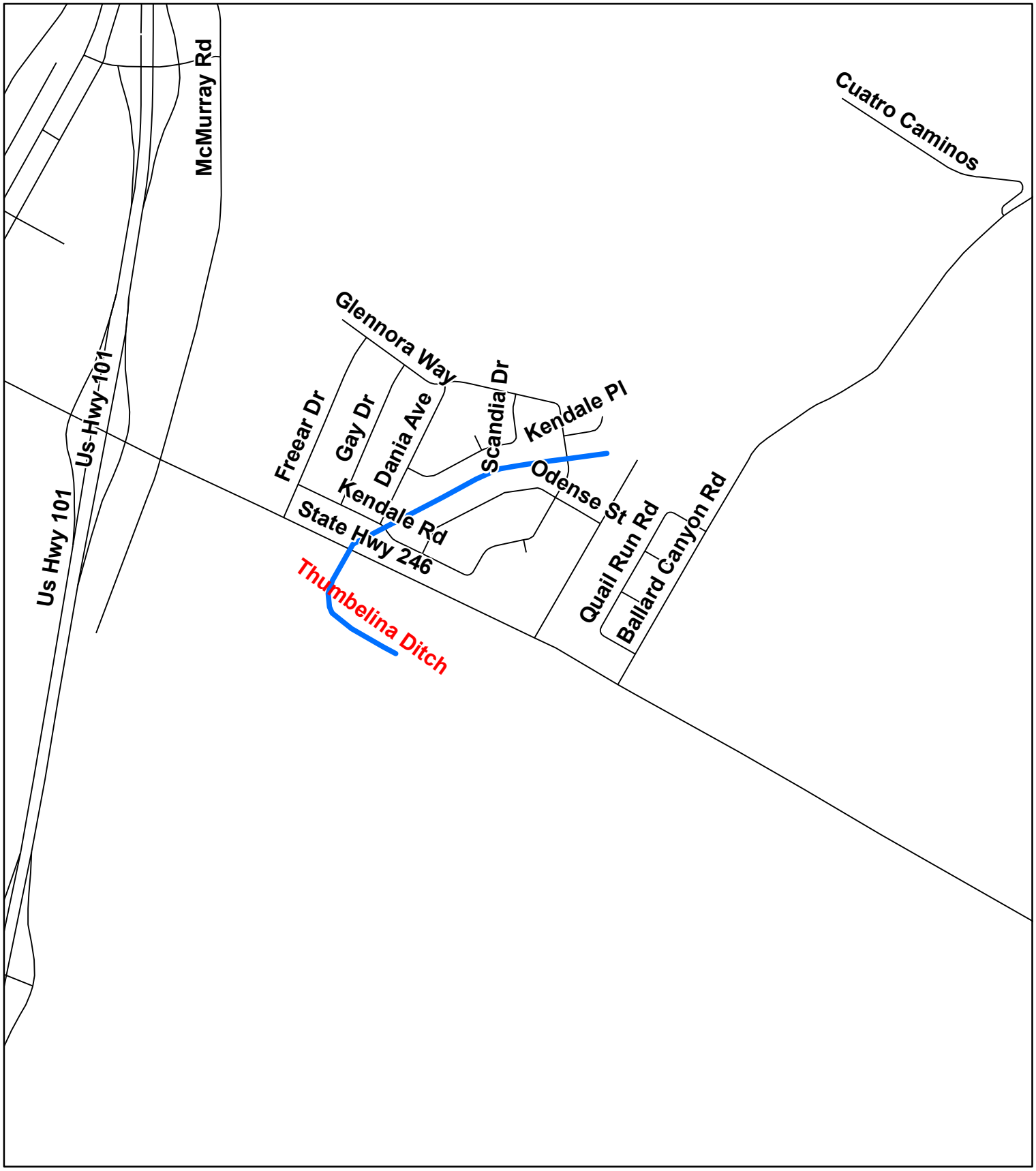

Department of Public Works County of Santa Barbara

Thumbelina Ditch

N
W E
S
Feet
680 340 0 680

Coordinate System: State Plane California Zone V NAD 1983

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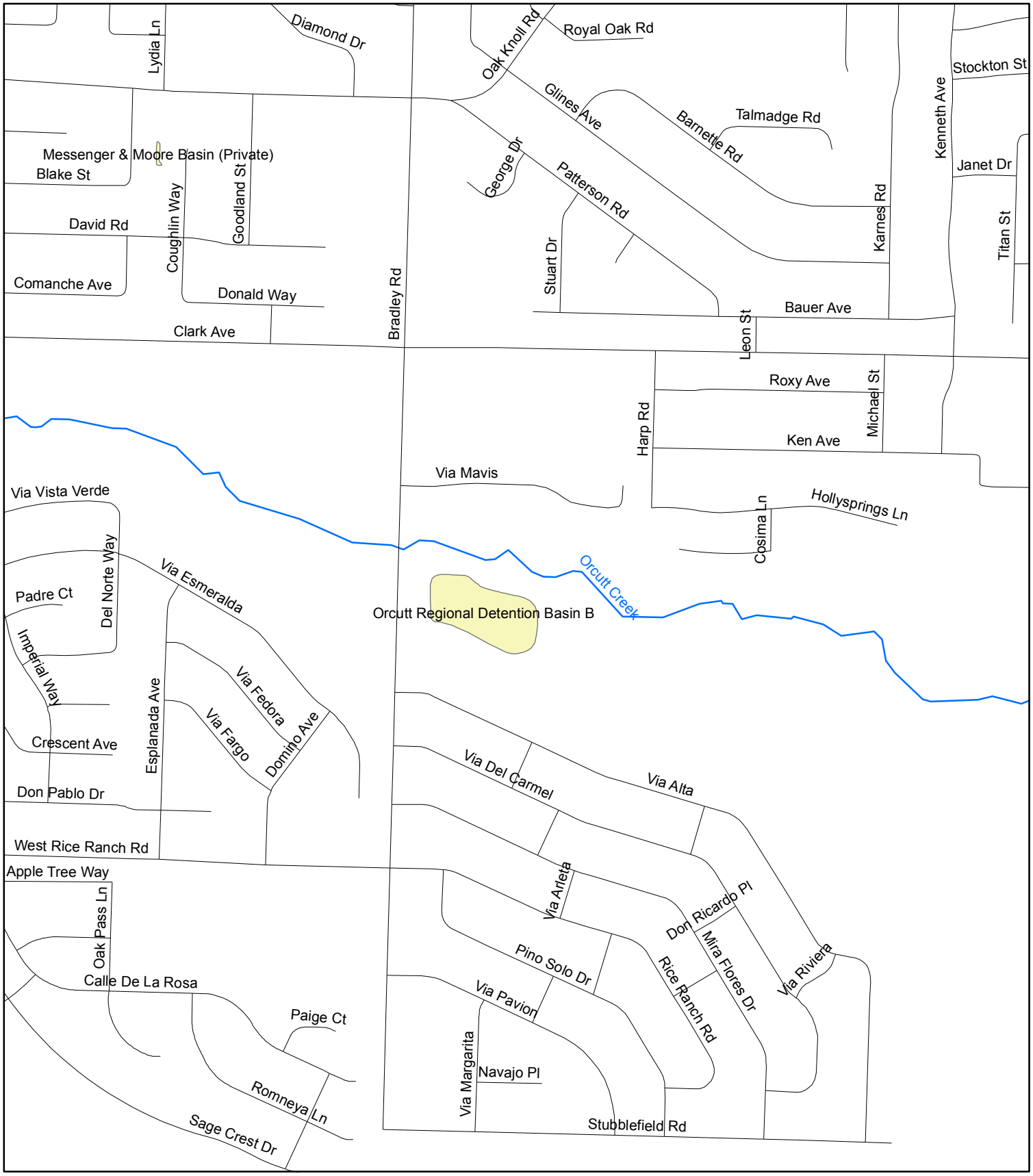

Department of Public Works County of Santa Barbara

Orcutt Regional Detention Basin B

N W E S

Feet

550 275 0 550

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

Prepared By:
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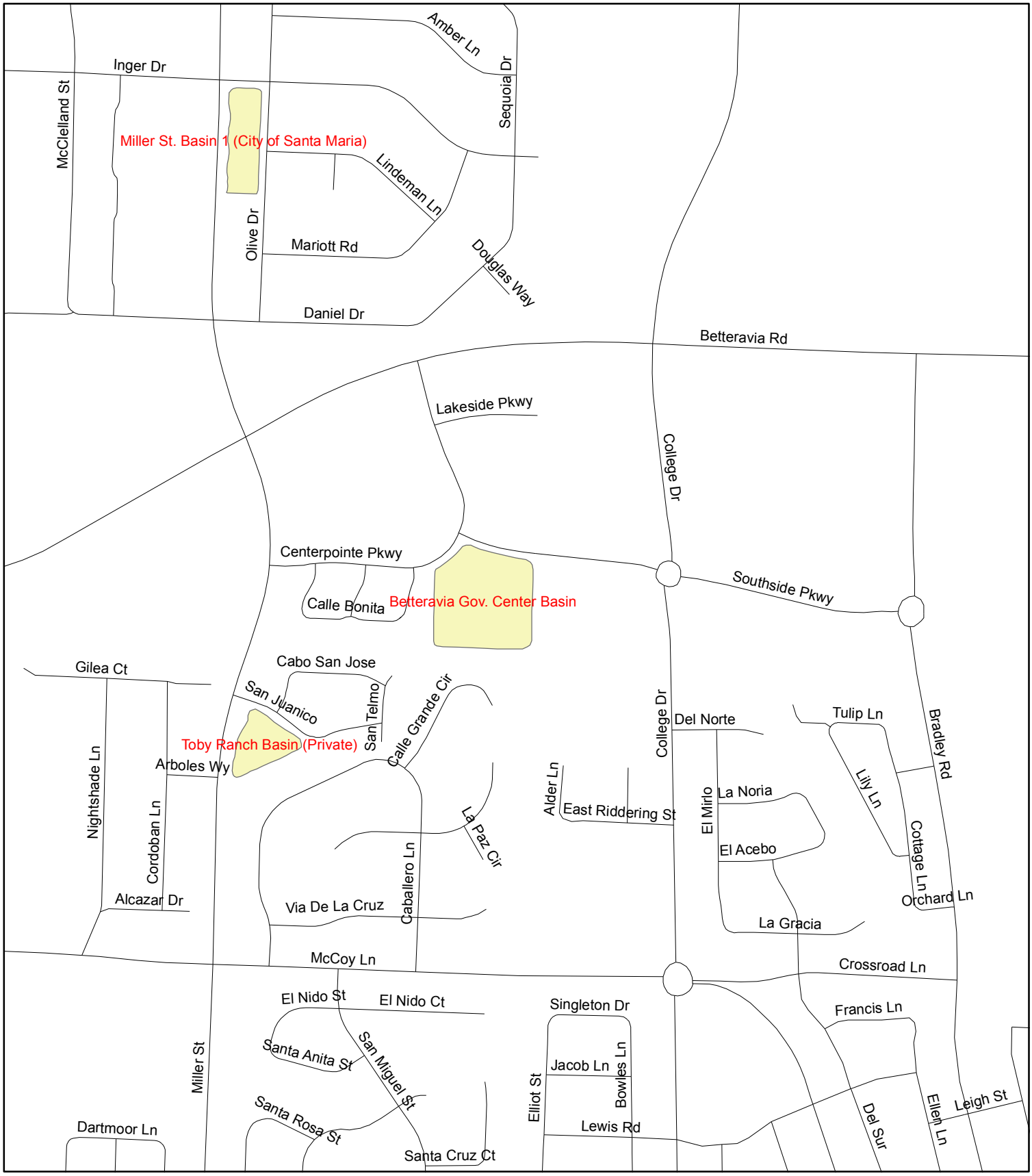

Department of Public Works County of Santa Barbara

C2P2 Basin (Betteravia Gov. Center Basin)

N W E S

Feet

430 215 0 430

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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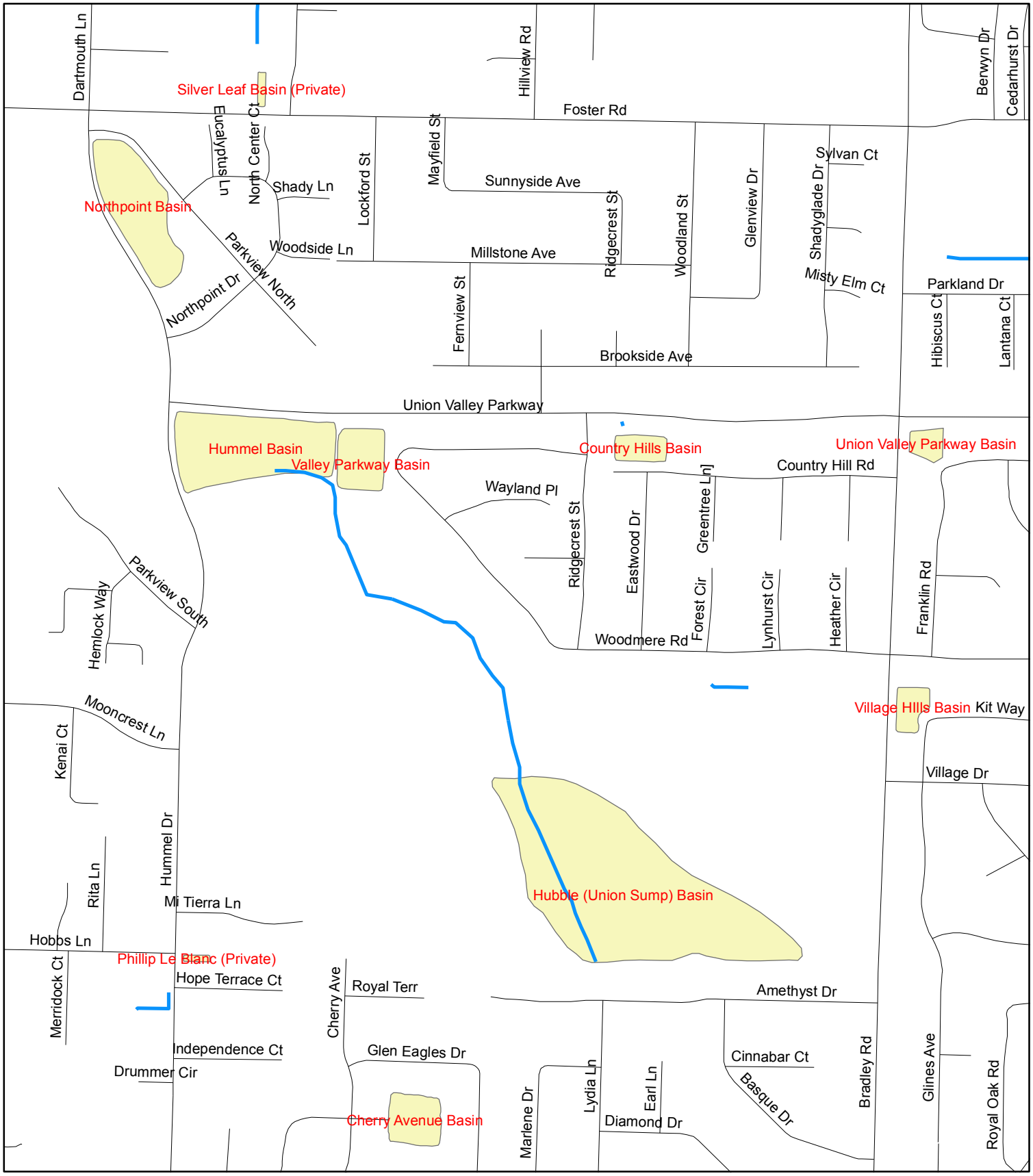

Department of Public Works County of Santa Barbara

Page 26

Northpointe Basin
Hummel Basin
Valley Parkway Basin
Country Hills Basin
Union Valley Parkway Basin
Village Hills Basin
Hubble Basin
Cherry Avenue Basin

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N W E S

Feet
490 245 0 490

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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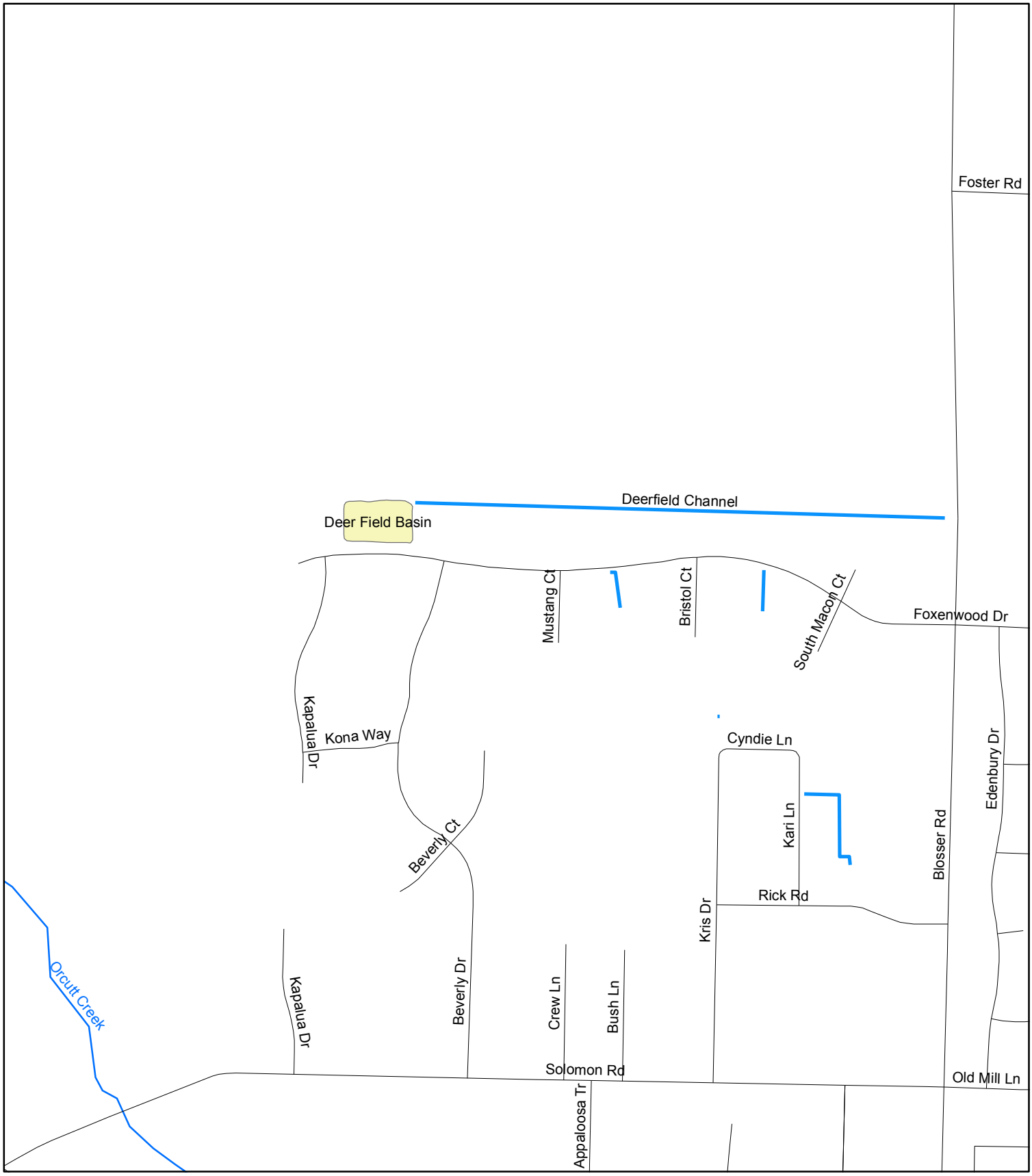

Department of Public Works County of Santa Barbara

Deerfield Channel
Deerfield Basin

N W E S

490 245 0 490

Feet

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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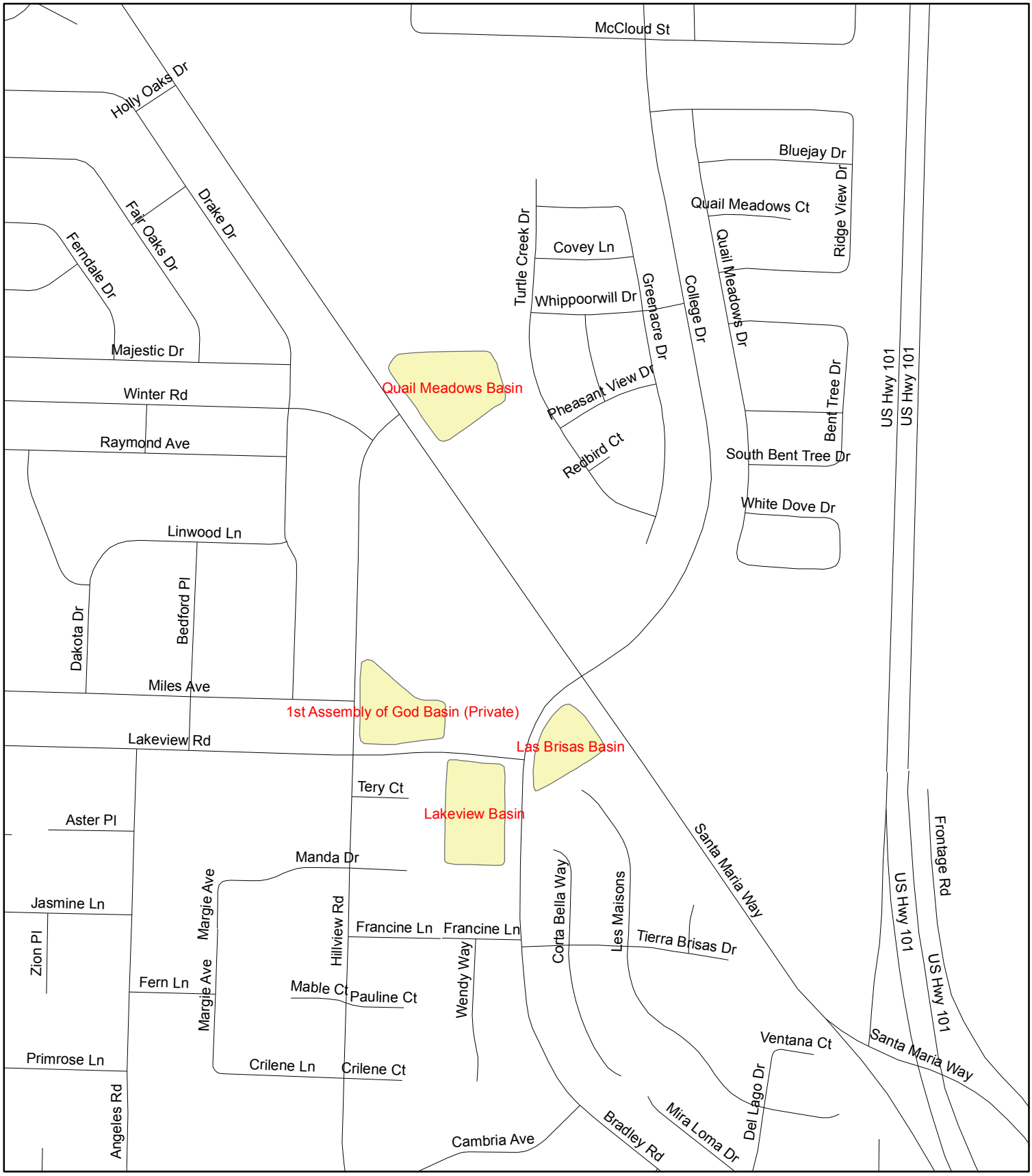

Department of Public Works County of Santa Barbara

Lakeview Basin
Las Brisas Basin
Quail Meadows Basin

N W E S

Feet
400 200 0 400

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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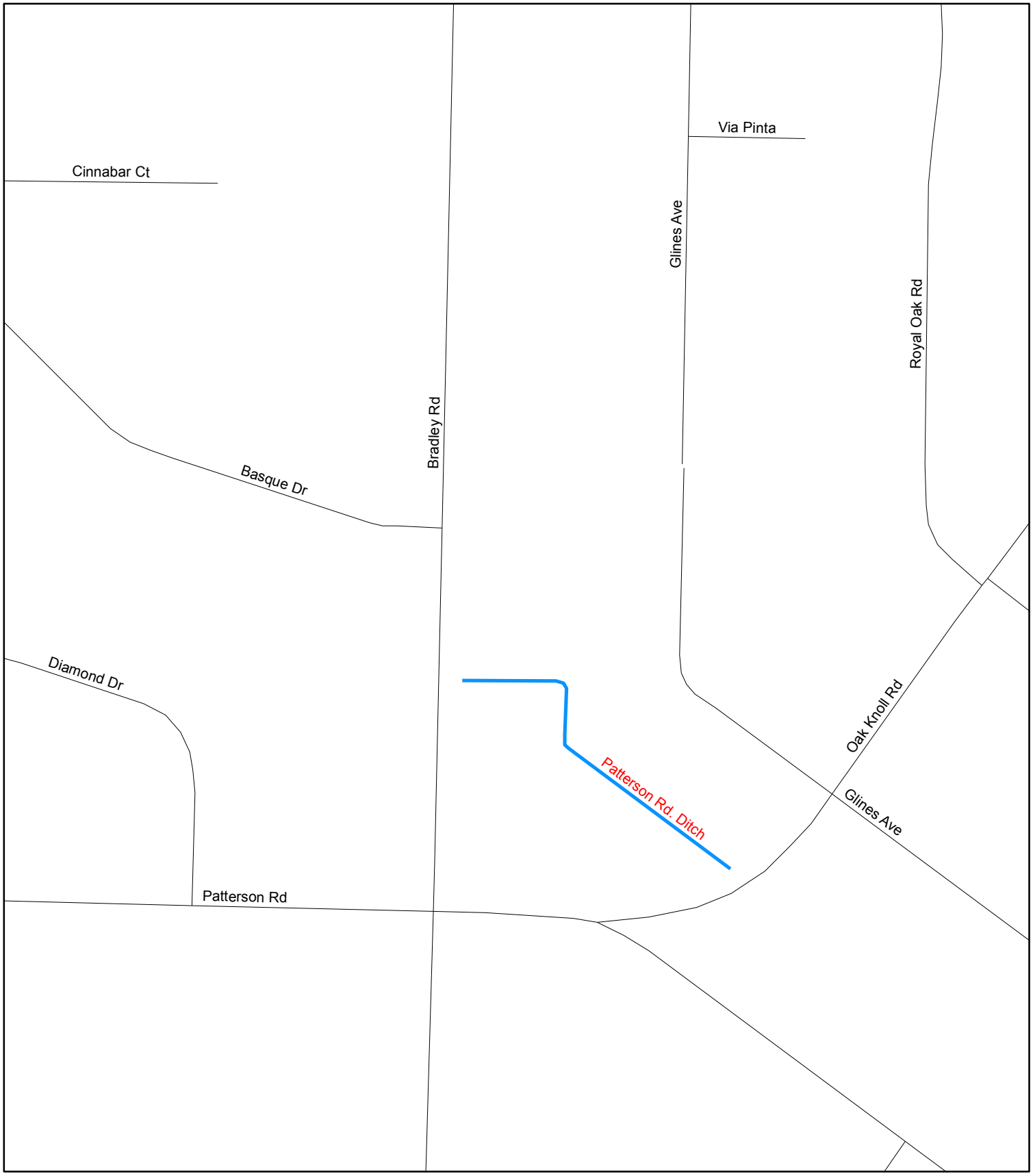

Department of Public Works County of Santa Barbara

Patterson Rd. Ditch

N W E S

130 65 0 130 Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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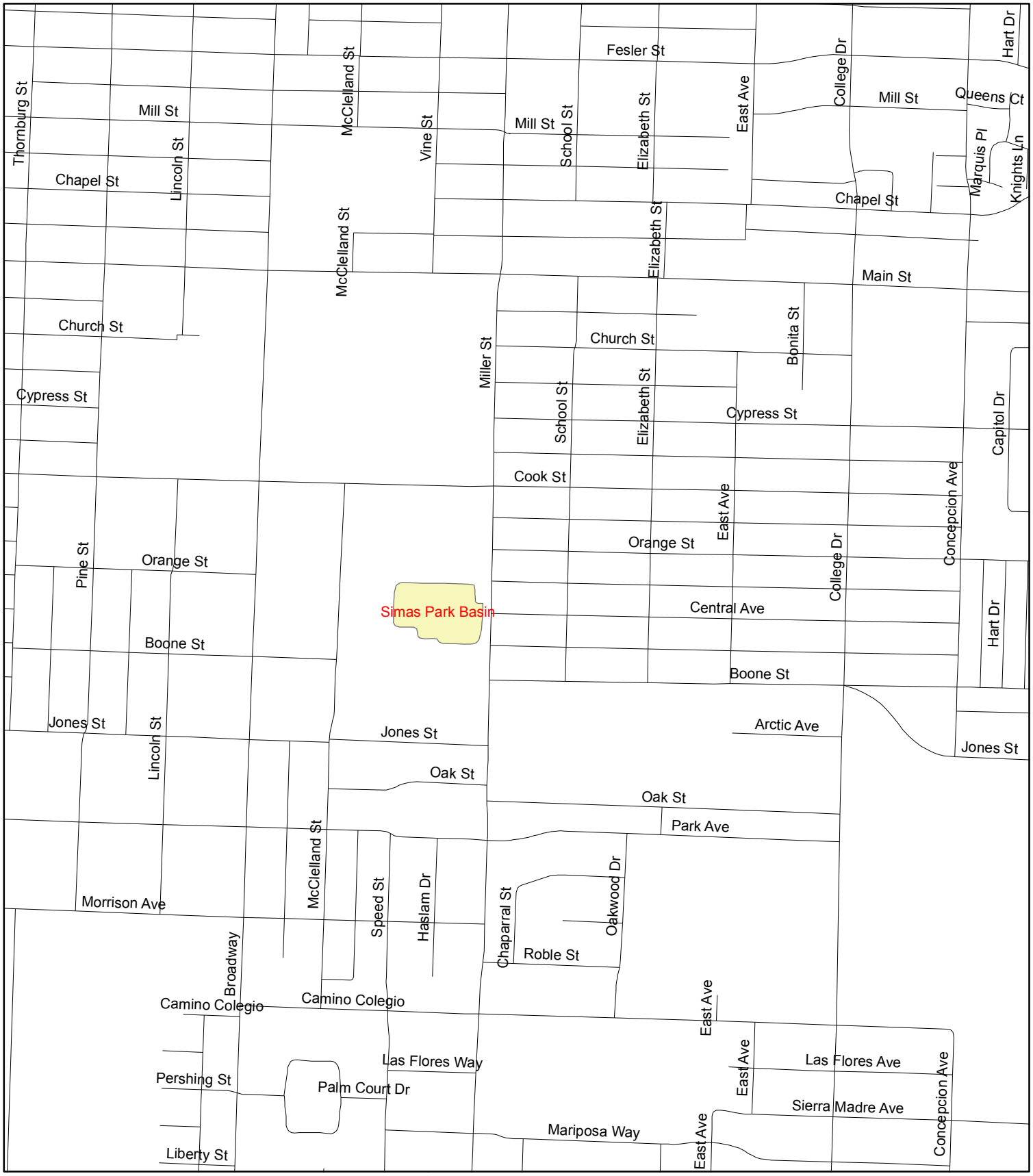

Department of Public Works County of Santa Barbara

Simas Park Basin

N W E S

Feet

570 285 0 570

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

Prepared By:
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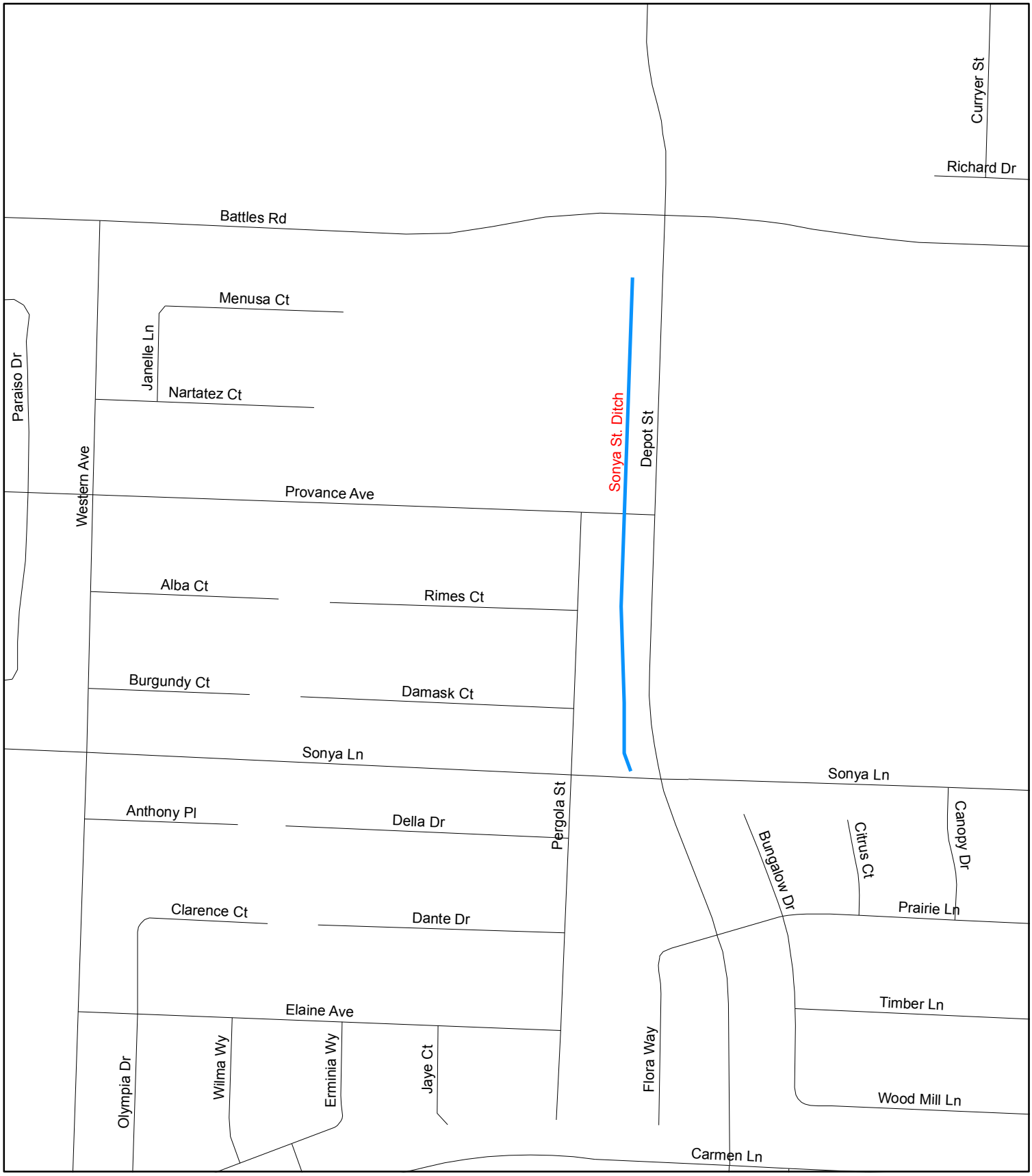

Department of Public Works County of Santa Barbara

Sonya St. Ditch

N W E S

Feet

270 135 0 270

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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Compiled by the Public Works Enterprise GIS.

South Coast Facilities:

Most of the South Coast facilities are concrete channels that require minor maintenance. Maintenance mainly consists of periodic inspection of the weep holes along the concrete channel and trimming of vegetation that overhangs the channel from adjacent back yards and along access roads and vegetation such as ivy that grows down the concrete itself. The District occasionally paints over graffiti.

Concrete Channels:

1. **Arroyo Burro Channel:** From the confluence with San Roque Creek downstream to Calle Real Street, approximately 166 feet. The bottom of the channel will be spot sprayed this year to eliminate the vegetation that may begin to colonize within the channel. Refer to Page 1.
2. **Atascadero Channel:** From Arroyo Road downstream to the confluence with Hospital Channel, a distance of 2,170 feet. . The bottom of the channel is spot sprayed along with graffiti removal on an annual basis to eliminate the vegetation that may begin to colonize within the channel. Refer to Page 2.

3. **Cieneguitas Channel:** From the Union Pacific railroad tracks donwstream to Modoc Road, a distance of 500 feet. Portions of the concrete channel are starting to breakdown and in need repair. Four 2'x3' sections of concrete are broken. These areas will be saw cut, removed, and replaced with new concrete. Refer to Page 3.

4. **Derbiano Drain:** From the confluence with Hospital Creek upstream 1000'. This concrete channel is encroached upon by overhanging shrubs that protrude into the active channel. The shrubs will be cut and removed from the active channel on an annual basis. Refer to Page 2.

5. **El Encanto Channel:** From Hollister Avenue to Phelps Road, a distance of 1,700 feet. The bottom of the channel is spot sprayed along with graffiti removal on an annual basis to eliminate the vegetation that may begin to colonize within the channel. Refer to Page 5.

6. **Franklin Channel:** From upstream of Casitas Pass Road downstream to the Carpinteria Salt Marsh, a distance of 2.2 miles. This concrete channel is encroached upon by overhanging shrubs that protrude into the active channel. The shrubs will be cut and removed from the active channel along with graffiti removal on an annual basis. Maintenance is scheduled for this season. Every 3 to 5 years, sediment is removed from the channel between Carp Ave and slough, with a loader so sediment does not accumulate. Maintenance including sediment removal will be scheduled this season. 150yds Refer to Page 8

7. **High School Drain:** On the east side of Carpinteria High School from Foothill Road upstream 500'. The bottom of the channel is spot sprayed along with graffiti removal on an annual basis to eliminate the vegetation that may begin to colonize within the channel. Refer to Page 8.

8. **Hog Canyon Channel:** From the confluence with Carpinteria Creek upstream 500'. This concrete channel is encroached upon by overhanging shrubs that protrude into the active channel. The shrubs will be cut and removed from the active channel. The channel is also spot sprayed on an annual basis. Maintenance is scheduled for this season. Every 5 to 7 years, sediment is removed from the channel. No sediment removal is scheduled this season. Refer to Page 9.

9. **Hospital Channel:** From Hollister Avenue downstream to the confluence with Atascadero Creek, a distance of 2,060'. 35yds of Sediment or debris, along with graffiti removal will be needed this maintenance season.

10. **Las Positas Channel:** From Veronica Springs Road upstream 1000'. The bottom of the channel is spot sprayed along to eliminate the vegetation that may begin to colonize the channel. Graffiti is also removed on an annual basis. The channel is desilted every 3 to 5 years. Spot spraying along with graffiti removal is scheduled for this season. Refer to Page 11.

11. **Los Carneros Channel:** From Los Carneros Road downstream to Hollister Avenue, a distance of approximately 3000''. The bottom of the channel is spot sprayed along with graffiti removal on an annual basis to eliminate the vegetation that may begin to colonize within the channel. Refer to Page 12.

12. **Mission Channel:** From Los Olivos to Pedregosa Street, and from Valerio to Canon Perdido, a total distance of 5,641'. Garbage or debris, along with graffiti removal will most likely be needed this maintenance season. Refer to Page 13.

13. **Montecito Channel (Casa Dorinda Channel):** From Hot Springs Road downstream to the Montecito Debris Basin, a distance of 1000'. Very large trees have fallen across the channel and need to be removed. Removal of trees will be scheduled for this maintenance season Every 3 to 5 years, sediment is removed from the channel. No sediment removal is scheduled this season. Refer to Page 14.

14. **Pace Park Drain:** Between Highway 101 and Pace Park Subdivision, a distance of 1,000'. The bottom of the channel is spot sprayed along with graffiti removal on an annual basis to eliminate the vegetation that may begin to colonize within the channel. The channel is desilted every 3 to 5 years. Spot spraying along with graffiti removal is scheduled for this season. Refer to Page 8.

15. **Robin Hill Drain:** On the west side of Robin Hill Road from Hollister Avenue upstream 500'. The bottom of the channel is spot sprayed along with graffiti removal on an annual basis to eliminate the vegetation that may begin to colonize within the channel. The channel is desilted every 3 to 5 years. Spot spraying along with graffiti removal is scheduled for this season. Refer to Page 12.

16. **San Jose Channel:** From Hollister Avenue downstream 4,000' to Goleta Slough. This Channel is scheduled for spot spraying this maintenance season but will not be desilted. Refer to Page 16.

17. **Santa Monica Channel:** This channel runs from the Santa Monica Debris basin downstream approximately 1.2 miles to Carpinteria Salt Marsh. This concrete channel is encroached upon by overhanging shrubs that protrude into the active channel. The shrubs will be cut and removed from the active channel on an annual basis. Garbage or debris removal will most likely be needed this maintenance season. Refer to Page 8.

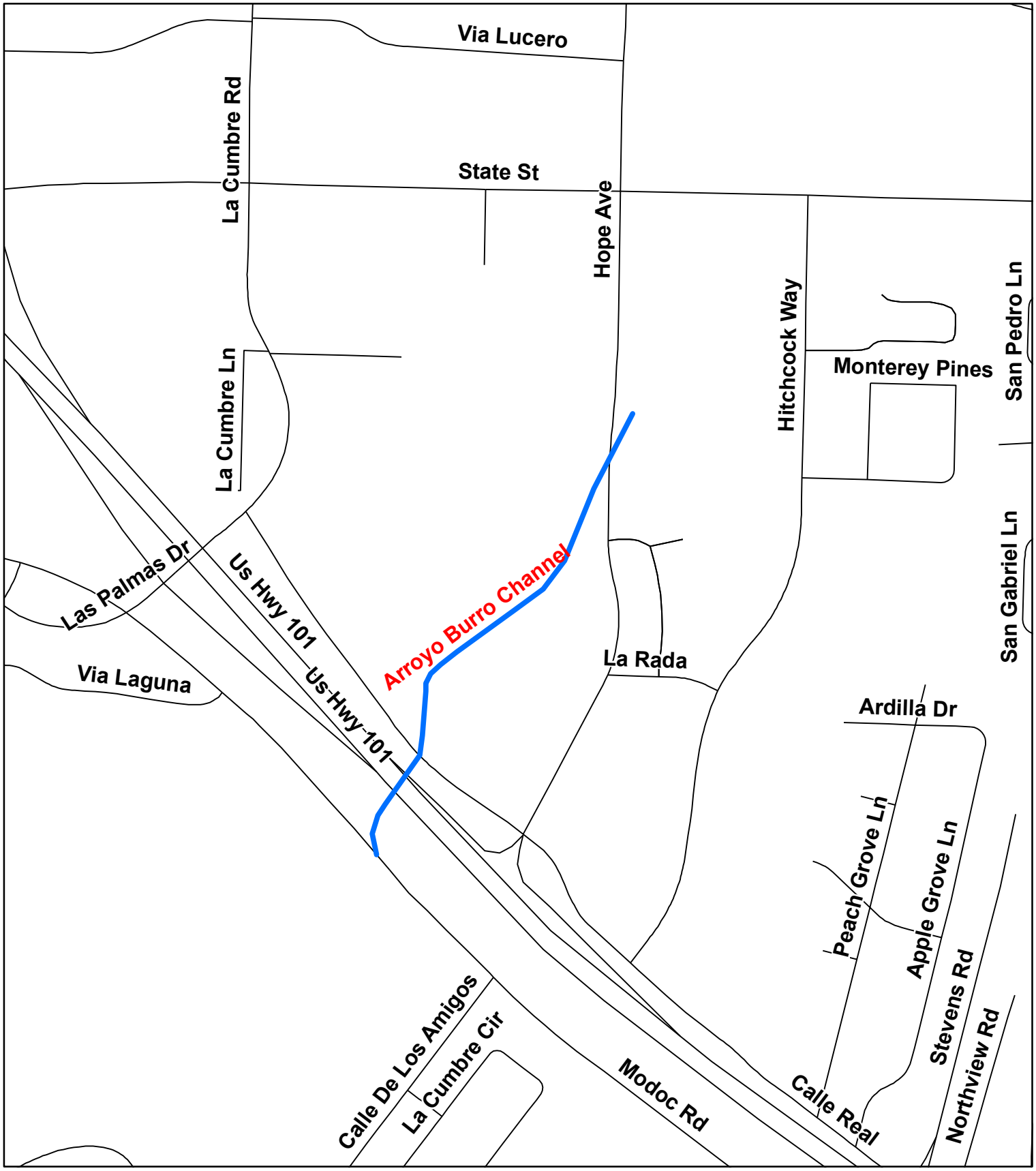
Basins:

1. **El Encanto Basin:** Located on Mitcheltorena Street in Santa Barbara. This basin requires rock and debris (small woody debris) removal (approximately 5 cubic yards) approximately every 10 years. Refer to Page 4.

2. **Franciscan Sediment Basin:** At the upstream end of Franciscan Culvert 1360 Cravens Lane in Carpinteria. This basin inlet box requires desilting this year to remove approximately 35 cubic yards of sediment and occasional spot spraying for weeds or cattails (approximately 5 square feet of cattails). Refer to Page 7.

3. **Hospital Basin:** Immediately north of Goleta Valley Little League fields on Hollister Avenue, Goleta. This basin requires desilting approximately every 5 years to remove between 100-200 cubic yards of sediment. Mustard and weedy vegetation are mowed annually within the basin for weed and fire control. The basin is also spot sprayed every other year if woody vegetation begins to colonize the basin. Mowing and desilting are scheduled for this season. Refer to Page 10.

4. **Kim's Basin:** Next to Kim's Market on Via Real in Carpinteria: This basin requires desilting approximately every 10 years to remove approximately 500 cubic yards of sediment and occasional spot spray of cattails (approximately 5 square feet of cattail removal). Refer to Page 7.



Department of Public Works County of Santa Barbara

Arroyo Burro Channel

Page 1

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N W E S

Feet

380 190 0 380

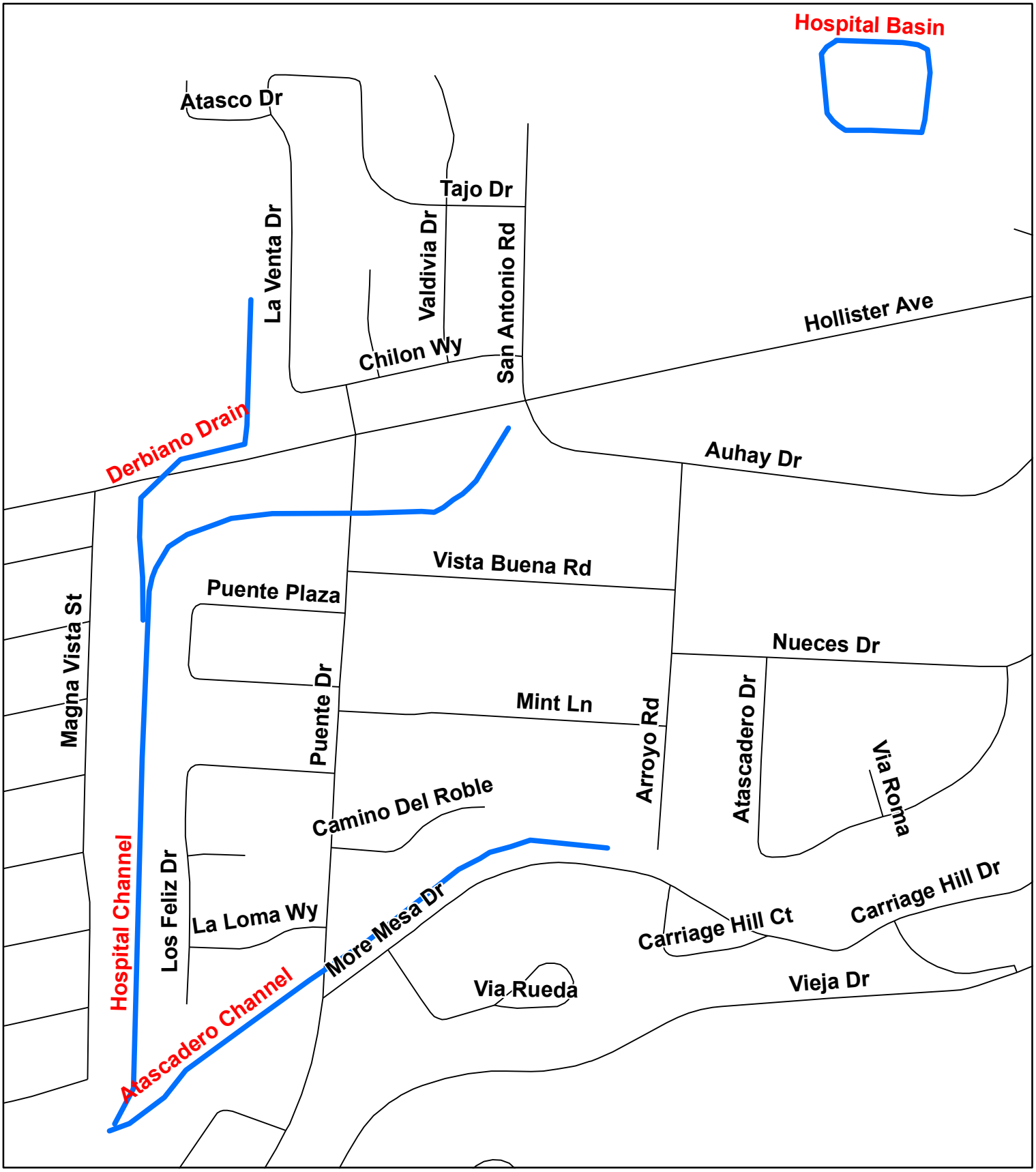
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Atascadero Channel
Derbiano Drain
Hospital Channel
Hospital Basin

N
W E
S
Feet
375 187.5 0 375

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

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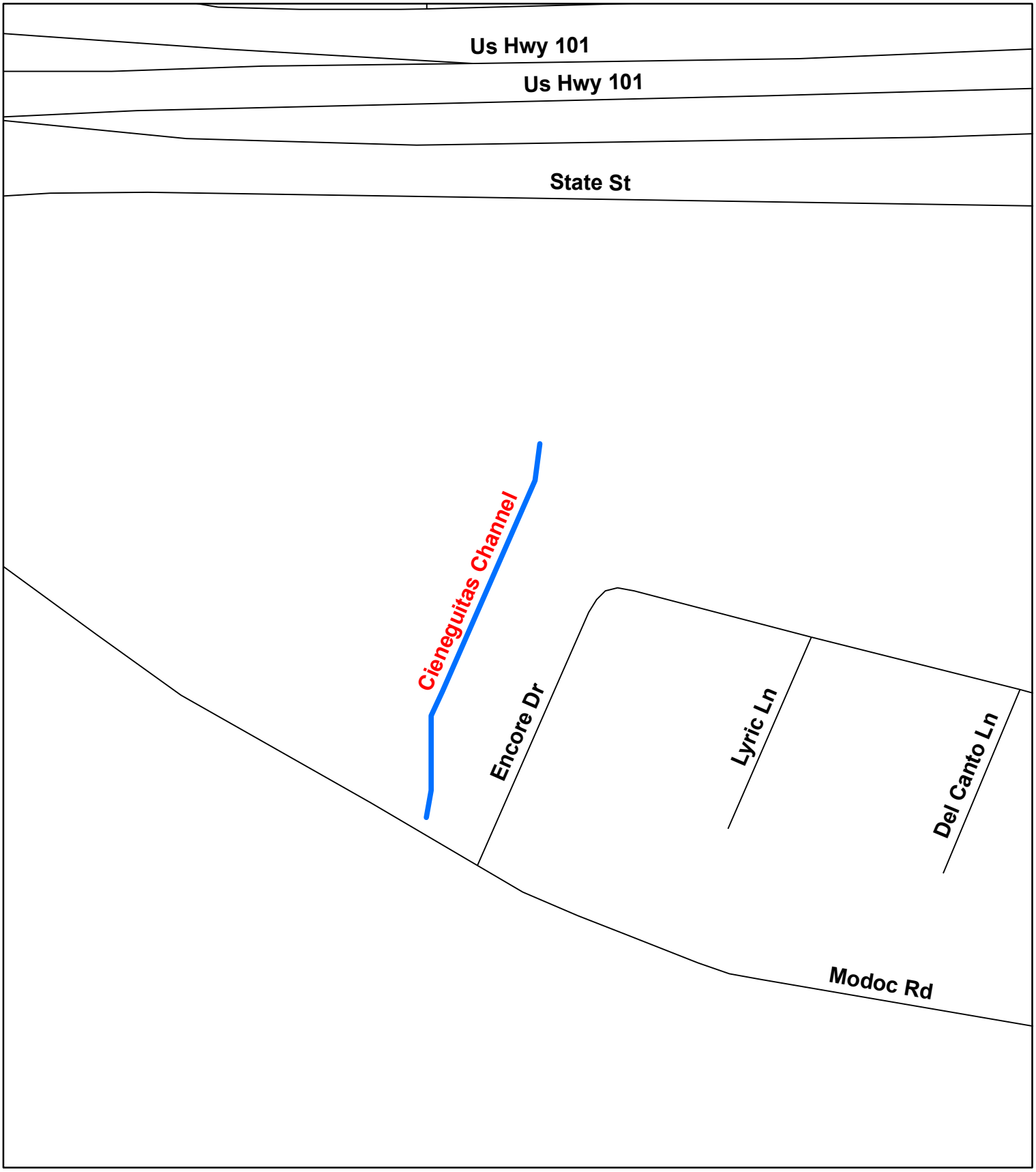

Department of Public Works County of Santa Barbara

Cieneguitas Channel

N W E S

Feet

140 70 0 140

Coordinate System: State Plane California Zone V NAD 1983

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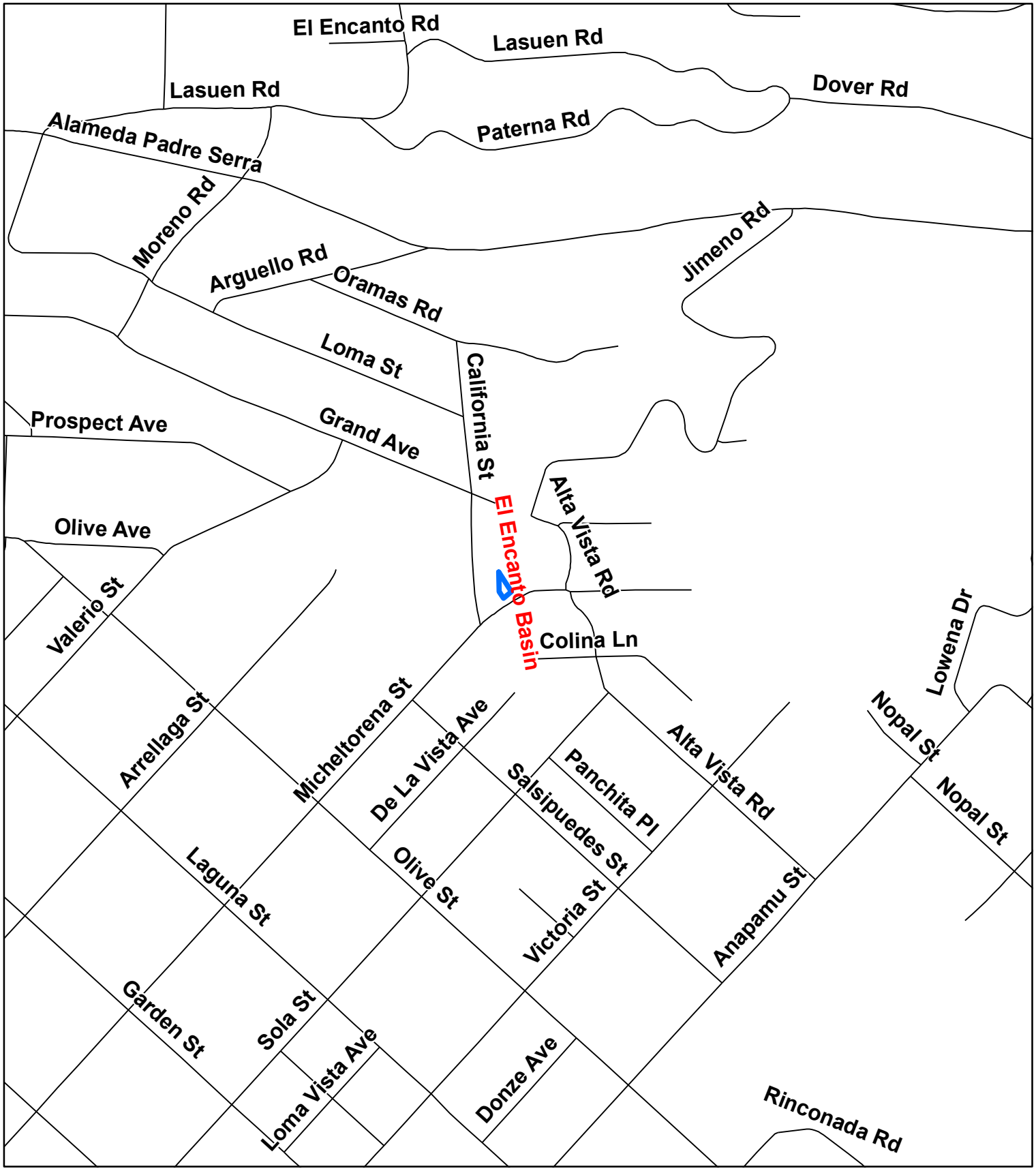

Department of Public Works County of Santa Barbara

El Encanto Basin

Page 4

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N
W E
S
Feet
390 195 0 390

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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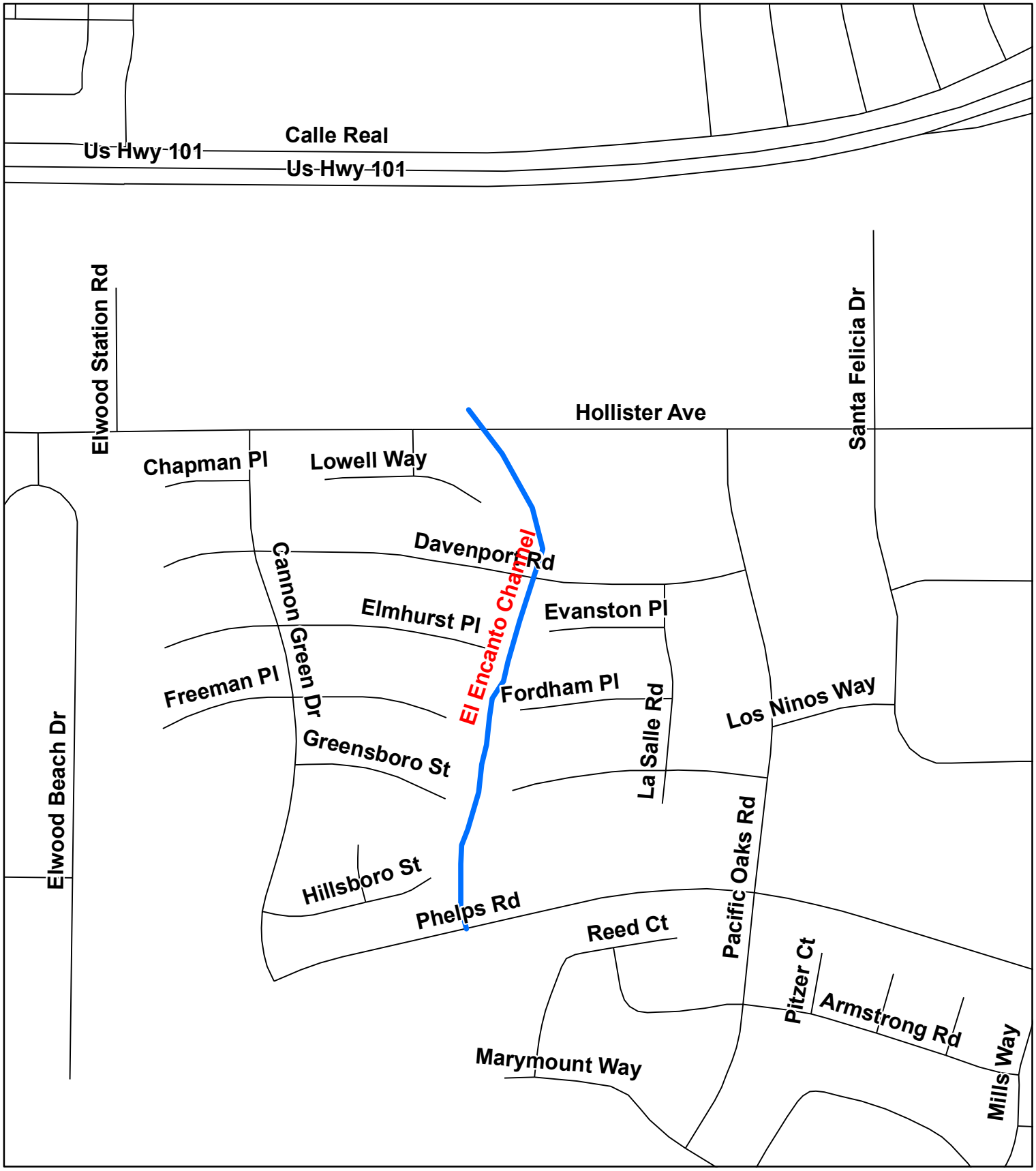

Department of Public Works County of Santa Barbara

El Encanto Channel

Page 5

N W E S

Feet 400 200 0 400

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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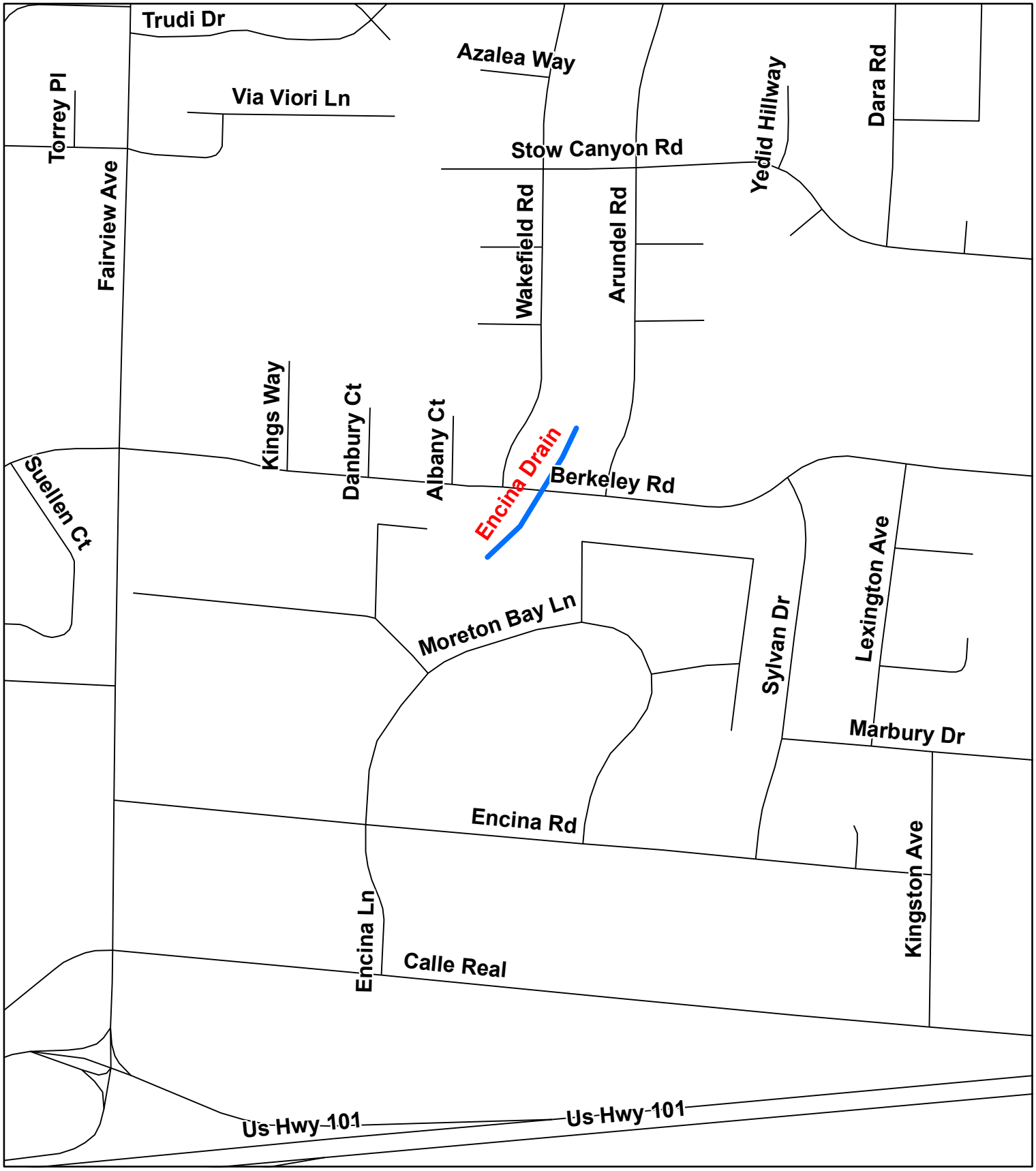

Department of Public Works County of Santa Barbara

Encina Drain

Page 6

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N W E S

Feet

350 175 0 350

Coordinate System: State Plane California Zone V NAD 1983

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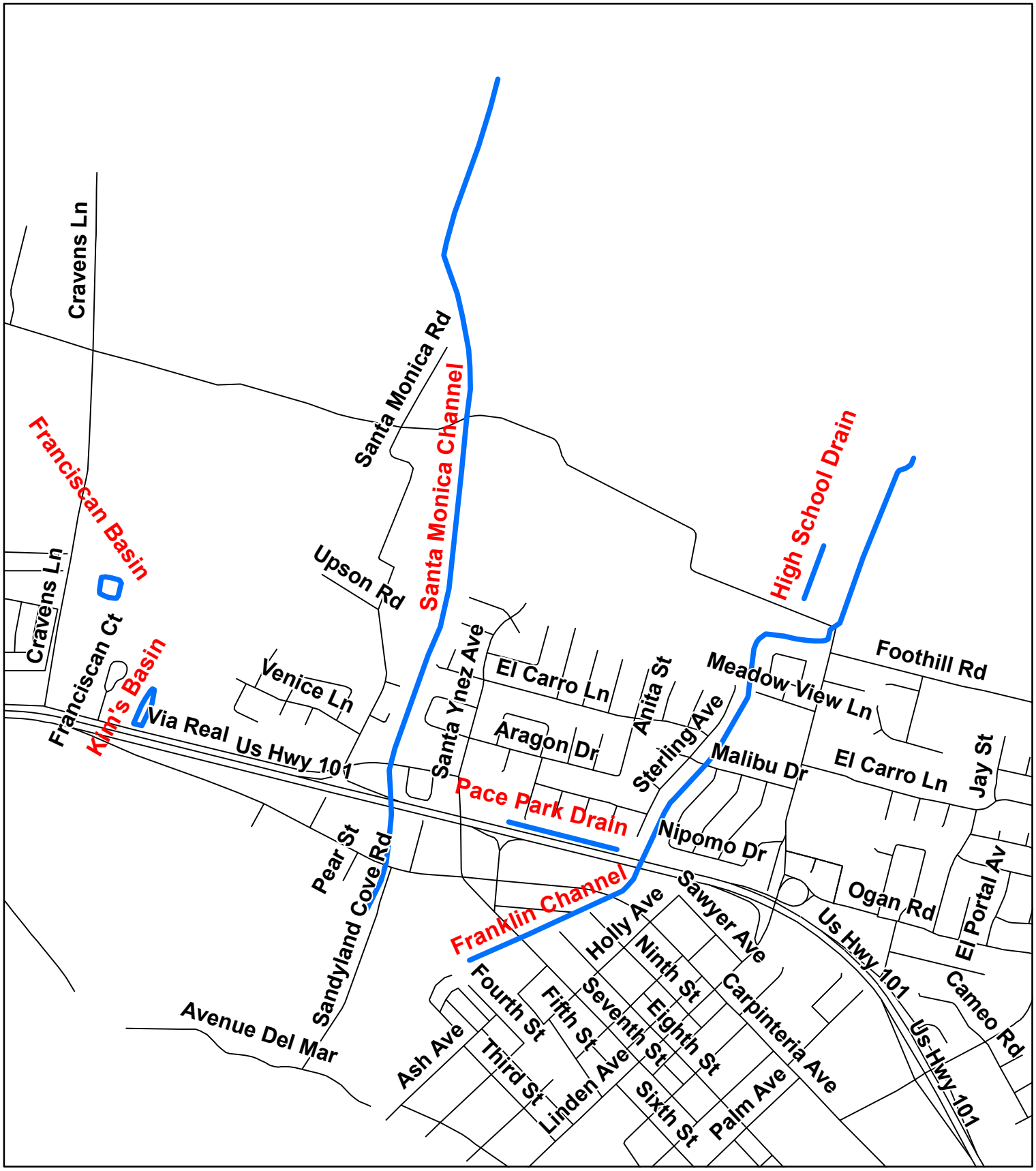

Department of Public Works County of Santa Barbara

Page 7

Franciscan Basin
Kim's Basin
Santa Monica Channel
Pace Park Drain
High School Drain
Franklin Channel

N
W E
S
Feet
1,000 500 0 1,000

Coordinate System: State Plane California Zone V NAD 1983

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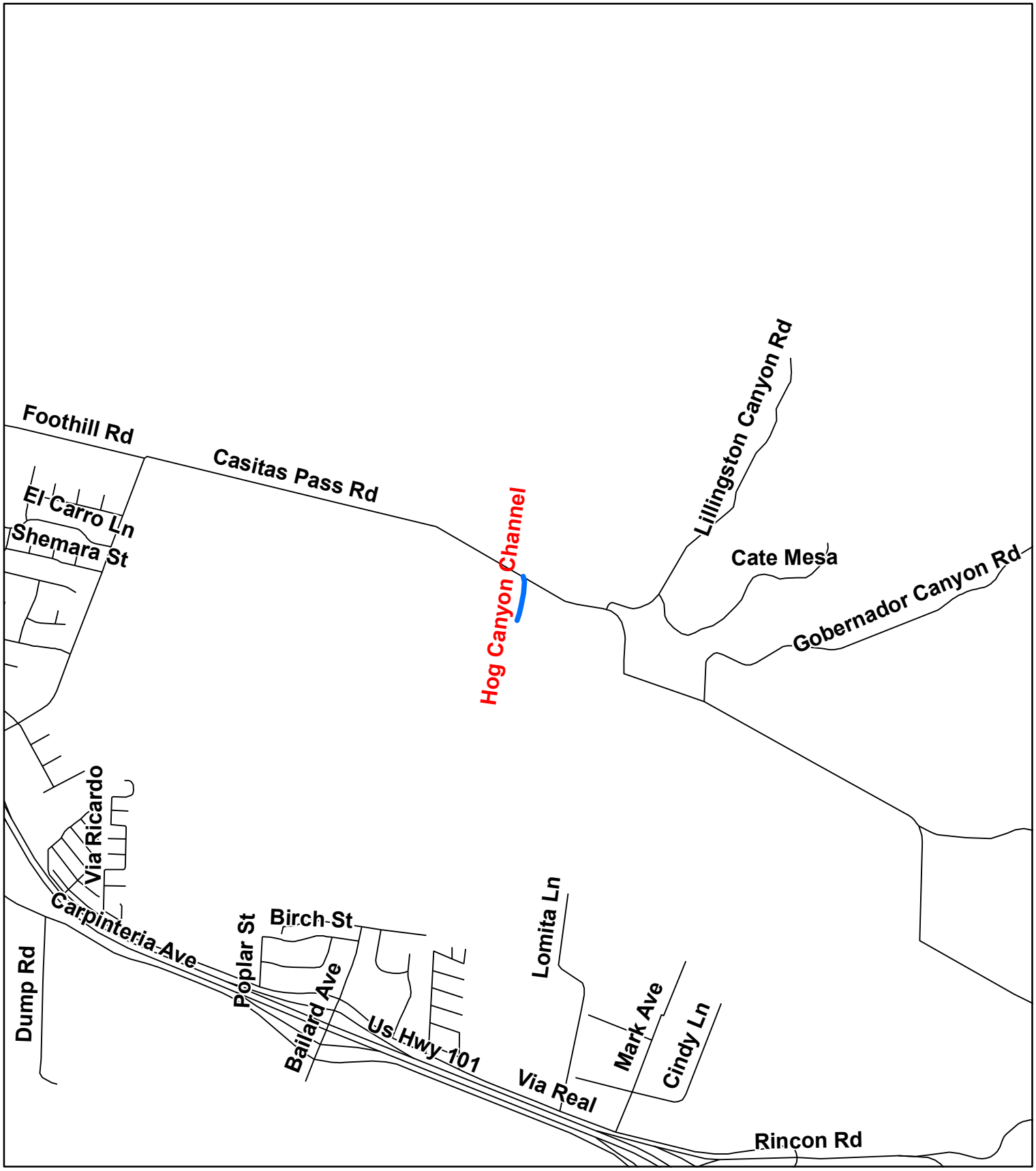

Department of Public Works County of Santa Barbara

Hog Canyon Channel

N W E S

Feet

1,200 600 0 1,200

Coordinate System: State Plane California Zone V NAD 1983

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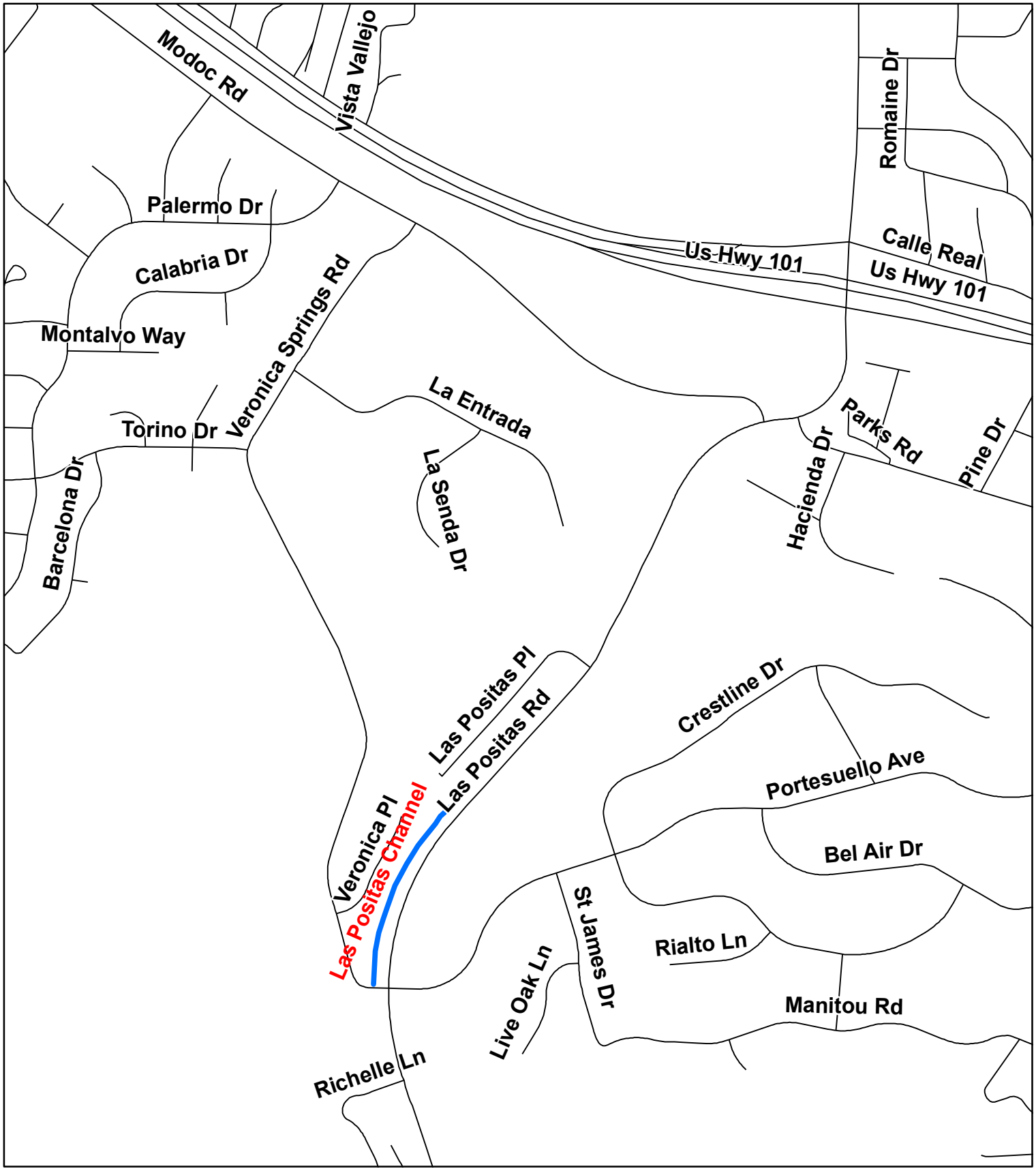

Department of Public Works County of Santa Barbara

Las Positas Channel

N W E S

Feet

550 275 0 550

Coordinate System: State Plane California Zone V NAD 1983

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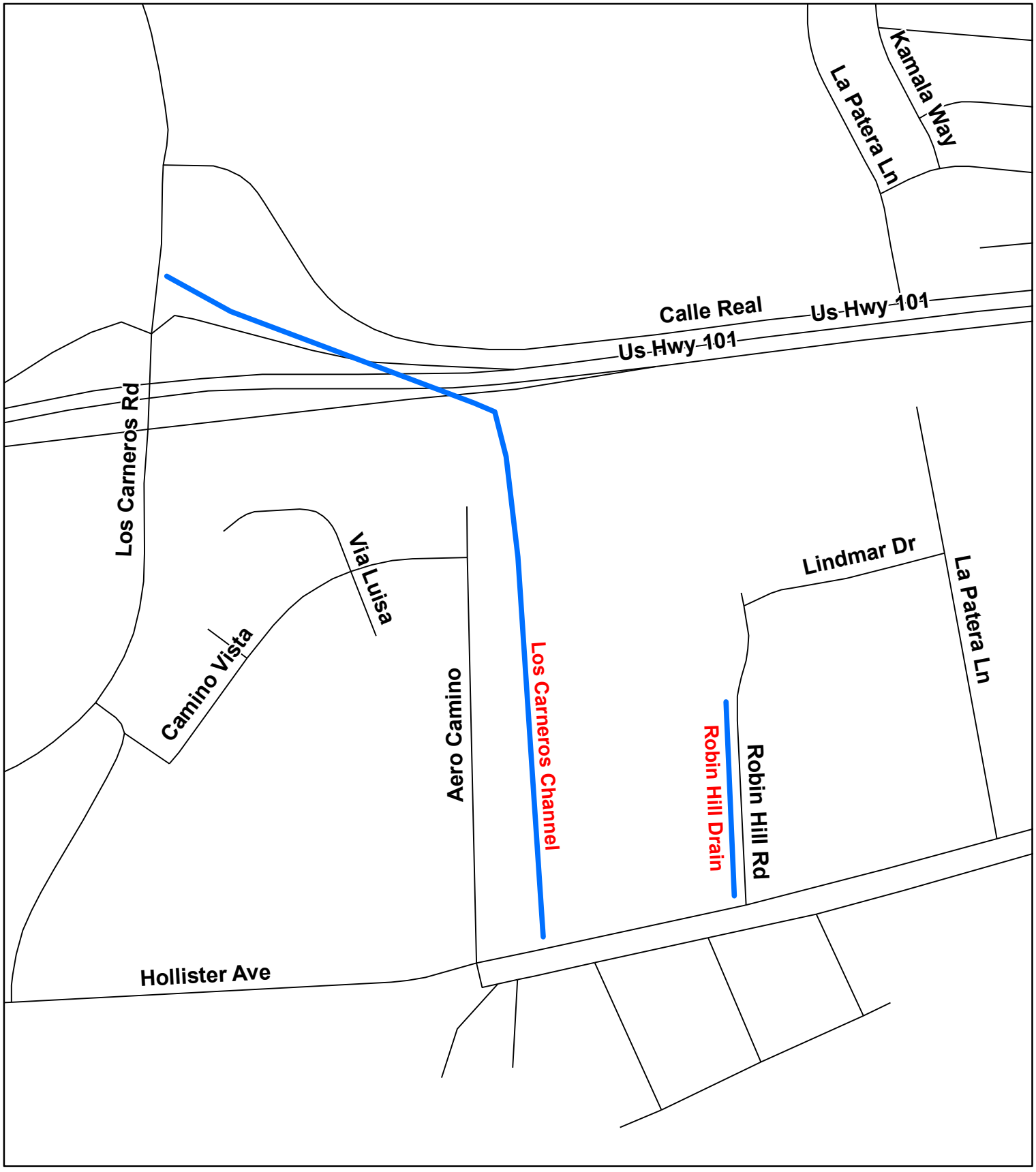

Department of Public Works County of Santa Barbara

Los Carneros Channel
Robin Hill Drain

N W E S

Feet

440 220 0 440

Coordinate System: State Plane California Zone V NAD 1983

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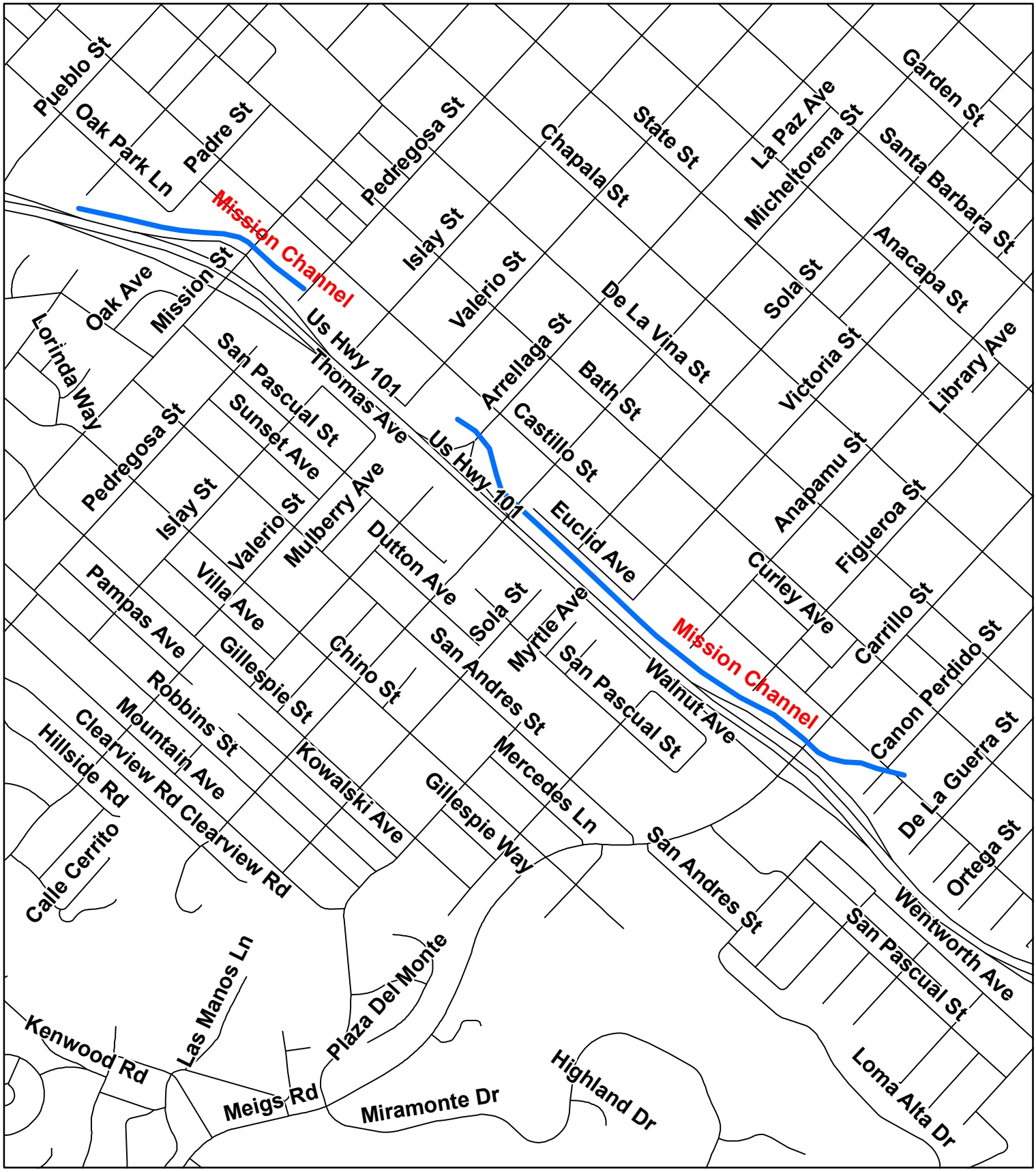

Department of Public Works County of Santa Barbara

Mission Channel

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N
W E
S
Feet
730 365 0 730

Coordinate System: State Plane California Zone V NAD 1983

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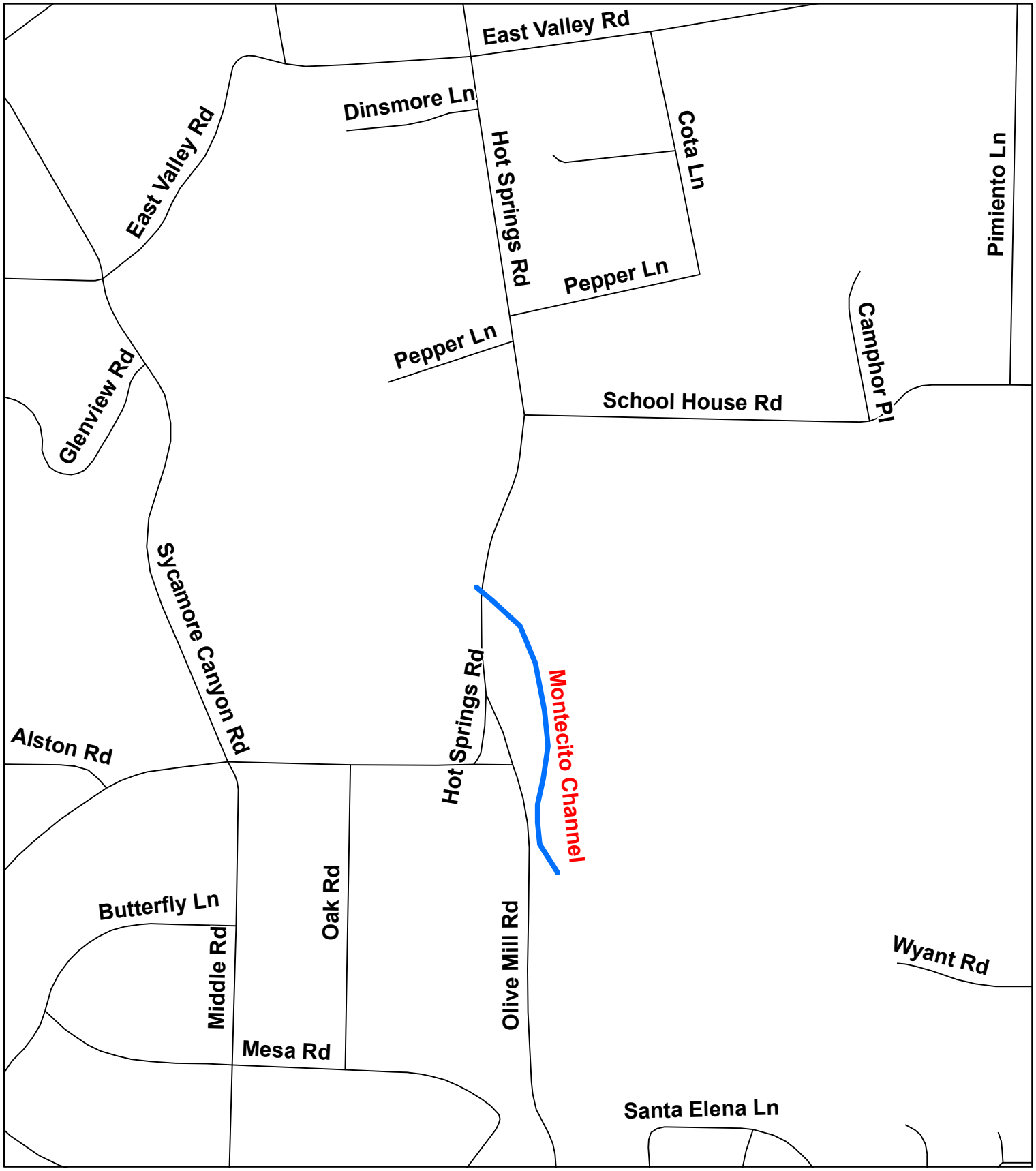

Department of Public Works County of Santa Barbara

Montecito Channel

N W E S

Feet

390 195 0 390

Coordinate System: State Plane California Zone V NAD 1983

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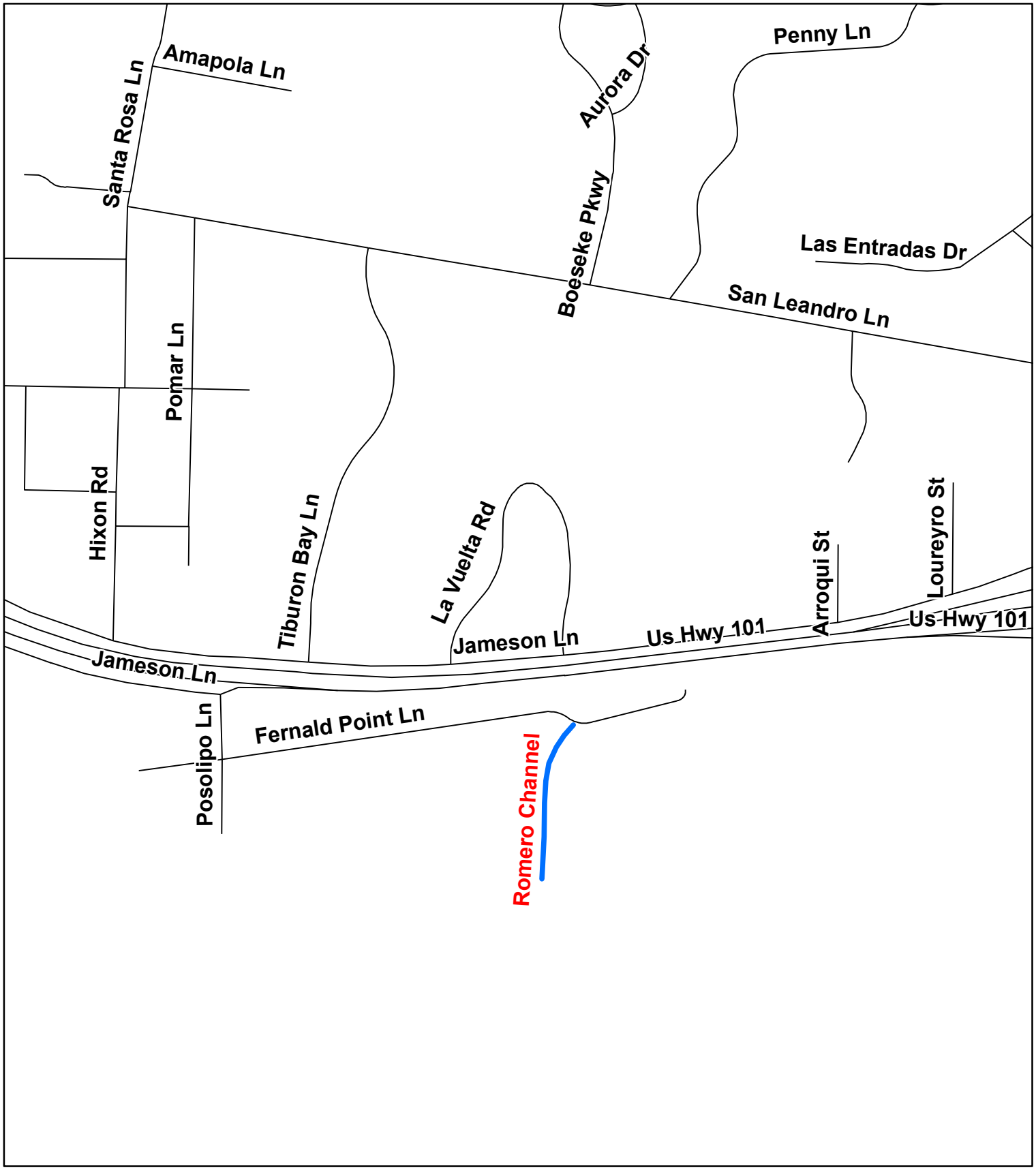

Department of Public Works County of Santa Barbara

Romero Channel

N
W E
S
Feet
420 210 0 420

Coordinate System: State Plane California Zone V NAD 1983

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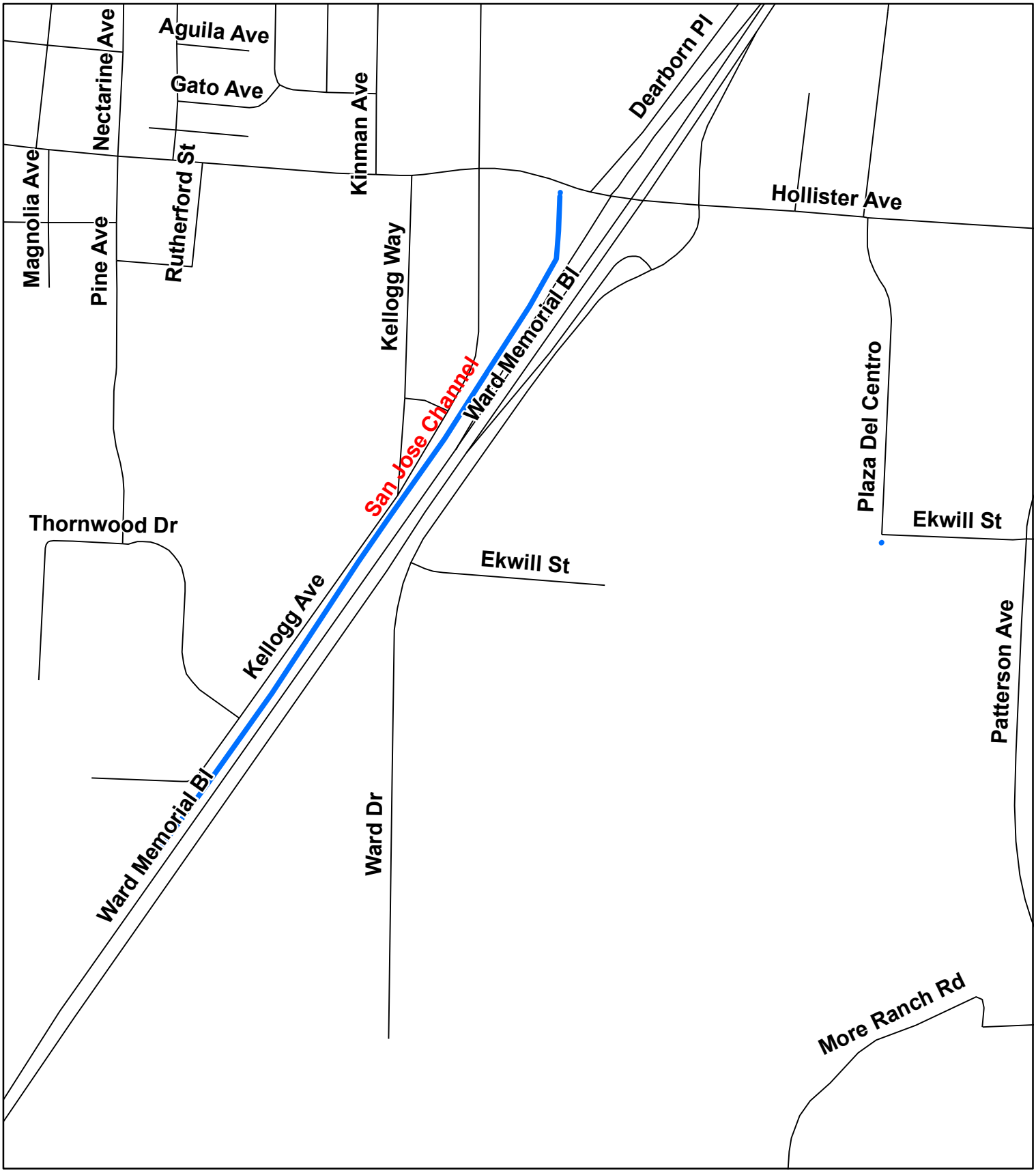

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San Jose Channel

N W E S

Feet

550 275 0 550

Coordinate System: State Plane California Zone V NAD 1983

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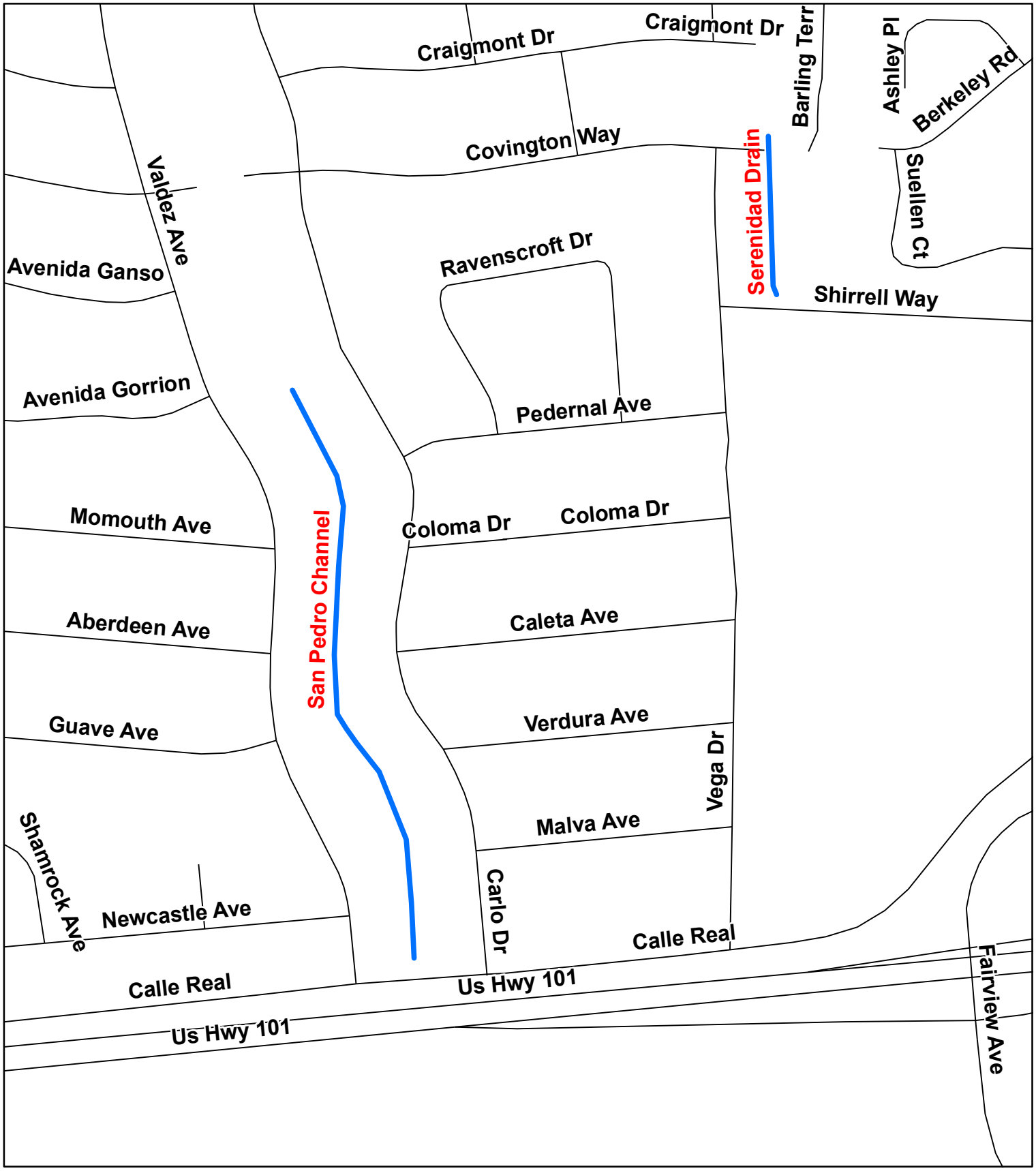

Department of Public Works County of Santa Barbara

San Pedro Channel
Serenidad Drain

N
W E
S
Feet
275 137.5 0 275

Coordinate System: State Plane California Zone V NAD 1983

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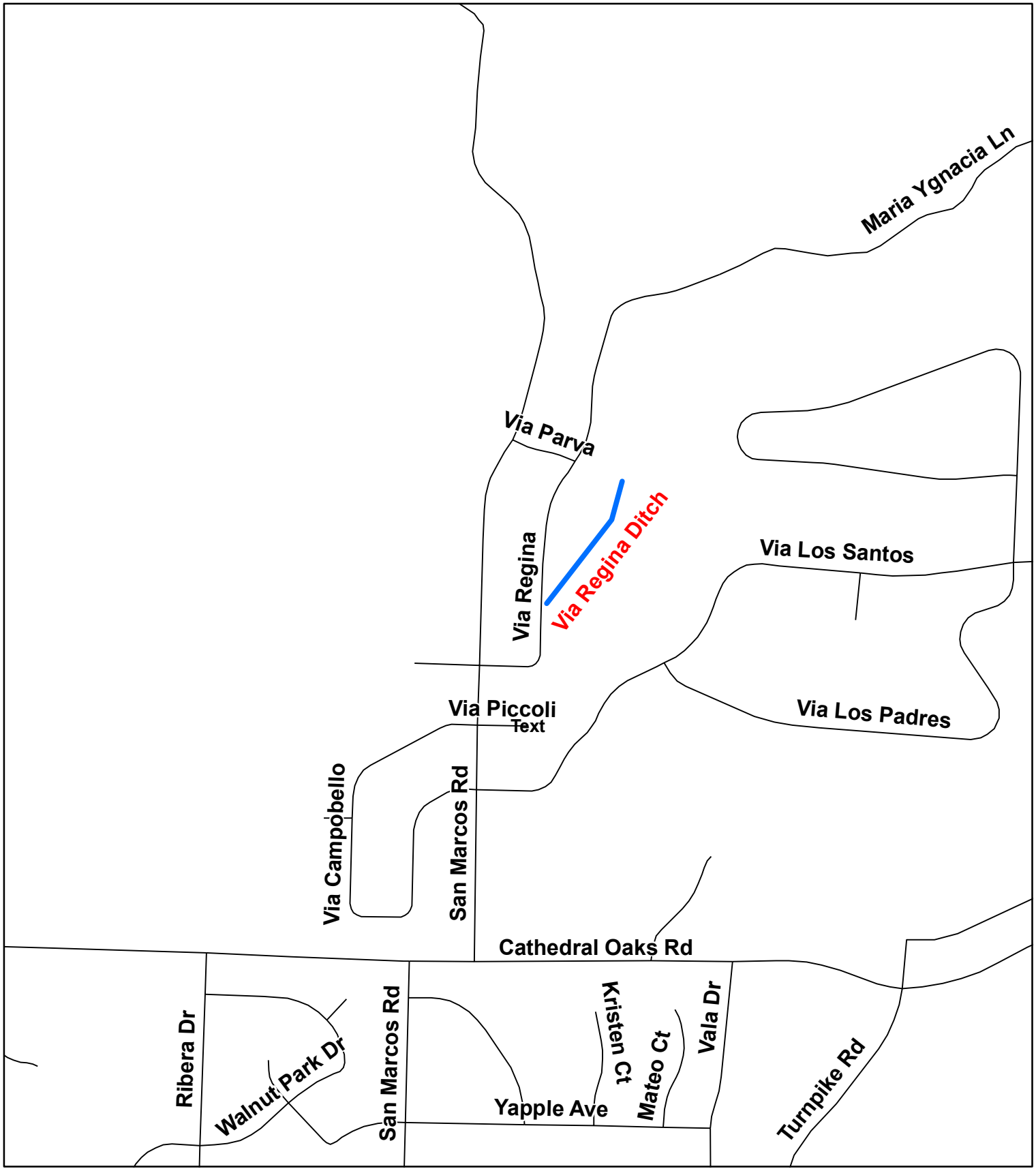

Department of Public Works County of Santa Barbara

Via Regina Ditch

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N W E S

Feet

450 225 0 450

Coordinate System: State Plane California Zone V NAD 1983

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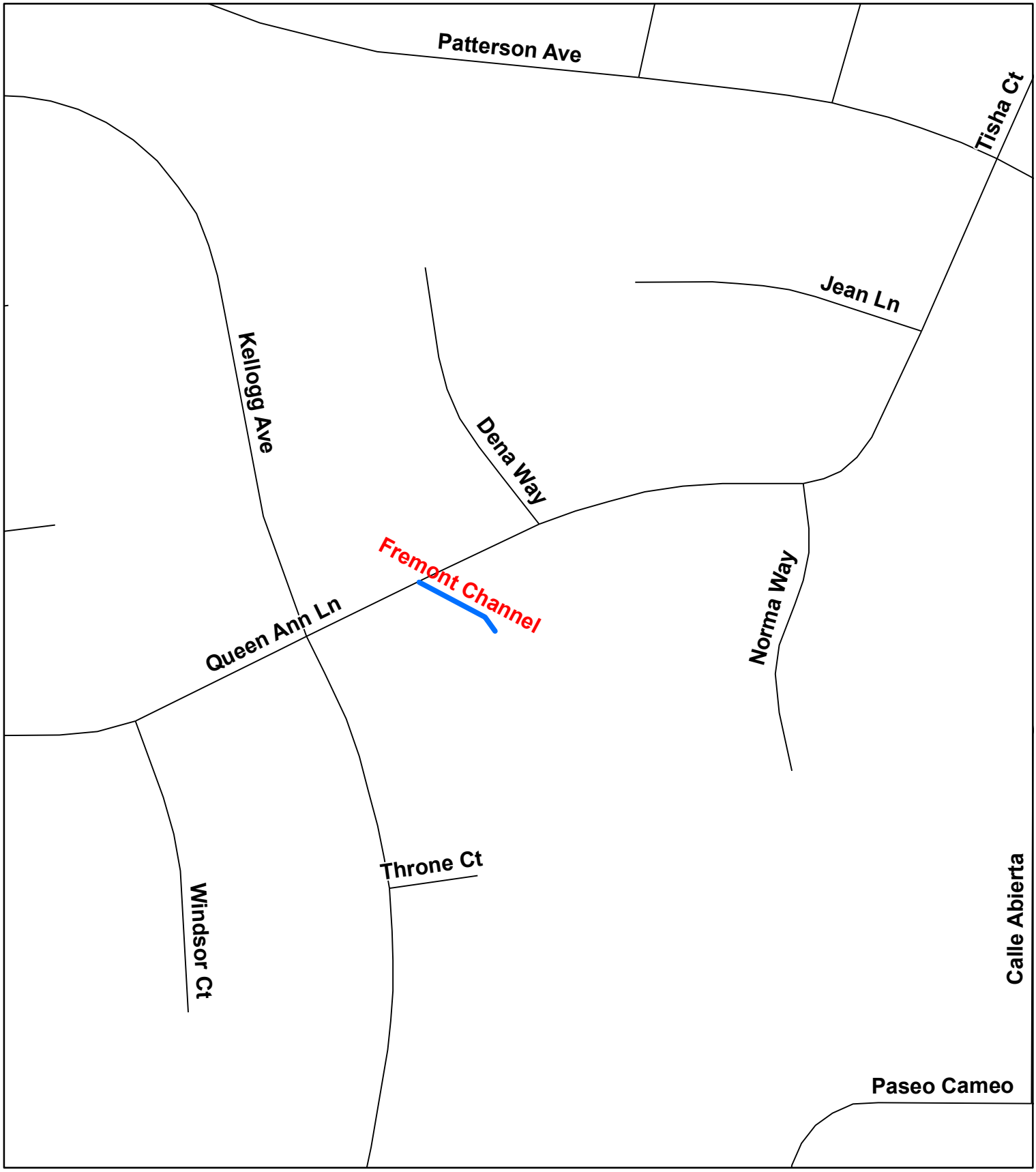


Department of Public Works County of Santa Barbara

Fremont Channel

N W E S

Feet

150 75 0 150

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS in April 2011.

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:
Inspected on March 29, 2016.

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.

Alamo Pintado Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2002/2003	200	200	200	0
2004/2005	700	4,000	0	-700
2005/2006	700	3,000	3,000	1,600
2007/2008	1,500 (Roads) 150 (District)	0	0	-1,500 (Roads) 1,450 (District)*
2008/2009	0	5,300	0	-1,500 (Roads) 1,450 (District)

2009/2010	0	5,300	5,000	4,950
2010/2011	0	0	0	4,950
2011/2012	0	0	0	4,950
2012/2013	0	0	0	4,950
2013/2014	100	0	0	4,850
2014/2015	0	0	0	4,850
2015/2016	0	0	0	4,850
2016/2017	0	0	0	4,850

*1,650 square feet of impact calculated from: 500 square feet of permanent impact at 3:1 replacement ratio for weir construction by Public Works/Roads Division; plus 150 square feet of temporal impacts to native vegetation by the District.

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 through 15:

These sections represent downed willow trees and/or large limbs that have fallen into the active channel. Section 7 is a site with 3 fallen willow branches at the same location. The material will be cut up and hauled out of the creek or left on the upper banks depending on access at each location. Work at these sections has no impact to native vegetation.

Section 16:

This section is a constricted reach of the creek corridor with mature trees on both banks. The soil material on the downstream/left bank has mobilized and slumped into the active channel, taking with it the rootwad of a large live willow tree. As a result of the slide, the tree is now within the active channel and leaning into the flow area. Two additional willow trees on the edge of the right bank further constrict the channel at this location.

The two trees on the right edge will be left intact. However, the tree at the left edge must be removed to provide adequate flow conveyance. The tree will be cut at the stump, leaving behind 2-3 feet of the trunk above the ground level. A large section of the tree trunk (8'-12' in length) will be cut and placed perpendicular across the channel floor to act as a natural grade control/log check feature. The log will be placed upstream of the two live trees and the cut stump, allowing the live trees and stump to lock the log into place. A footing will be dug at each bank and across the channel so that the log can be partially buried in sediment.

The fallen log is a willow tree and will likely resprout after it is buried. Stump shoots and re-sprouts at the edge of the channel will be allowed to grow, to help lock the log into place. Sprouts

within the center of the channel will be brushed and lightly spot-spray to prevent a thicket from growing in the center of the channel.

This log check feature will help prevent further downcutting (which is problematic in Alamo Pintado Creek) as well as providing habitat features for wildlife. The project is considered self-mitigating. Work will be performed from the top of bank with a winch truck to pull the tree into place.

Section 17
A fallen willow limb to be cut up and hauled out of the creek.

Section 18
Tree with a split-trunk which is partially falling into the creek. The damaged trunk within the creek channel will be cut and removed, while the other trunk at the edge of the channel will be left behind to help protect the bank.

Also at this location is a colony of arundo on the edge of the bank. The District crew will cut the arundo near the ground level with chain saws, loppers, or hand tools. The cut stalks will be gathered and hauled out of the channel, and placed on the top of the upper bank or terraces, at a location where the arundo will not be washed back into the creek corridor, to dry out and break down.

The cut arundo stumps will be spot sprayed with glyphosate herbicide. The site will be revisited in spring for a followup cut and spot-spray as necessary. Work in this section has no impact to native vegetation.

Sections 19-27:
These sections represent downed willow trees and/or large limbs that have fallen into the active channel. The material will be cut up and hauled out of the creek or left on the upper banks depending on access at each location. Work at these sections has no impact to native vegetation.

Section 28
A cluster of cottonwood root sprouts. The sprouts will be brushed and spot-sprayed. Work in this section will impact 10 square feet of native vegetation.

Sections 29-42:
These sections represent downed willow trees, sycamore trees, and/or large limbs that have fallen into the active channel. The material will be cut up and hauled out of the creek or left on the upper banks depending on access at each location. Work at these sections 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.

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

*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.

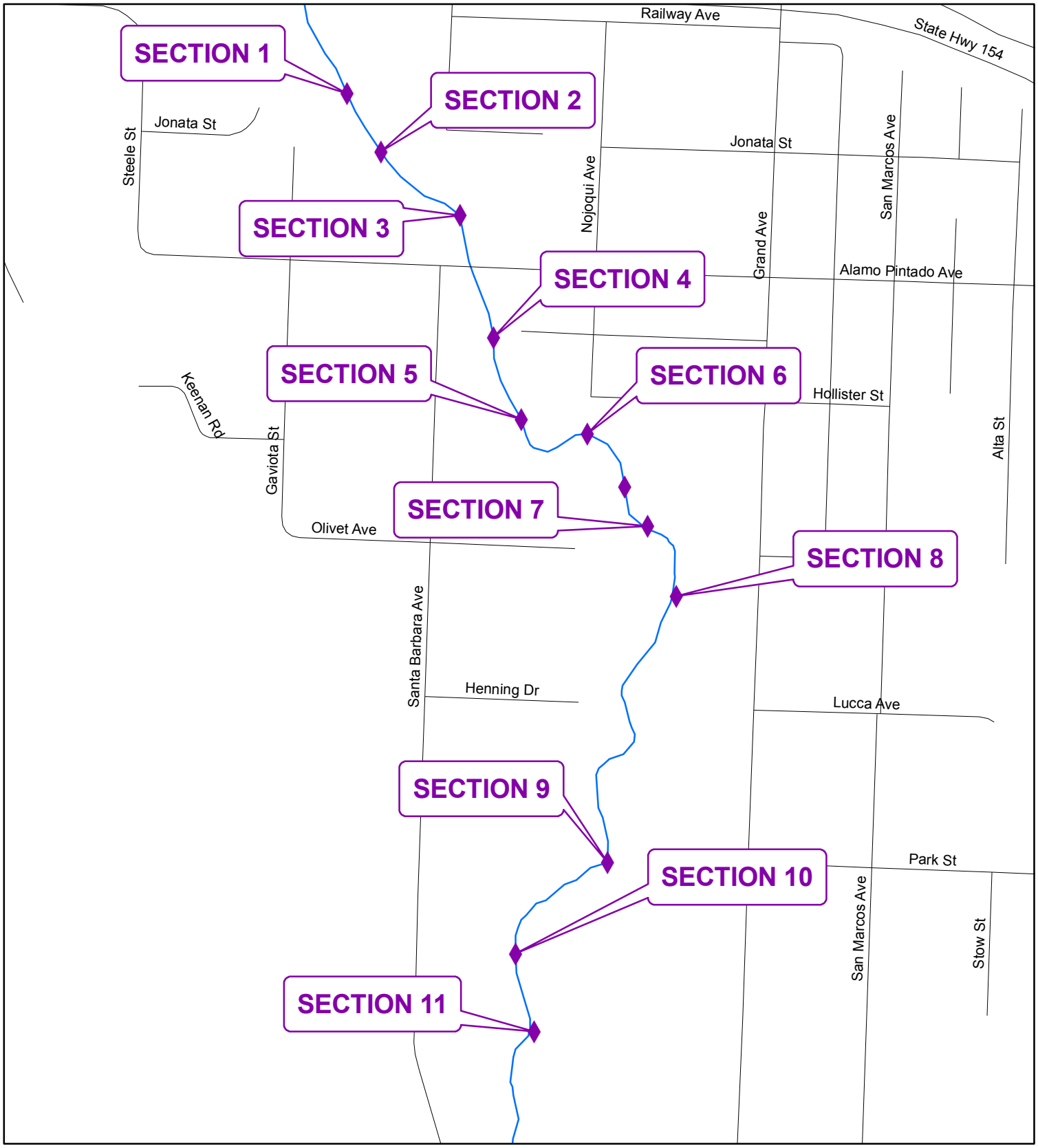
VASCULAR PLANT LIST
ALAMO PINTADO CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
AMARANTHACEAE		
Amaranthus albus	Tumbleweed	I
Amaranthus deflexus	Low Amaranth	I
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Apium graveolens	Celery	I
Conium maculatum	Poison Hemlock	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Calendula officinalis	Pot-Marigold	I
Centaurea solstitalis	Barnaby's Thistle	I
Conyza canadensis	Horseweed	I
Gnaphalium luteo-album	Weedy Everlasting	I
Gnaphalium palustre	Wooly Everlasting	N
Hapbpapus squarrosus	Sawtooth Golden bush	N
Helianthus sp.	Garden Sunflower	I
Lactuca serriola	Prickly Lettuce	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Milk Thistle	I
Solidago occidentalis	Western Goldenrod	N
Sonchus oleraceus	Sow Thistle	I
Xanthium strumarium	Cocklebur	I
BETULACEAE		
Alnus rhombifolia	White Alder	N

BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
CACTACEAE		
Opuntia sp.	Beavertail Cactus	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
JUGLANDACEAE		
Juglans californica	California Walnut	N
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Arundo donax	Giant Reed	I
Avena barbata	Slender Wild Oats	I
Bromus diandrus	Rupgut	I
Cynodon dactylon	Bermuda Grass	I
Elymus condensatus	Giant Rye	N
Lolium perenne	Italian Ryegrass	I
Oryzopsis miliacea	Rice Grass	I
Polypogon interruptus	Beard Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Polygonum capitatum	Common Knotweed	I
Polygonum lapathifolium	Willow Smartweed	N
Rumex crispus	Curly Dock	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Rosa californica	Wild Rose	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus fremontii	Fremont Cottonwood	N
Populus balsamifera	Black Cottonwood	N

Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SCROPHULARIACEAE		
Mimulus guttatus	Marsh Monkey Flower	N
Veronica americana	Speedwell	N
SOLANACEAE		
Datura meteloides	Jimson Weed	I
Nicotiana glauca	Tobacco Tree	I
TYPHACEAE		
Typha sp.	Cattail	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N
VERBENACEAE		
Verbena lasiostachys	Verbena	N
VISCACEAE		
Phorandendron villosum	Oak Mistletoe	N

* I = Introduced
N = Native



Department of Public Works County of Santa Barbara

Alamo Pintado Creek-A

Legend

♦ Sites

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

330 165 0 330

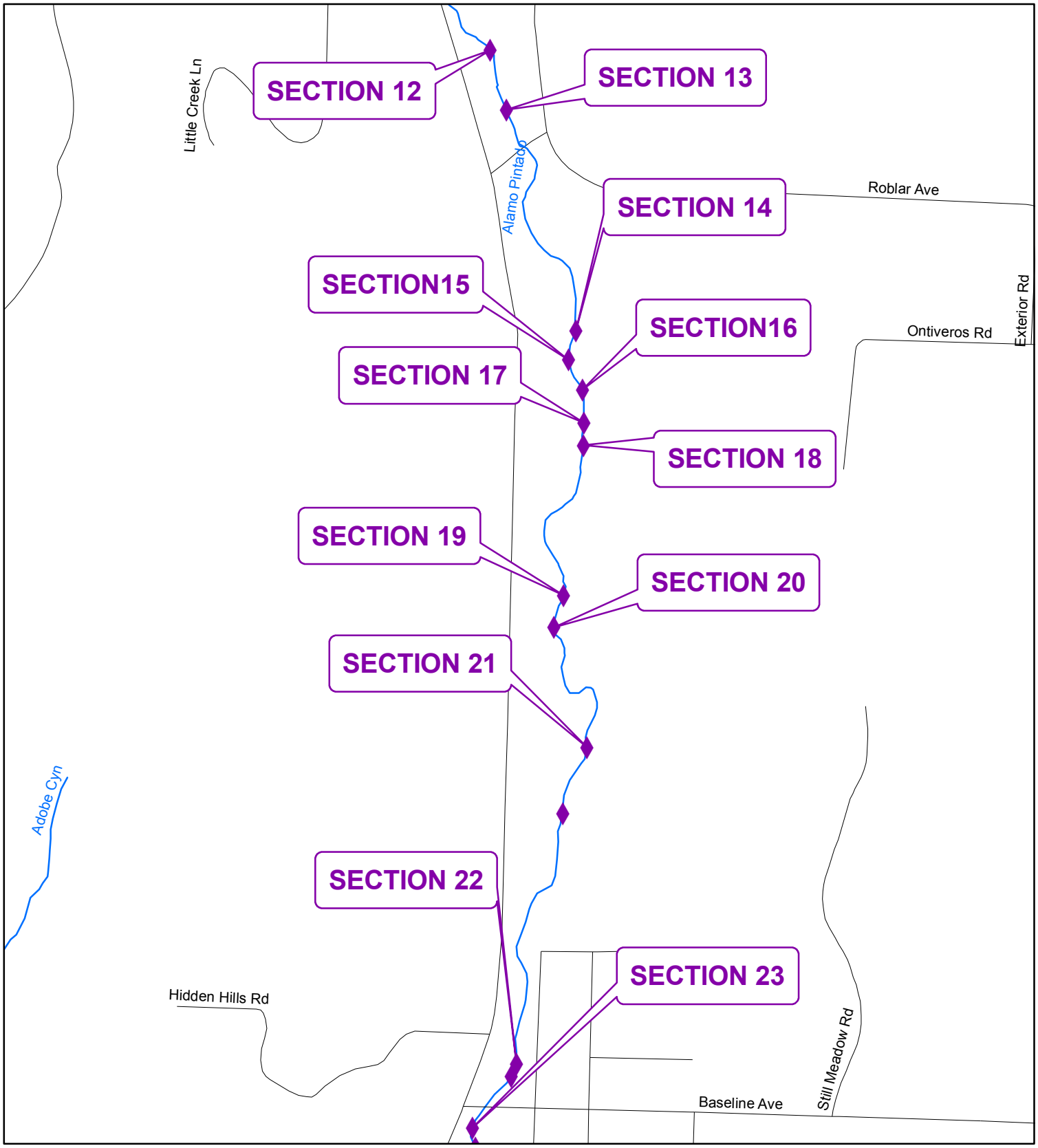
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Alamo Pintado Creek-B

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

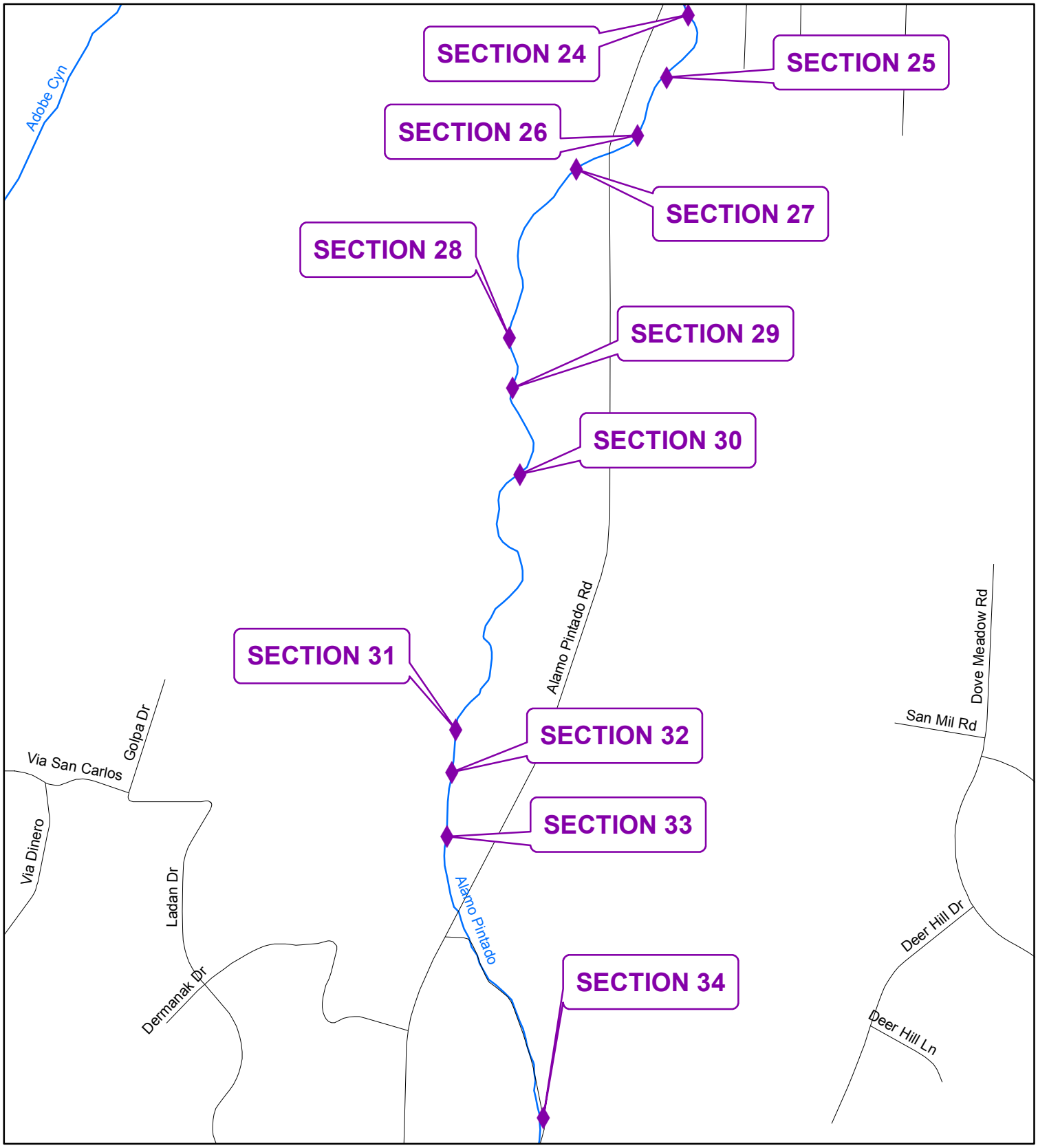
725 362.5 0 725

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Alamo Pintado Creek-C

Legend

♦ Sites

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

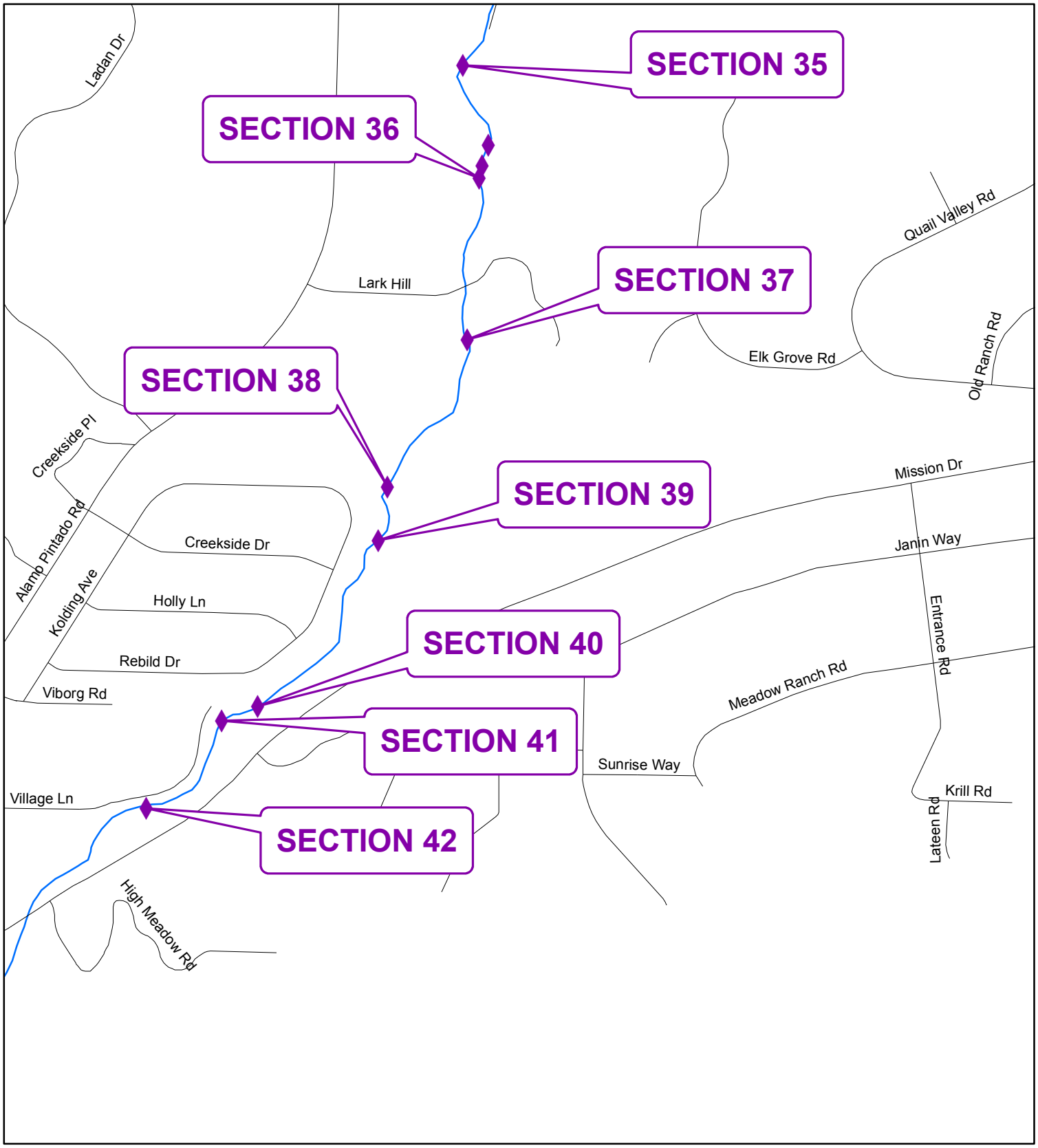
725 362.5 0 725

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Alamo Pintado Creek-D

Legend

♦ Sites

N W E S

600 300 0 600

Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Alamo Pintado Creek

Section 2

Section 16

BRADLEY CANYON CHANNEL ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
Bradley Canyon Channel is located approximately 3.5 miles east of Santa Maria. Work within Bradley Canyon Channel will occur in a 1500' length upstream of the Santa Maria River.

Setting:
Inspected on March 24, 2016.

Bradley Canyon Channel begins approximately 0.7 miles upstream (south) of Betteravia Road and flows northward to the Santa Maria River, a total distance of approximately 2 miles. This drainage is confined by a levee on the west side of the 100-foot wide channel and an earthen slope on the east side. An established earthen low flow channel ranging from 5 to 10 feet wide flows down the middle of the drainage, but this low-flow channel periodically is washed away during storms, leading to a situation where flow meanders through the channel and erodes the levee toe. Surface water, almost entirely attributed to agriculture run-off, ranges from three feet to only a few inches in depth during the dry season. Vegetation is comprised mostly of wild raddish, poison hemlock, mustards, and weedy grasses. Overstory vegetation is almost entirely lacking.

Upstream (south) of Betteravia Road, the landowner has repeatedly disked the channel and excavated a few trenches, which further diminishes the effectiveness of the low-flow channel. Downstream (north) of Betteravia Road, the low-flow channel is still evident, but is mostly filled in with sediment. As Bradley Canyon Channel bends to the west adjacent to the Santa Maria River, intermittent patches of high-density cattail and bulrush grow in the stream. An overstory comprised of arroyo willow, narrow leaved willow and mulefat occurs along some portions of this lower segment.

Red legged frogs have been observed in the project area and are assumed to be present. Until the past few years, the channel remained wetted throughout the year in the vicinity of Betteravia Road upstream through the agricultural areas. Over the last several years, agriculture adjacent to Bradley Canyon Channel has changed from row crops that were flood irrigated to strawberries and other berries that are drip irrigated. As such, Bradley Canyon Channel has markedly less water overall and the lower portions of the channel (where most of the District maintenance occurs) dry up during the summer months where it remained wetted in previous years.

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.

Bradley Canyon Channel				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	2,000	2,000	2,000	0
2005/2006	500	500	500	0
2006/2007	0	0	0	0
2007/2008	1,000	42,688*	42,688	41,688
2008/2009	14,800	14,800	0	26,888
2009/2010	0	0	0	26,888
2010/2011	0	0	0	26,888
2011/2012	0	0	0	26,888
2012/2013	0	0	0	26,888
2013/2014	0	0	0	26,888
2015/2016	210	0	0	26,678
2016/2017	100	0	0	26,578

*From Betteravia Road downstream approximately 4,300 feet, Bradley Canyon Channel was desilted 20 feet wide to reestablish a wider channel, allow more habitat to persist for the frogs and to allow half of the channel to remain undisturbed each maintenance season. This allows for an additional 0.98 acres of frog habitat, although it is not native vegetation.

Wildlife Survey:

As described in the project description, maintenance will involve using equipment to excavate and move sediment in the channel at a few select locations. 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 segments of Bradley Canyon Channel since 2004. The District assumes that red legged frogs are still present 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

Previous observations and relocation efforts during the last several years of detected a variable number of red legged frogs in the project area where standing water is present.

The landscape draining into Bradley Canyon has been converted from flood irrigation to more drip irrigation in recent years, resulting in less water in the channel during summer months. In fact, for the past several summers the lower end of Bradley Canyon has gone completely dry. The declining number of frogs during the last 3 years is most likely due to the low water levels in the system from a change in agriculture practices and extensive drought.

During maintenance work that involves heavy equipment and/or disturbance of the channel, the District Biologist monitors all maintenance activity. The Biologist inspects the site before work begins and flushes animals from the work area. If animals are exposed during operations, the work is paused while the animal is captured and safely relocated upstream or downstream of the work area.

No other sensitive species have been observed within this drainage. Impacts to red legged frogs and other species addressed 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.

At the northern end where Bradley Canyon meets the Santa Maria River levee, a strip of riparian vegetation has colonized the edge of the channel. During winter months, high flows from Bradley Canyon could threaten the riparian growth (and associated red legged frog habitat). The District established a bypass trench that allowed high storm flows to continue north into the active flow area of the Santa Maria River rather than scour into the riparian vegetation. The intent was to use the bypass channel during winter months, but allow low-flow during the summer months to drain into the riparian area, continuing to support vegetation and red legged frog habitat while keeping the bypass channel relatively clear for use during winter storms. The bypass channel has not been needed for the past several seasons due to persistent drought.

In 2014, as part of ongoing levee management, an abandoned dirt road at the bypass channel was removed. The soil embankment and culvert were excavated, reconnecting Bradley Canyon with the main channel at the confluence of the Santa Maria River. This area has now been scoured and eroded and will be regarded as part of the current year's maintenance.

Engineering Analysis:

Bradley Canyon Channel is a tributary to the Santa Maria River and is an integral part of the Santa Maria River Levee Project. It drains a very large watershed south of the Santa Maria River. The Levee system was constructed in the 1960s by the Corps of Engineers and is owned and maintained by the District. The Operations & Maintenance Manual provided by the Corps requires that the channel remain clear of vegetation and that a low-flow channel be maintained. The downstream end of the channel upstream of the confluence with the Santa Maria River has experienced some sedimentation and has been colonized by vegetation. Therefore, maintaining the width and clearing with the low-flow channel by controlling the vegetation will comply with the terms and conditions of the O&M Manual.

Project Description:

Section 1:

This area of Bradley Canyon has a narrow trench within the wider trapezoidal channel. The trench captures low-flow and keeps erosive forces away from the edges of the levees. Throughout the summer and fall, irrigation tailwater drains into the channel and may create puddles and small pools in the trench, which can generate culsters of obstructive vegetation.

To maintain the central drainage trench, the District will spot-spray encroaching vegetation only on the floor of the trench. Vegetation at the edges of the trench will be left behind to stabilize the bank and for wildlife habitat. Spot spray will be not be performed in February/March/April during amphibian breeding season. A followup treatment may be necessary later in the fall. This area has been maintained before and impacts have already been tabulated for mitigation.

Section 2:
Section 2 is a reach of Bradly Canyon where a willow thicket begins along the Levee road. The willow thicket on both sides of the channel shades the channel, but also leads to several fallen limbs and trees. The recent drought has exacerbated the problem, as the willows are dying, breaking, and choking the channel. Fallen material tends to form debris jams. The slope through this reach has become nearly flat, providing no drainage into the main Santa Maria River.

Through this reach, the crew will use a small dozer or bobcat to remove fallen material and accumulated sediment. The material will be graded from south to north (downstream) and pushed into a large eroded scour hole near an old road culvert that was recently removed. The material will be shaped and groomed over the scour hole to blend the trench into the main channel with a gentle gradual slope. The desilted trench will be 6 feet wide (to match the existing drainage channel) and approximately 2 feet deep at the downstream end, and 900 feet long. Approximately 200 cubic yards of material will be desilted and then shaped and groomed into the large scour hole.

Willow limbs hanging over the active channel below 6-feet tall will be trimmed back. The overhanging canopy will remain intact. Vegetation on the sides of the banks and upper banks will not be brushed; only vegetation on the floor of the active channel will be removed. The work will leave an overhead canopy of higher trees and limbs as much as feasible, to keep the channel shaded and prevent cattail formation.

The work area will be dry during maintenance. Due to light disturbance to brushing of coyotebrush, arroyo willow, and sandbar willow sprouts, the work will result in 100 square feet of impact to native vegetation.

The edges of the newly graded soil at the scour pit will be re-planted and seeded with native species to prevent erosion. The exact dimensions of the planting areas will be determined in the field during maintenance, depending on the sediment quality and water availability.

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-D, H-E	H-1, H-2
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C, WQ-D	H-1, B-2, W-1, W-2, W-6, W-7, W-8, W-4
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-D	B-2, B-3, B-5
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-E, FAW-F, FAW-I, FAW-J	H-1, B-2, B-3, B-5, B-6, W-1, W-2, W-8
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A, AQ-B	A-1, A-2
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1
Public Health and Safety EIR section 5.10	PHS-A	W-2

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

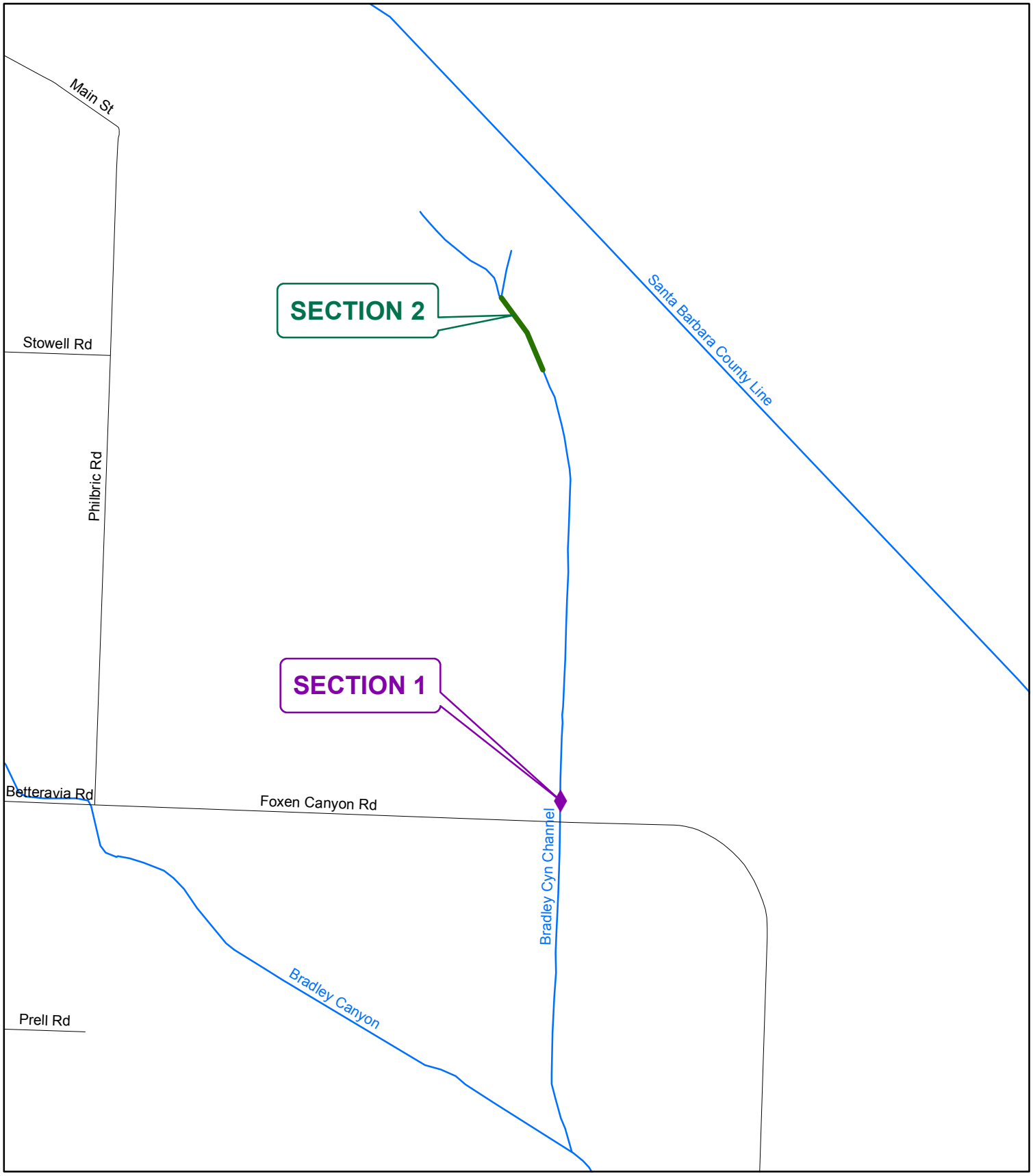
Project Specifics:
The project will take 4 days to complete.

VASCULAR PLANT LIST
BRADLEY CANYON CHANNEL

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Carduus phonozephalus	Italian Thistle	I
Gnaphalium luteo-album	Weedy Everlasting	I
Lactuea serriola	Prickly lettuce	I
Picris echioides	Ox Tongue	I
Silybum marianum	Milk Thistle	I
Taraxcum officinale	Common Dandelion	I
Xanibum strumarium	Cocklebur	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium	Watercress	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
Chenopodium berlandieri	Lamb's Quarters	I
Chenopodium murale	Nettle-Leaved -Goosefoot	I
CYPERACEAE		
Cyperus esculentus	Yellow Nutgrass	I
Scirpus californicus	California Bulrush	N
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I

FABACEAE		
Melilotus albus	White Sweet Clover	I
Trifolium sp.	Clover	I
LAMIACEAE		
Marrubium vulgare	Horebound	I
PLANTAGINACEAE		
Plantago major	Common Plantain	I
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Bromus rubens	Foxtail	I
Lolium perenne	Italian Rye	I
Oryzopsis miliacea	Rice Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Polygonum arenastrum	Italian Ryegrass	I
Polygonum lapathifolium	Willow Smartweed	N
Rumex crispus	Curly Dock	I
SALICACEAE		
Populus balsamifera	Black Cottonwood	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SOLANACEAE		
Nicotiana glauca	Tree Tobacco	I
TYPHACEAE		
Typha sp.	Cattail	N

* I - Introduced
N - Native



Department of Public Works County of Santa Barbara

Bradley Canyon Channel

Legend

- Sites
- Lengths

PUBLIC WORKS ENTERPRISE GIS

N W E S

1,200 600 0 1,200

Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Bradley Canyon Channel

Section 2

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:
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 is 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.

Cebada Canyon Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2006/2007	0	0	0	0
2007/2008	4,800	4,800	0	-4,800
2009/2010	200	5,000	5,000	0
2010/2011	0	0	0	0
2014/2015	0	0	0	0
2016/2017	200	1000	TBD	TBD

Wildlife Survey:
The work at Cebada Canyon involves heavy equipment excavating and re-shaping soil in the

channel. The District Biologist performed a site assessment in May 2016. The work area was completely dry and will be dry during maintenance. There are no special status species known or likely to be present in this work area. Vegetation at the site is comprised of common native riparian vegetation as well as ruderal weeds. Riparian birds may use the area; BMPs will be implemented to minimize disturbance to the native tree canopy. The work will be performed outside of the nesting bird season. Once the project is complete, the site ecological value of the site will be unchanged or modestly improved; a weed-infested sloped will be reseeded and planted with native species. Wildlife that may be disturbed or flushed from the site during operations would readily return to the site.

Engineering Analysis:

Accumulated sediment is severely blocking a culvert and not allowing the flows in Cedaba Channel to pass downstream. Additionally, debris blocking an adjacent culvert from the Highway 246 Roundabout is also contributing to the flooding potential. These obstructions must be removed or La Purisima Rd. and Hwy 246 will flood.

Project Description:

Section 1:

This reach of the creek collects drainage from Purisima Road and a new traffic roundabout drainage culvert at Highway 246. The main creek culvert at Purisima Road is a 5'-6' circular pipe that has been almost entirely filled with sediment. A second culvert from the roundabout is plugged with woody debris. The channel does not drain because the grade of the creek is sloped toward the plugged culverts (upstream) rather than downstream. This situation threatens to block the culverts and flood the roadways.

To resolve the drainage issue, the District proposes to place equipment in the channel to excavate sediment from the large circular pipe to a depth of 4-5 feet. After the culvert is excavated, the channel will be desilted downstream with a gentle grade for 500 feet and tapered back into the existing creek channel. The desilted channel will be approximately 6 feet wide.

The brush and debris at the second culvert will be cut and removed. The sediment will be desilted with gentle grade to match the remaining channel. Approximately 200 cubic yards of material will be desilted.

The sediment removed from the plugged channel will be staged in the channel temporarily during maintenance, and then shaped into an eroded failing bank at the north side of the channel. This bank has erosion gullies and is infested with black mustard and fennel. The weeds will be mowed and spot-sprayed with herbicide before the sediment is shaped and groomed over the damaged bank.

The bank will be restored with native vegetation and seed mix, as well as erosion-control fabric. The project will require a small amount of incidental disturbance to native vegetation, approximately 200 square feet, but will create 1000 square feet of restoration. Any excess sediment than cannot be compacted into the failing bank will be loaded into dump trucks and hauled offsite.

The work area will be completely dry during operations. Access to the channel for equipment will be taken from the south bank, just downstream of the work area. Here, a few willow limbs may be trimmed and removed to allow the small excavator to drive down the bank into the work area.

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.

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

*Residual Impacts:

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

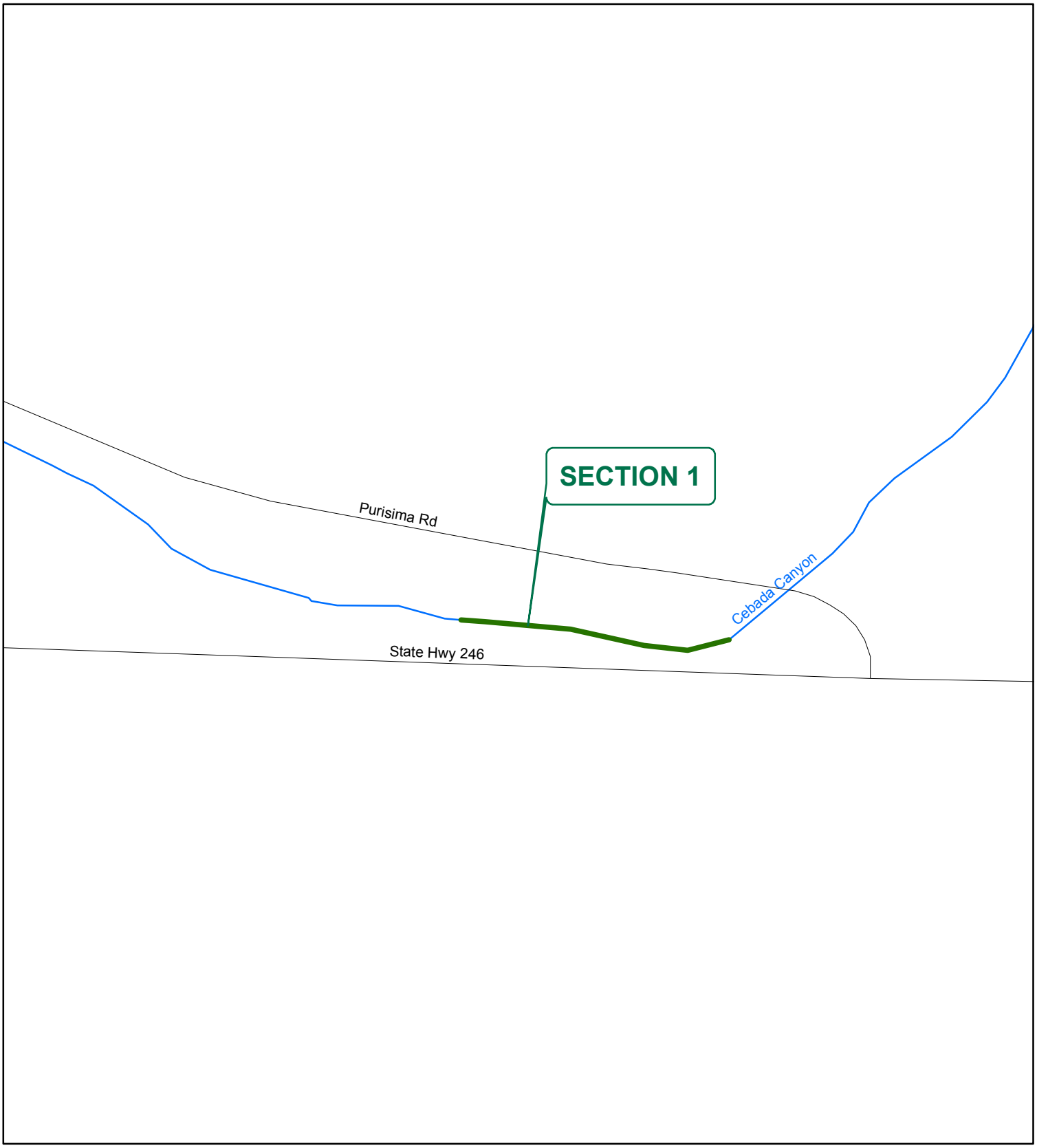
Project Specifics:
The project will take 4 days to complete.

CEBADA CANYON CHANNEL
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
ASTERACEAE		
Artemisia california	Calif. Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Gnaphalium californicum	Pearly Everlasting	N
Lactuca serriola	Prickly Lettuce	I
Xanthium strumarium	Cocklebur	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
FABACEAE		
Robinia pseudoacacia	Black Locust	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
MALVACEAE		
Malva parviflora	Cheeseweed	I
POACEAE		
Avena fatua	Wild Oaks	I
Bromus diandrus	Ripgut Grass	I
Oryzopsis sp.	Rice grass	I
Pennisetum setaceum	Fountaingrass	I
Polypogon monspeliensis	Rabbitfoot Grass	I
POLYGONACEAE		
Rumex crispus	Curly Dock	I

PRUMULACEAE		
Angallis arvensis	Scarlet Pimpernel	I
ROSACEAE		
Rubus ursinus	Calif. Blackberry	N
Rubus discolor	Himalayan Blackberry	I
SOLANACEAE		
Nicotiana glauca	Tree tobacco	I
SALICACEAE		
Salix lasiolepis	Arroyo Willow	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N

* I = Introduced
N = Native



Department of Public Works County of Santa Barbara

Cebada Canyon Creek

Legend

Lengths

N W E S

Feet

225 112.5 0 225

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Cebada Canyon Creek

Section 1

Section 1

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/Soloman Creek in agricultural fields near Highway 1. North Green Canyon flows into Middle Green Canyon, which meets Orcutt/Soloman Creek near the Santa Maria River.

Setting:

Inspected on March 24, 2016.

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.

Middle Green Canyon				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2002/2003	0	1,200	0	0
2004/2005	0	0	0	0
2005/2006	1,000	1,000	1,000	0
2007/2008	0	0	0	0
2008/2009	0	0	0	0
2009/2010	0	0	0	0
2010/2011	0	0	0	0
2011/2012	0	0	0	0
2012/2013	300	0	0	-300
2013/2014	100	0	1900	1500
2014/2015	770	0	0	730
2015/2016	215	0	0	515
2016/2017	0	0	0	515

North Green Canyon				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	3,000	3,000	3,000	0
2006/2007	0	0	0	0
2008/2009	0	0	0	0
2009/2010	0	0	0	0
2010/2011	0	0	0	0
2011/2012	0	0	0	0
2013/2014	0	0	0	0
2014/2015	1300	0	0	-1300
2015/2016	0	0	0	-1300
2016/2017	1000	TBD	TBD	TBD

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 an obstructive island of sediment in the middle of the ditch. 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 300 linear feet, 4 feet wide, and 2 feet deep. Approximately 90 cubic yard will be desilted. The work area is bare loose sediment and weedy non-native grasses; no new impact to native vegetation will occur.

Section 2:

Similar to Section 1, this ditch has accumulated sediment, reducing the depth and capacity. 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 900 linear feet, 4 feet wide, and 2 feet deep. Approximately 270 cubic yard will be desilted. The work area is bare loose sediment and weedy non-native grasses; no new impact to native vegetation will occur.

Section 3:

Sediment and debris has accumulated in the ditch just upstream of the road culvert. The District will excavate the floor of the ditch to reclaim a trench 5 ft wide and 2 feet deep for a distance of 10 feet. Approximately 4 cubic yards of material will be desilted. The material will be placed on the adjacent farm field and graded back into the existing field after it was dewatered. The channel is mostly all bare sediment along this area. The work will not impact native vegetation.

Downstream of the culvert, sediment has accumulated in the ditch. The ditch is overgrown with patches of cattails and bulrush. The ditch is narrow and confined by the elevated road bed in this reach. The District will excavate the floor of the ditch to reclaim a trench 6 ft wide and 2 feet deep for a distance of 1350 feet. A few buckets of silt will be excavated from each side of the road culvert as well.

Approximately 600 cubic yards of material will be desilted. The material will be placed on the adjacent farm field and graded back into the existing field after it has dewatered. This area has been maintained in previous years by desilting and mowing, and the impacts have already been tabulated for mitigation.

Section 4:
This reach is the confluence of North Green Canyon and Middle Green Canyon. The two ditches are choked with cattails and bulrush, threatening to block both drainages and impede flow. The ditches are deep and the vegetation is short enough that mowing will be adequate to restore capacity, rather than excavation. Using a mower attachment on the Gradall arm, the District will mow the cattails and bulrush at the fork in the two drainage ditches. This area was mowed last year and impacts have already been tabulated for mitigation.

North Green Canyon Channel

Section 1:
This area of the ditch widens into a long swale between two vegetable fields. The swale is entirely colonized by cattail and bulrush. The vegetation restricts flows, and just downstream the ditch narrows again, further impeding drainage. The District has developed an alternative maintenance strategy to test at this location. Rather than excavate the vegetation and sediment from the swale, the District will mow a central channel through the swale, leaving a strip of vegetation along the edge of both banks. The mowed trench will allow flowing water to enter and exit the site. The mowed trench will be approximately 500 ft long and 4 ft wide. This area is partially occupied by colonies of native and non-native vegetation. The work will result in 1000 square feet of impacts to native habitat. After the area is mowed, the District will periodically spot-spray regrowth within the swale to maintain a flow area. Spot spray will not occur in February, March, and April, to allow aquatic wildlife breeding.

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.

Resource	Impacts	Mitigation Measures*
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-D, H-E	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C, WQ-D	H-1, B-2, W-1, W-2, W-4, W-5, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-D	B-1, B-2, B-3, B-4
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-E, FAW-F, FAW-I	H-1, B-1, B-2, B-3, B-5, B-6, W-1, W-2, W-5
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A, AQ-B	A-1, A-2
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1
Public Health and Safety EIR section 5.10	PHS-A	W-2

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

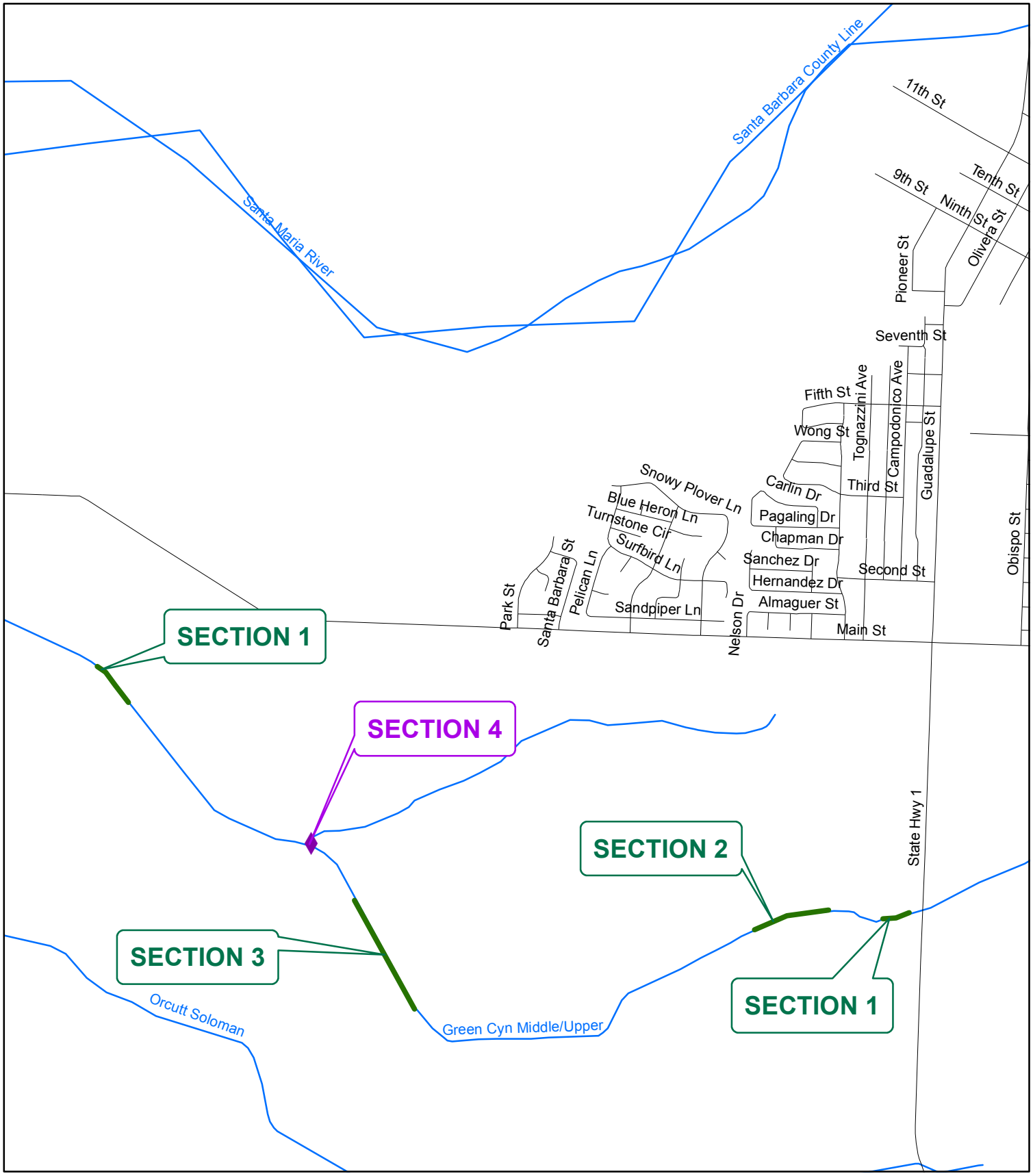
Project Specifics:
The Green Canyon Drainage projects will take 14 days to complete.

VASCULAR PLANT LIST
GREEN CANYON DRAINAGES

SCIENTIFIC	COMMON NAME	ORIGIN*
APIACEAE		
Conium maculatum	Poison Hemlock	I
ASTERACEAE		
Ambrosia psilostachya	Western Ragweed	I
Conyza bonariensis	Horseweed	I
Heterotheca grandiflora	Telegraph Weed	N
Sencio vulgaris	Common Groundsel	I
Sonchus asper	Sow Thistle	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturium -aquaticum	Watercress	N
FABACEAE		
Melilotus indicus	Yellow Sweet Clover	I
MALVACEAE		
Malva parviflora	Cheeseweed	I
MYRTACEAE		
Eucalyptus sp.	Eucalyptus	I
ONAGRACEAE		
Epilobium adenocaulation	Willow-Herb	N
POACEAE		
Avena fatua	Wild Oat	I
Bromus mollis	Soft Chess	I
Bromus rubens	Foxtail	I
Cortaderia acacamensis	Pampas Grass	I
Lolium perenne	Italian Rye	I
Oryzopsis sp.	Rice grass	I
POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	N
Rumex crispus	Curly Dock	I
SALICACEAE		

Salix lasiolepis	Arroyo Willow	N
TYPHACEAE		
Typha sp.	Cattail	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N

* I = Introduced
N = Native



Department of Public Works County of Santa Barbara

Legend

- Sites
- Lengths

Green Canyons

N W E S

Feet

1,100 550 0 1,100

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Green Canyon Channels

Middle Green Section 1

Middle Green Section 3

ORCUTT/SOLOMON CREEK ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location: The project begins 2000 feet downstream of Stillwell Road and ends 1200 feet upstream of Solomon Rd. in Orcutt.

Setting:
Inspected on March 17, 2016.

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.

Orcutt/Solomon Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2003/2004	2,600	4,000	4,000	1,400
2004/2005	8,600	9,000	9,000	1,800
2006/2007	6,000*	6,000*	3,000*	-1,200
2007/2008	350	800	800	-750
2008/2009	800	0	0	-1,550
2009/2010	0	750	2000	450
2010/2011	0	500	500	950
2011/2012	800	880	600*	750
2012/2013	485	800	0	265
2013/2014	20	0	0	245
2014/2015	10	0	0	235
2015/2016	580	0	0	-345
2016/2017	TBD	0	0	TBD

*Several small restoration sites were implemented to achieve 880 square feet of area. Ultimately, only 600 square feet was successful.

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:
Section 1 is a small patch of willow seedlings and sprouts that has emerged on the sandy channel floor. The District crew will brush the sprouts with hand tools and spot-spray the stems to inhibit regeneration. Only plants on the floor of the channel will be cut and treated. The creek channel is dry during the summer at this location. Maintenance in this section result in 10 square feet of temporal impacts to native vegetation.

Section 2-5:
These sites are fallen willow branches, small dead trees, and downed coyotebrush shrubs. The fallen material threatens to block the active channel and pick up debris. The crew will cut apart the fallen woody material and place the material on the adjacent banks. Maintenance in these sections will not result in impacts to native vegetation.

Section 6:
This site is a fallen willow tree that will be cut and removed, as well as a thicket of willows on the bank that are leaning into the central channel. The crew will limb some of the leaning

branches, while leaving the main live trunks intact on the banks. The cut material will be chipped and 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 7
A dense patch of coyote brush is projecting and overhanging into the active channel. The crew will limb the dangling/hanging material, while leaving the main live trunks intact on the banks. The cut material will be chipped and 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 8:
This site is a fallen willow branch that will be cut and removed from the active channel. The cut material will be chipped and 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 9:
A large pine tree has fallen into the channel. The crew will cut the tree 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 10-11:
These sites are fallen willow branches that will be cut and removed from the active channel. The cut material will be chipped and 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 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. Due to several years of minimal flow, the central channel has become populated with maturing willow trees, which have collected debris plugs. The result is a sporadically open channel with clusters of willow and debris, and a braided eroding channel that threatens to break over the banks.

To alleviate this issue, the District will selectively cut willow clusters and debris plugs 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.

The new flow corridor will be a maximum of 8 feet wide and 6 feet tall. Overhead branches above 6 feet high will be left intact for shade and habitat. The work area will extend 800 feet

downstream of the existing check structure, after which the creek enters open space and agriculture properties that can tolerate more vegetation in the channel.

The total work area is 6400 square feet, of which approximately one quarter to one third is vegetated with some amount of native and non-native vegetation. The exact area of impact to native vegetation will be determined in the field during biomonitoring.

Laguna Sanitation Facility

Section 13:
The property at Laguna Sanitation has several fallen willow trees within the creek corridor. The crew has identified sites along the main creek with excess debris and fallen trees. The fallen trees will be cut into pieces and removed from the active channel.

Section 14:
Section 14 is a tributary creek that runs through the property at Laguna Sanitation Water Treatment Plant. Section 13 has a dense willow riparian canopy along both sides. Several fallen trees and limbs have dropped in the active channel; additionally the mature trees in the corridor have limbs hanging into the channel. A contractor tree-crew will use chain saws and hand tools to cut the projecting limbs from a corridor 6' wide and 6 feet tall. 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. Vegetation along the banks and above 6 feet tall will be left in place to retain the riparian corridor. The project will result in impacts to approximately 250 square feet of native vegetation in the form of willow sprouts in the center of the channel that will be disturbed during limbing and shaping of the corridor.

Section 15:
This area is a bend in the drainage channel with another tributary joining the main stem of Orcutt-Soloman Creek from the north. For the past several years, flows in the sandy soil have resulted in erosion and scour. The south bank of the channel has failed, resulting in an overflow trench running through the property at Laguna Sanitation and eroding an access road. The repair at this location involves multiple steps. First, the eroded bank where the overflow trench has developed will be re-shaped by using a small tractor/excavator to push soil from the adjacent ag field into a berm. Then, the berm will be groomed and shaped to match the existing banks. If necessary, a small bobcat or mini-excavator will be used to remove excess sediment from the center of the creek channel to re-establish the main drainage pathway around the creek corner.

Section 16:
In addition to these project sites, the property at Laguna Sanitation has several fallen willow trees within the creek corridor. The crew has identified 11 fallen trees along the main creek, eastern tributary, and along the access road to the wetland ponds. The fallen trees will be cut into pieces and removed from the active channel.

Section 17:
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 material from the outlet pipe opening. A temporary bypass and access ramp may be

installed to access the south side of the pipe, if the machinery cannot reach the site from the existing road. The temporary access ramp would be removed and re-groomed to match the existing site at the end of the day. 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.

The excavation will involve approximately 15 linear feet, 15 feet wide, and 3 feet deep. Approximately 25 cubic yards will be removed. The work area includes mostly bare, dry sediment. This work area has been maintained previously and the impacts have already been tabulated for mitigation.

Section 18:
This site is the confluence of Orcutt-Soloman Creek and Corralitos Creek. The section is between two ag fields and downstream of the Highway 1 culvert. The channel floor is colonized with non-native watercress, which forms a dense mat. The floating vegetation traps sediment and threatens to block the culvert. The District crew will spot-spray the watercress to maintain flow capacity. A followup spray may be applied in late spring to inhibit regeneration. No spray will be used during March/April/May for the amphibian breeding season. Maintenance in this section 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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C	H-1, B-2, W-2, W-4, W-6, W-7, W-8,

Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-B	B-1, B-3, H-9
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I	B-1, B-2, B-3, B-5, W-1, W-2, W-5
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A	A-1
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1

*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 13 days to complete.

VASCULAR PLANT LIST
ORCUTT- SOLOMON CREEK

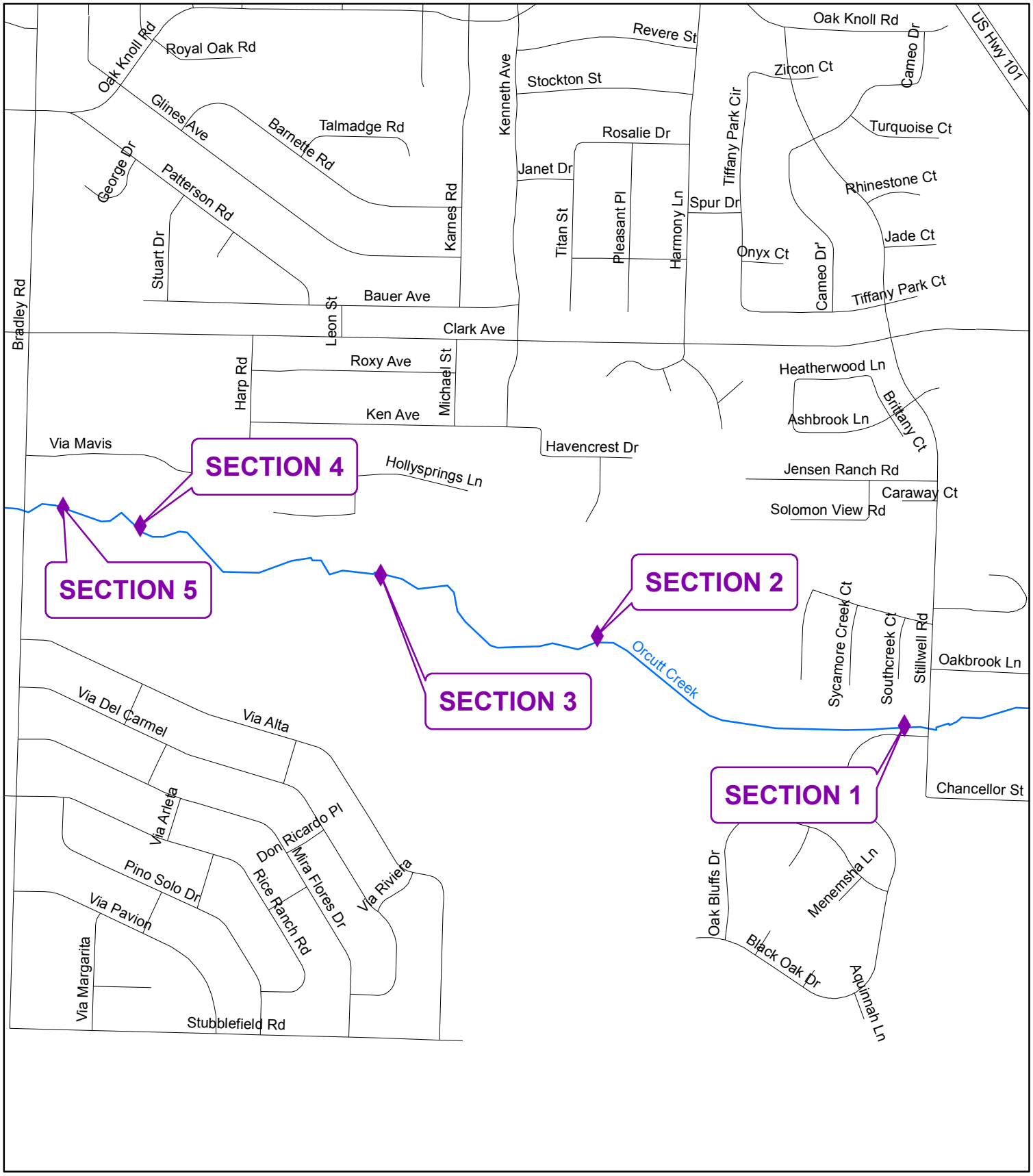
SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
AMACARDOACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium Maculatum	Poison Hemlock	I
ASTERACEAE		
Achillea millefolium	Yarrow	N
Ambrosia Psilostachya	Western Ragweed	I
Artemisia biennis	Biennial Sagewort	I
Artemisia douglasiana	Mugwort	N
Baccharis douglasii	Marsh Baccharis	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyote Bush	N
Carpobrotus edulis	Iceplant	I
Ciriusum vulgare	Bull Thistle	I
Conyza bonariensis	Horseweed	I
Cotula coronopifolia	Brass Buttons	I
Gnaphalium purpureum	Purple Cudweed	I
Helenium puberulum	Sneezeweed	N
Heterotheca grandiflora	Telegraph Weed	N
Isocoma venetus ssp. verniodes	Coast Goldenbrush	N
Lactuca serriola	Prickly Lettuce	I
Picris echioides	Ox Tongue	I
Sencio blochmaniae	Blochman's -Groundsel	I
Silybum marianum	Milk thistle	I
Sisymbrium irio	London Rocket	I
Sonchus asper	Sow Thistle	I
Xanthium spinosum	Spiny Cocklebur	I
Xanthium strumarium	Cocklebur	I
BORAGINACEAE		
Heliotropium curassavicum var. occulatrum	Heliotrope	N
BRASSICACEAE		

Brassica nigra	Black Mustard	I
Brassica campestris	Field Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturium -aquaticum	Watercress	I
CACTACEAE		
Opuntia sp.	Beavertail Cactus	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CARYOPHYLLACEAE		
Spergularia st.	Sand Spurrey	I
CHENOPDIACEAE		
Artiplex hastata	Hastate-Leaved -Saltbush	N
Chenopodium berlandiere	Lamb's Quarters	I
Chenopodium murale	Nettle-Leaved -Goosefoot	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Cyperus esculentus	Yellow Nutgrass	N
Eleocharis macrostachya	Common Spikerush	N
Scirpus californicus	California Bulrush	N
Scirpus robustus	Prairie Bulrush	N
EUPHORBIACEAE		
Euphoria peplus	Petty Surge	I
FABACEAE		
Lotus purshianus var. purshianus	Spanish Clover	N
Lotus salsuginosus	Lotus	N
Melilotus indicus	Yellow Sweet Clover	I
Vicia benghalensis	Vetch	I
JUNACEAE		
Juncus bufonius	Toad Rush	N
Juncus phaeocephalus	Brown-Headed Rush	N
LEMNACEAE		
Lemna sp.	Dutchweed	N

MALVACEAE		
Malva parviflora	Cheeseweed	I
ONAGRACEAE		
Epilobium adenocaulation	Willow-Herb	N
PLANTAGINACEAE		
Plantago major	Common Plantain	I
POACEAE		
Agrostis stolonifera	Redtop	I
Cynodon dactylon	Bermuda Grass	I
Digitaria sanguinalis	Crab grass	I
Echonochloa crusgalli	Barnyard Millet	I
Lolium perenne	Italian Ryegrass	I
Piptatherum miliaceum	Rice grass	I
Polypogon monspeliensis	Rabbitfoot Grass	I
POLEMONIACEAE		
Microsteris gracilis spp. gracilis	Microsteris	N
POLYGONACEAE		
Polygonum arenastrum	Common Knotweed	I
Polygonum lapathifolium	Willow Smartweed	N
Polygonum punctatum	Dotted Smartweed	N
Rumex crispus	Curly Dock	I
Rumex fueginus	Golden Dock	I
Rumes hymenosephalus	Wild Rhubarb	I
PORTULACEAE		
Portulaca oleraceae	Purslane	I
PRUMULACEAE		
Angallis arvensis	Scarlet Pimpernel	I
ROSACEAE		
Poentilla egedii	Silverweed	
Rubus ursinus	Calif. Blackberry	N
SALICACEAE		
Salix exigua	Narrowleaf Willow	N
Salix lasiolepis	Arroyo Willow	N

SCROPHULARICEAE		
Mimulus guttatus	Marsh Monkey -Flower	N
Scrophularia californica	Figwort	N
SOLANACEAE		
Solanum nodiflorum	Small-Flowered -Weed	I
SPARGANIACEAE		
Sparganium ecrycarpum	Bur Reed	N
TROPAEOLACEAE		
Tropaelum majus	Garden Nasturtium	I
URTICACEAE		
Urtica holosericea	Giant Nettle	N
Urtica urens	Dwarf Nettle	N
VERBENACEAE		
Verbena lasiotachys	Verbena	N

* I = Introduced
N = Native



Department of Public Works County of Santa Barbara

Legend

- Sites
- Lengths

Orcutt/Soloman Creek - A

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

675 337.5 0 675

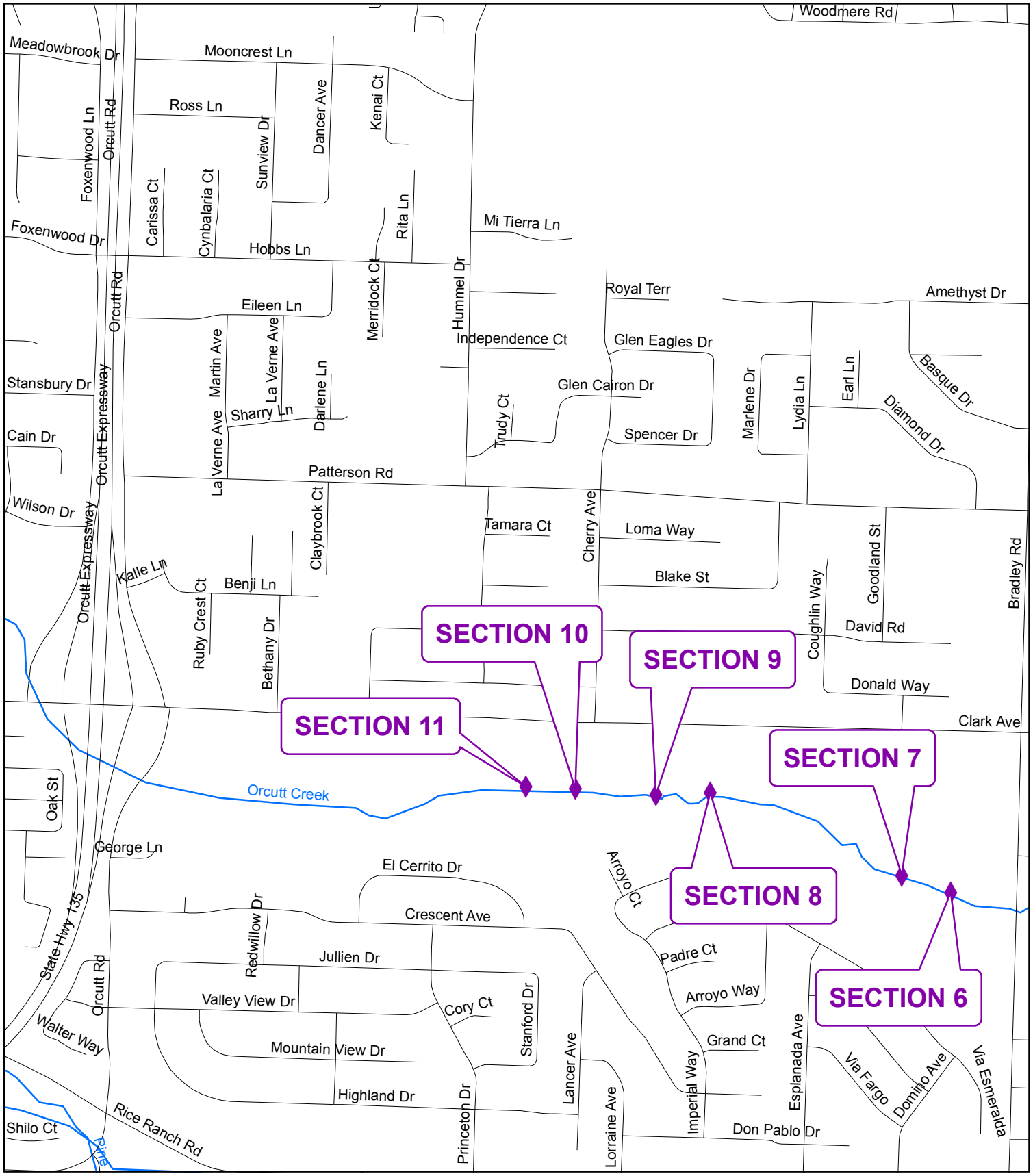
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Legend

- Sites
- Lengths

Orcutt/Soloman Creek - B

PUBLIC WORKS ENTERPRISE GIS

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N W E S

Feet

675 337.5 0 675

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.

Department of Public Works County of Santa Barbara

Legend

Sites

Lengths

Orcutt/Soloman Creek - C

PUBLIC WORKS ENTERPRISE GIS

N W E S

475 237.5 0 475

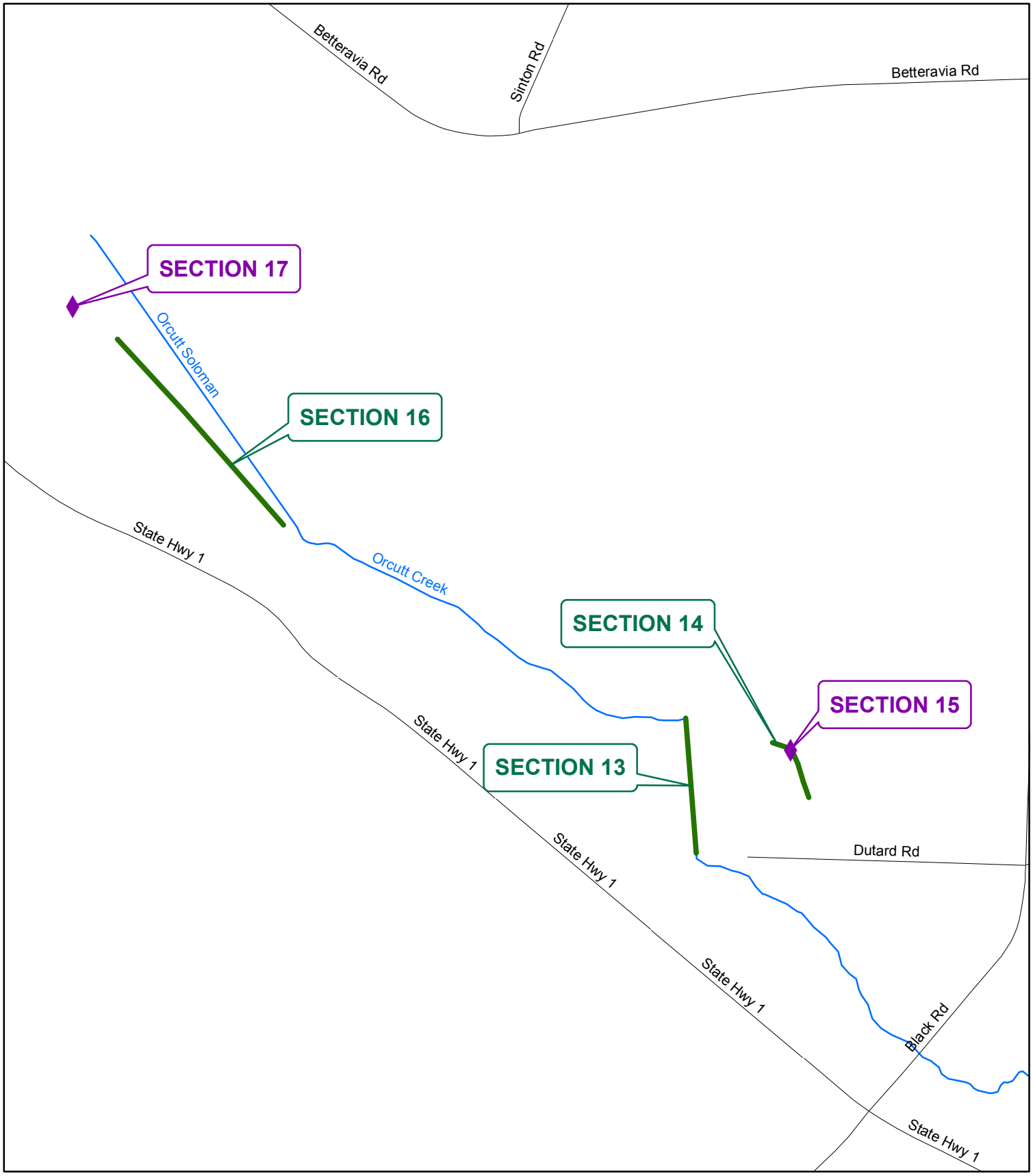
Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Legend

Sites

Lengths

Orcutt/Soloman Creek - D

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

1,750 875 0 1,750

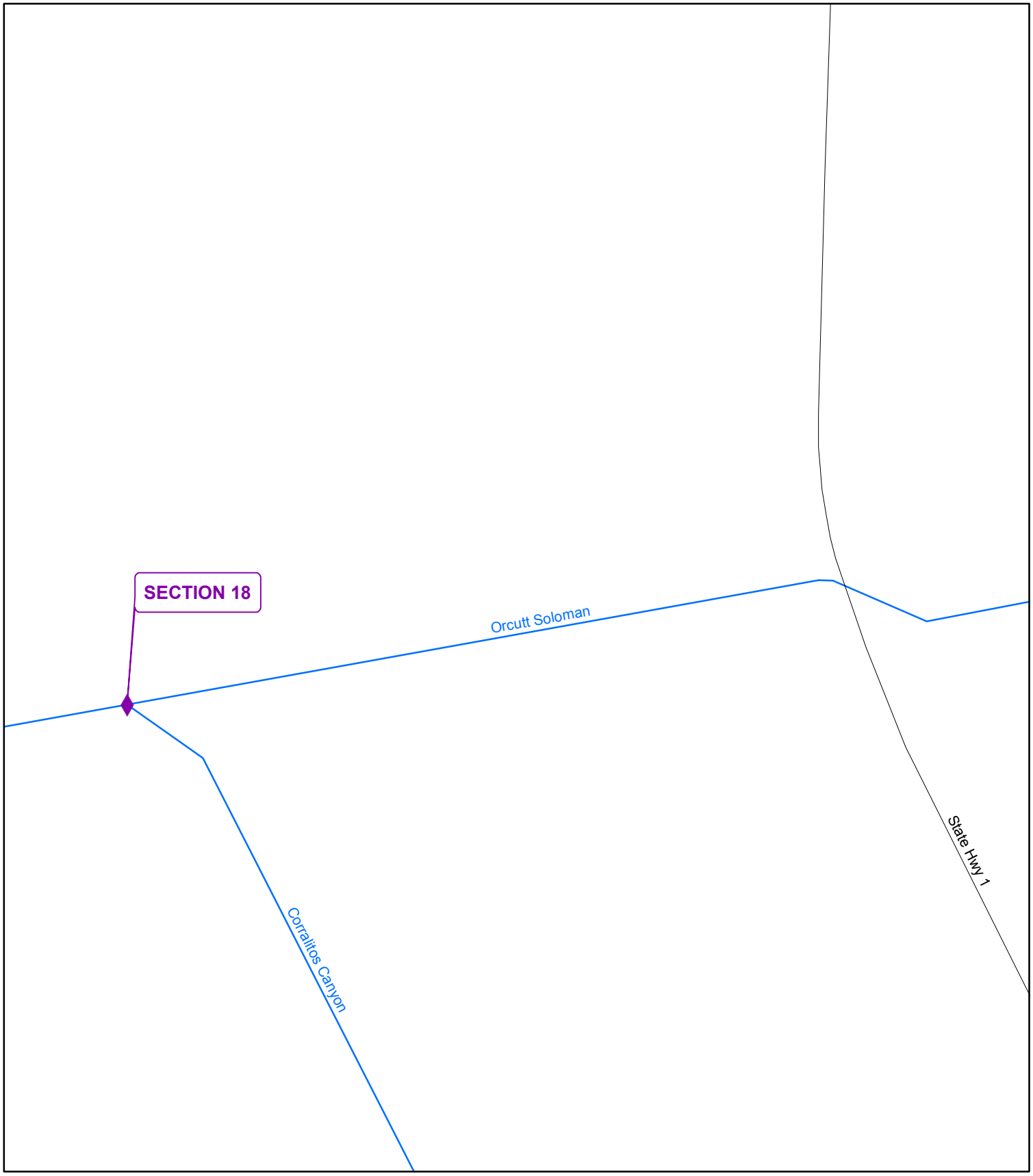
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Orcutt Solomon Creek-E

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

N
W E
S

Feet

270 135 0 270

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Orcutt Solomon Creek

Section 9

Section 12

PINE CANYON CREEK ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The maintenance inspection area begins 300 yards upstream of Graciosa Rd. and terminates at the Orcutt Expressway Bridge.

Setting:
Inspected on March 17, 2016.

Pine Canyon Creek is a tributary to Solomon Creek and runs through the southern portion of Orcutt. The creek has low sloping banks with willows, sycamores and cottonwoods on either side. The upper portion of Pine Canyon Creek is well vegetated with willows and runs parallel to Rice Ranch Road for several hundred feet and immediately downstream of a new housing development bordered by Rice Ranch Road and Bradley Road. On the lower portion of the maintenance area, the willows and cottonwoods are now over 20 feet tall. The vegetation on the north bank in this same stretch has also matured through the District's revegetation efforts. The sandy substrate in the creek invert held some standing water at the time of the inspection but the majority of this stretch of creek did not contain flowing water. The creek dries out during the summer months and only occasionally contains water due to irrigation runoff from adjacent neighborhoods.

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 to more easily display and track the District's restoration efforts.

Pine Canyon Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2003/2004	1,500	1,500	1,500	0
2008/2009	0	0	0	0
2014/2015	0	0	0	0
2016/2017	500	TBD	TBD	0

Wildlife Survey:
Maintenance at Section 1 involves excavating a trench along a roadside field. The District Biologist assessed the project area in May 2016. The habitat is a roadside ruderal field with a series of drainage ravines. A few coyotebrush shrubs and willows may need to be removed as part of the desilting. The rest of the work area is mostly

weedy non-native grasses. The project area is approximately 1.6 miles from an identified range of the California tiger salamander at the Santa Maria Airport. The land between the CTS range at the airport and the project site is suburban housing developments and roadways. There is no suitable dispersal habitat between the airport and the project site. The project site is within the road right-of-way and contains no standing water and or evidence of persistent small mammal activity.

No other special status species are known or likely to occur on the project site. The District Biologist will perform a pre-project survey and onsite biological monitoring during excavation to determine if any special protective measures are needed. If any special status species are detected during biomonitoring, the project will be suspended.

The project area at Section 2 is the ditch behind a row of suburban houses just upstream of Highway 135. The project area will be dry during maintenance. No special status species are known or likely on the project area. The District Biologist will perform a pre-project survey to determine if any special protective measures are needed.

Engineering Analysis:

Excessive or obstructive vegetation growing in the invert can trap silt and sediment which would otherwise move downstream. The channel needs to be cleared of the silt and silt-trapping vegetation which has accumulated so that the culvert and the channel's full capacity can be utilized. When the accumulated sediment is allowed to remain, it leads to increased water surface elevations which could eventually break out of the creek banks and threaten adjacent private properties.

Project Description:

Section 1:

The detention basin near Princeton Drive and Rice Ranch Road drains to the west and into Pine Canyon Creek within this section. The roadside ditch and creek corridor is overgrown with dense tangled willows in the center channel. The roadside ditch has been regraded and groomed by others, but now the roadside ditch has lost its depth and ends in a shallow sloped field next to the road. Overland flow could easily exceed the capacity of the ditch and the fallow field and create a flood risk.

In order to remedy this drainage problem, the District will desilt a small trench within the roadside ditch to re-connect with the main channel of Pine Canyon Creek. The trench will allow water within the roadside ditch to reach the main creek channel without obstruction.

Using a Gradall or excavator, the District will desilt a trench approximately 4 feet wide and 2-3 feet deep for a distance of approximately 50 feet. A few coyotebrush shrubs may need to be removed as part of the desilting. A large willow at the existing roadside ditch will not be disturbed. The rest of the work area is mostly weedy non-native grasses. The project will result in 100 square feet of impacts to native vegetation. Following desilting, the District will re-seed the edges of the channel with a native erosion-control seed mix. The work is considered self-mitigating.

Section 2:

Pine creek runs behind a housing tract at Shilo Court and then through a culvert at Highway 135. Part of the housing development includes drainage culverts that enter the creek just upstream of Highway 135. The drainage culvert is completely buried in sediment, impeding drainage and presenting a flood hazard for the homes and roadways. The drainage system has backed up and spilled out of an overflow pipe, causing erosion of the bank surrounding the overflow pipe.

The District will use a mini-excavator to desilt sediment from the pipe opening. The machinery will take access from an existing pathway off of Shilo Court. A few willows may need to be limbed to allow access but no whole trees will be cut. The crew will remove approximately 2 cubic yards of material from the culvert opening. The sediment will be removed from the creek channel and placed on the open field, outside of the channel, northwest of the creek site. The sediment will be dispersed in open area among the coyote bush shurbs.

The work area will be dry during maintenance. There will be no impacts to native vegetation.

Section 3:

Downstream of the Highway 135 culvert, Pine creek runs through low-density rural properties along the Highway. The creek corridor at the culvert is obstructed with low willows and overhanging branches. The District will perform a combination of limbing and brushing within a central corridor to provide flow capacity.

Vegetation on the banks will not be disturbed. Vegetation over 6ft high will be left intact to provide shade. A corridor 4-5 feet wide and up to 6 feet high will be limbed and brushed as necessary to maintain a contiguous pathway from the culvert through the willow thicket. The work area will run for approximately 300 feet, after which the creek is far enough from sensitive development that obstructions in the channel can be tolerated. All work will be performed with handtools. The cut material will be chipped into mulch and/or hauled offside, depending on access.

The work area is not entirely populated with native species, however the project will result in sporadic impacts to native vegetation as a result of brushing willow sprouts and other native species in the floor of the channel. The total impact to native vegetation is 300 square feet.

Section 4

This reach runs parallel to Clarke Avenue. A large willow tree is blocking the Clark Avenue Bridge. This tree is within the road right-of-way and will be removed by the Roads Dept. The remaining 300 ft of the channel along Clarke Ave has periodic downed trees, overhanging limbs, and occasional clumps of willows on the floor of the active channel.

The District crew will perform a combination of limbing and brushing within a central corridor to provide flow capacity. Vegetation on the banks will not be disturbed. Vegetation over 6ft high will be left intact to provide shade. A corridor 4 feet wide and up to 6 feet high will be limbed and brushed as necessary to maintain a contiguous pathway from the culvert through the willow thicket. The work area will run for approximately 250 feet upstream of the Clarke Ave bridge. Upstream of the work area,

the creek is far enough from sensitive development that obstructions in the channel can be tolerated. All work will be performed with hand tools. The cut material will be chipped into mulch and/or hauled offside, depending on access.

The work area is not entirely populated with native species, however the project will result in sporadic impacts to native vegetation as a result of brushing willow sprouts and other native species in the floor of the channel. The total impact to native vegetation is 200 square feet.

Impact Analysis and 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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C	H-1, B-2, W-2, W-4, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-B	B-1, H-9
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I	B-1, B-2, B-3, B-5, W-1, W-2, W-5
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A	A-1
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1

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

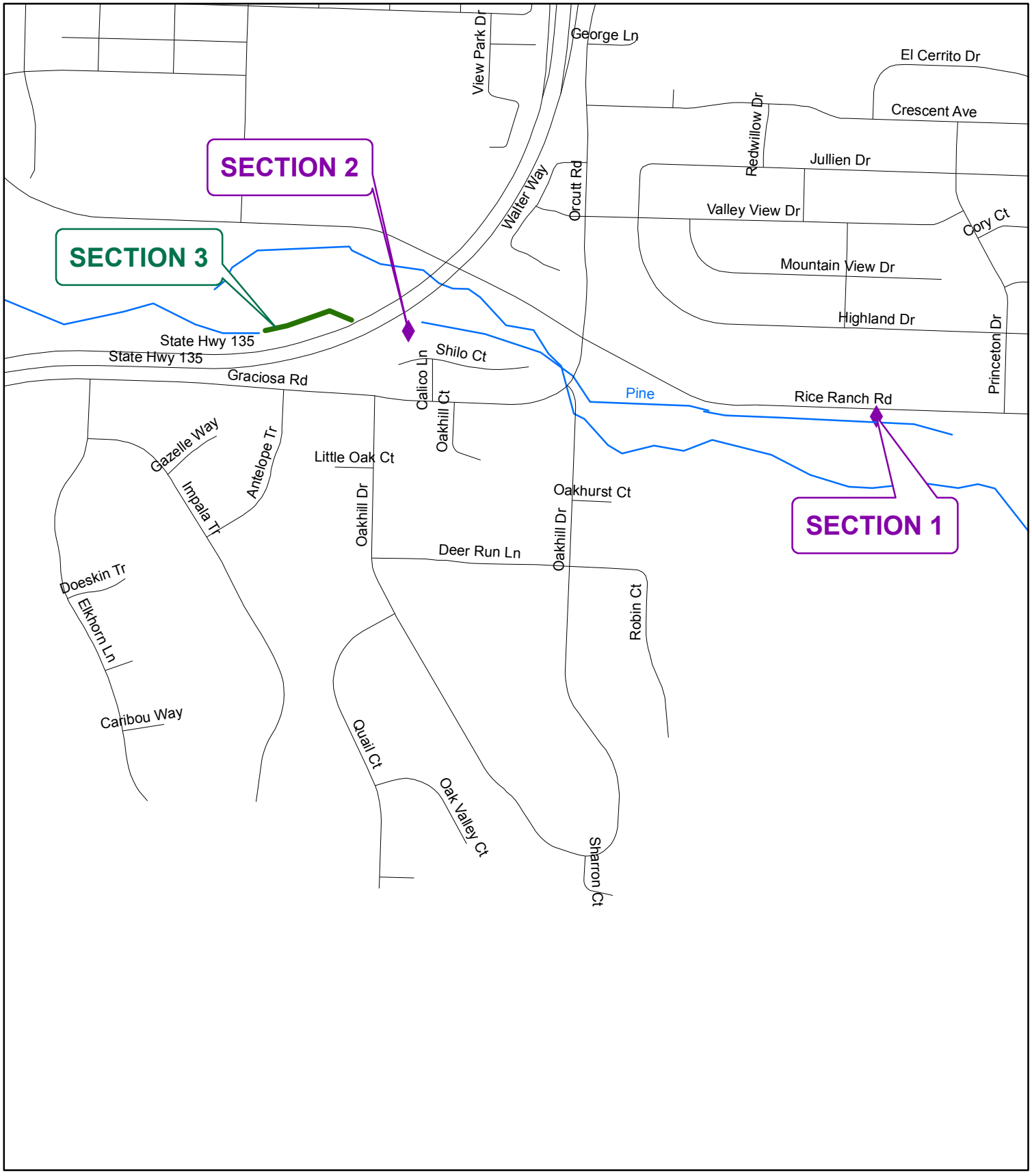
Project Specifics:
The project will take 4 days to complete.

PINE CANYON CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	***COMMON NAME***	***ORIGIN****
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Sanicula crassicaulis	Sanicle	N
ASTERACEAE		
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyote Bush	N
Cirsium vulgare	Bull Thistle	I
Xanthium spinosum	Spiny Cocklebur	I
BORAGINACEAE		
Heliotropium curassavicum	Heliotrope	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
CONVOLVULACEAE		
Cuscuta californica	Dodder	I
CYPERACEAE		
Scirpus americanus	Three Square	N
EUPHORBIACEAE		
Eremocarpus setigerus	Turkey Mullein	N
FABACEAE		
Lathyrus latifolius	Common Sweetpea	I
Lotus scoparius	Deerwood	N
Lupinus arboreus	Bush Lupine	I

SCIENTIFIC NAME (Cont'd)	**COMMON NAME** (Cont'd)	**ORIGIN** *
FABACEA (Cont'd)		
Lupinus bicolor	Bicolor Lupin	N
Melilotus indicus	Yellow Sweet Clover	I
Vicia benghalensis	Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
GROSSULARIACEAE		
Ribes divaricatum	Straggly Gooseberry	N
MYRTACEAE		
Eucalyptus globulus	Blue Gum	I
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Bromus unuioloides	Rescue Brome	I
Lolium perenne	Italian Ryegrass	I
POLYGONACEAE		
Rumex crispus	Curly Dock	I
SALICACEAE		
Salix laevigata	Red Willow	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I

* N = Native
I = Introduced



Department of Public Works County of Santa Barbara

Legend

- Sites
- Lengths

Pine Canyon - A

PUBLIC WORKS ENTERPRISE GIS

N W E S

580 290 0 580

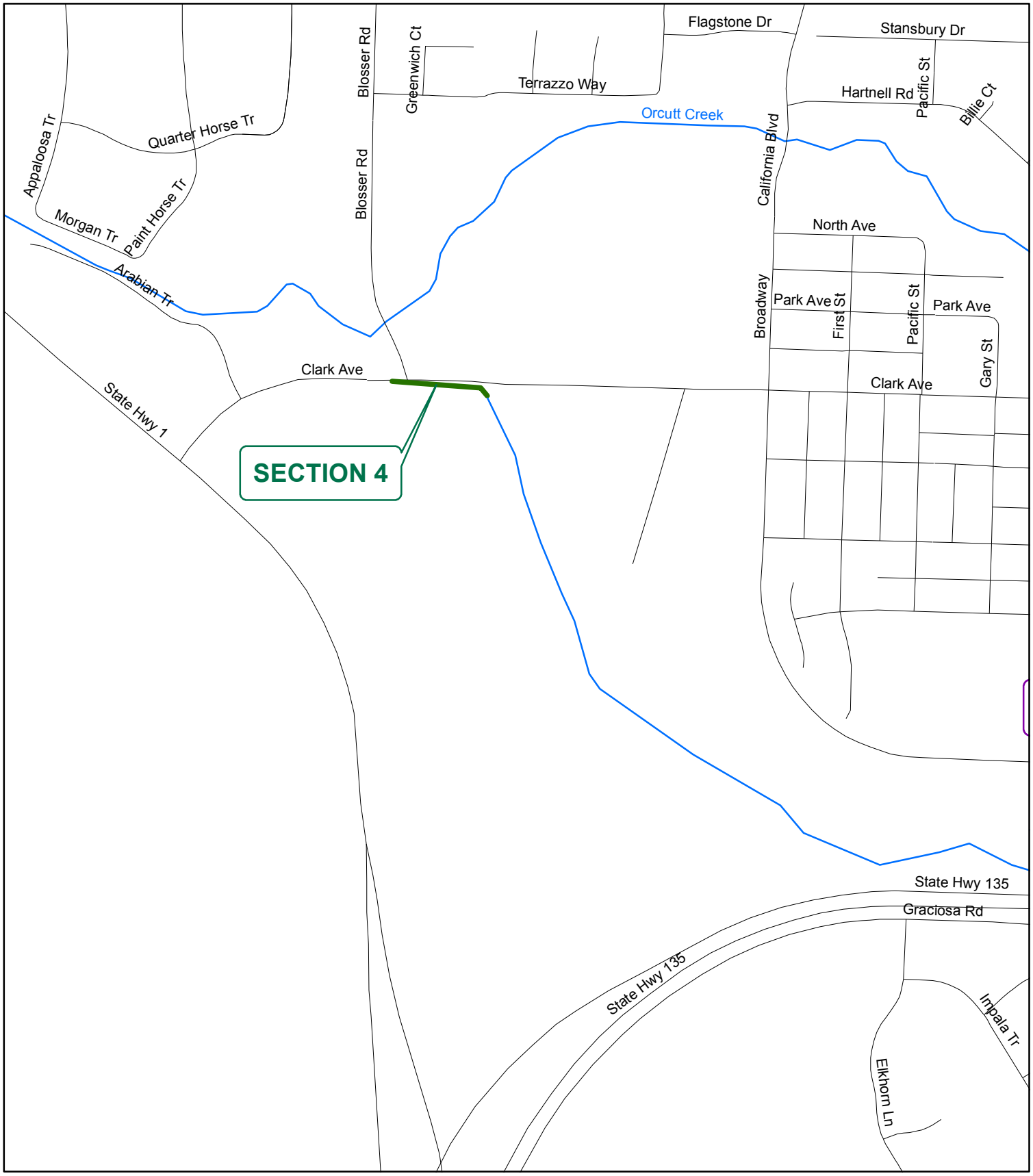
Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Legend

- Sites
- Lengths

Pine Canyon - B

PUBLIC WORKS ENTERPRISE GIS

N W E S

580 290 0 580

Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.

Pine Canyon Creek

Section 1

SAN ANTONIO CREEK- LOS ALAMOS
ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins approximately ½ mile upstream of Highway 101 and ends approximately four miles downstream of Bell St.

Setting:
Inspected on March 22, 2016

San Antonio Creek, located in northwestern Santa Barbara County is near the unincorporated area of Los Alamos. The area where maintenance will occur is an approximately 5 mile portion of San Antonio Creek. San Antonio Creek through the maintenance area is low gradient, with sand and gravel substrate, running through low density urban areas of Los Alamos and agricultural fields downstream.

The maintenance area was dry during the creekwalks, which is typical of this creek in March; the creek is usually dried out by mid-spring. Riparian vegetation is generally quite dense along the entire maintenance area, dominated by medium and large willow trees. The creek invert is littered with fallen limbs and debris, but very little herbaceous growth due to the dense overstory and limited light infiltration.

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.

Historically within San Antonio Creek, the District has implemented restoration at several locations, however some of the plantings have not been as successful as desired and therefore not counted towards mitigation. In other areas, the private property owners have not been willing to allow restoration along their creek banks. In 2006, however, the District was able to implement a large restoration site along the north bank of San Antonio Creek at Hamptons Farms. The 2009/2010 Annual Plan included two restoration areas as part of bank shaping and stabilization. Another site was established in 2011; the revegetation was washed away in late season flows but the bank protection remained in place, and was revegetated again in 2012.

San Antonio Creek-Los Alamos				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2002/2003	2,690	5,100	1,500	-1,190
2003/2004	1,925	4,000	0	-3,115
2004/2005	3,800	7,600	0	-6,915
2005/2006	0	7,000	0	-6,915
2006/2007	800	7,800	7,800	85
2007/2008	760	2,400	0	-675
2008/2009	350	4,670	0	-1,025
2009/2010	0	4,670	4,670	3,645
2010/2011	1,400	2,150	2150	4,395
2011/2012	0	500	1000	5,395
2012/2013	0	0	0	5,395
2013/2014	160	0	0	5,235
2014/2015	0	0	0	5,235
2015/2016	200	0	0	5,035
2016/2017	20	0	0	5,015

* This restoration site was mostly washed away in 2011 storms. It was replanted to re-establish the site with an additional 1000 ft^2.

Engineering Analysis:

Maintenance of San Antonio Creek requires downed vegetation, overhanging vegetation and debris removal to preserve flood flow conveyance and to protect adjacent properties. Obstructive vegetation consisting primarily of downed limbs and trees as well as limbs projecting into 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 aggravate bridge and culvert plugging.

Project Description:

Sections 1

This site has a fallen willow limb in the active channel in this section. 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. Work in this section has no impact to native vegetation.

Section 2

This site is under a grove of cottonwood trees. The cottonwood roots and seeds have created a thicket of sprouts within the floor of the creek channel. The District crew will brush the cottonwood sprouts within the active channel. Sprouts at the toe of the channel and along the bank will be left behind. The cut stems will be spot-sprayed with herbicide to inhibit regeneration. A follow-up spot-spray may be necessary the following spring and summer. This site requires repeat maintenance due to the dense mature cottonwood canopy overhead and the lack of sufficient flow for the past few years. Impacts have already been tabulated for this site.

Sections 3-6:
These areas have fallen willow trees, branches, and woody debris in the active channel in this section. A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation and debris will be cut up and hauled out of the creek or left on the upper banks depending on access. Work in this section has no impact to native vegetation.

Section 7:
This site has a dense thicket of poison oak encroaching across most of the channel. The crew will use pole saws and hand tools to cut back the poison oak within the active channel. The work area is 5 feet long and 4 feet wide. The project will result in 200 square feet of impact to native vegetation.

Section 8-11:
These areas have fallen willow trees, branches, and collections of woody debris in the active channel in this section. A crew using chainsaws and loppers will remove the obstructive vegetation from the active channel. The vegetation and debris will be cut up and hauled out of the creek or left on the upper banks depending on access. Work in this section has no impact to native vegetation.

Section 12:
This site has a large fallen oak tree in the floor of the channel. The woody debris will be cut up and hauled out of the creek or left on the upper banks depending on access. Work in this section has no impact to native vegetation.

Sections 13-27:
The sections represent downed trees and limbs within the active channel. The fallen material is hanging into the channel from either bank and/or completely separate from the canopy and lying freely in the center of the channel. The fallen woody material is typically arroyo willow or unidentified dead snags. 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. Work in these sections 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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C	H-1, B-2, W-2, W-4, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I	B-1, B-2, B-3, B-5, W-1, W-2,
Public Health EIR section 5.10	PH-A	W-2

*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 6 days to complete.

VASCULAR PLANT LIST
SAN ANTONIO CREEK - LOS ALAMOS

SCIENTIFIC NAME	COMMON NAME	ORIGIN
ACERACEAE		
Acer negundo	Box elder	N
AMARANTHACEAE		
Amaranthus albus	Tumbleweed	I
Amaranthus deflexus	Low Amaranth	I
ANACARDIACEAE		
Malosma laurina	Laurel Sumac	N
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Apium graveolens	Celery	I
Conium maculatum	Poison Hemlock	I
Foenicumum vulgare	Sweet Fennel	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Ambrosia psilostachya	Western Ragweed	I
Anthemis cotula	Mayweed	I
Artemisia biennis	Biennial Sagewort	
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis douglasii	Marsh Baccharis	N
Baccharis salicifolia	Mulefat	N
Baccharis pillaris	Coyote Bush	N
Carduus pysnocephalus	Italian thistle	I
Centaurea sostitalis	Barnaby's Thistle	I
Cirisium vulgare	Bull Thistle	I
Conyza canadensis	Horseweed	I
Cotula coronopifolia	Brass Buttons	I
Gnaphalium chilense	Cottonvatting	N
Isocoma venetus ssp. Vernoniodes	Coast Goldenbrush	N
Lactuca serriola	Prickly Lettuce	I
Picris ecioides	Ox Tongue	I
Senecio vulgare	Common Groundsel	I
Silybum marianum	Milk Thistle	I
Sonchus arvensis	Prickly Sow Thistle	I

Xanthium spinosium	Spiny Cocklebur	I
Xanthium strmarium	Cocklebur	I
BORAGINACEAE		
Heliotropium curassavicum var. occulatum	Heliotrope	N
Amsinckia intermedia	Fiddleneck	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Capsella bursa-pastoris	Shepherd's Purse	I
Cardaria draba	Hoary Cress	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
Sisymbrium altissimum	Tumbling Mustard	I
Sisymbrium irio	London Rocket	I
CARIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CARYOPHYLLACEAE		
Spergula arvensis	Spurrey	I
Spergularia sp.	Sand Spurrey	I
CHENOPODIACEAE		
Artiplex hastate	Hastate-Leaved -Saltbush	N
Artiplex serenana	Bractscale	N
Chenopodium album	Lamb's Quarters	I
Chenopodium macrospermum var. farinosum	Coast Goosefoot	I
Chenopodium murale	Nettle-Leaved -Goosefoot	I
Salsola iberica	Russian Thistle	I
CONVOLVULACEAE		
Convolvulus arvensis	Bindweed	I
Cuscuta claifornica	Dodder	N
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Cyperus esculentus	Yellow Nutgrass	N
Scirpus acutus	Common Tule	N
Scirpus californicus	California Bulrush	N
Scirpus pungens	Bulrush	N

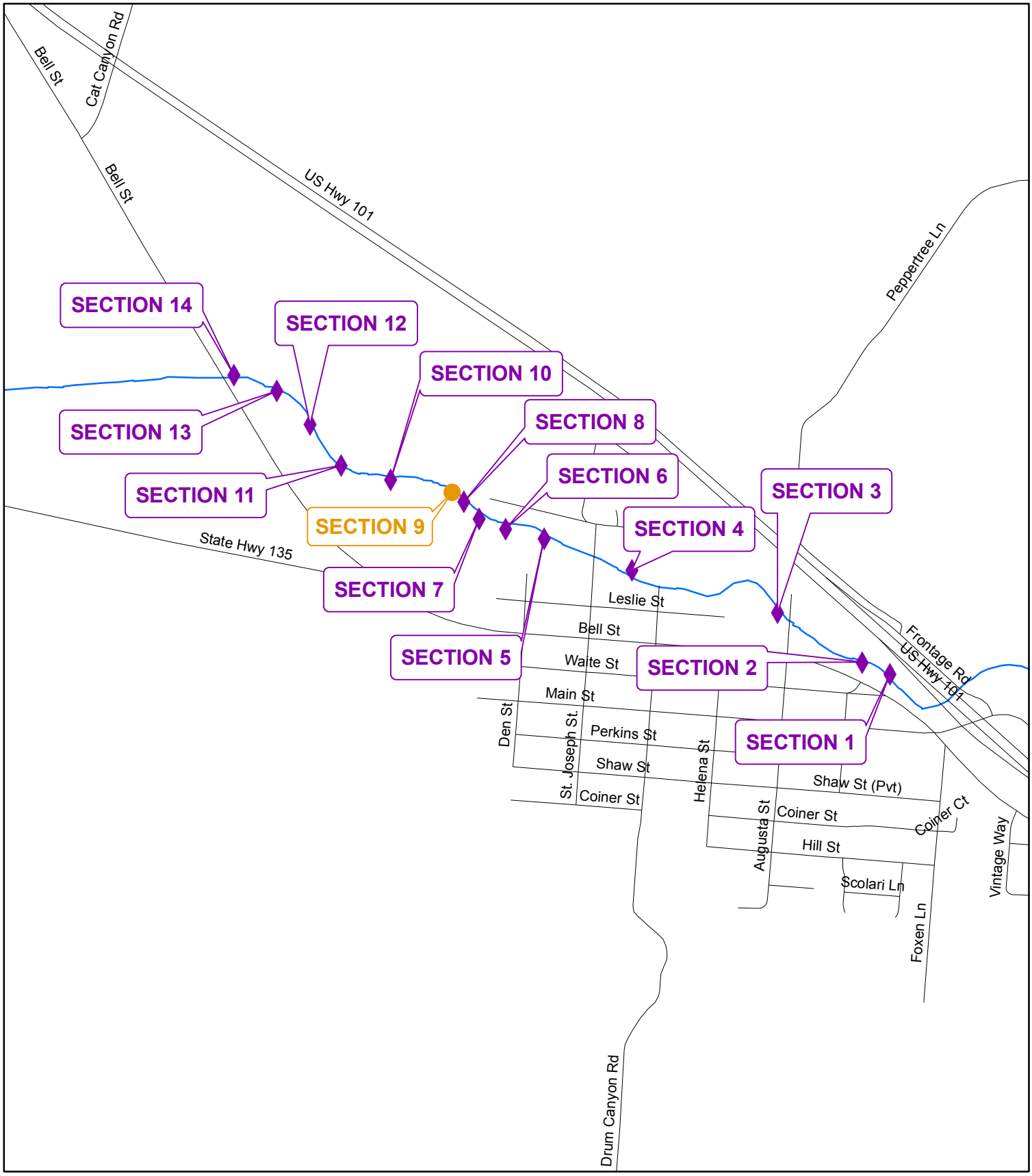
Scirpus robustus	Prairie Bulrush	N
EUPHORBIACEAE		
Eremocarpus setigerus	Turkey Mullein	N
FABACEAE		
Lotus purshianus var. purshianus	Spanish Clover	N
Lotus salsuginosus	Lotus	N
Lupius bicolor	Bicolor Lupin	N
Medicago polymorpha	Bur Clover	I
Metilotus albus	White Sweet Clover	I
Metilotus inducus	Yellow Sweet Clover	I
Vicia benghalensis	Vetch	I
FAGACEAAE		
Quercus agrifolia	Coast Live Oak	N
Quercus lobata	Valley Oak	N
FRANKENIACEAE		
Frankenia grandifolia	Alkali Heath	N
GROSSULARIACEAE		
Ribes divaricatum	Straggly Gooseberry	N
JUGLANDACEAE		
Juglans regia	English Walnut	I
JUNCACEAE		
Juncus bufonius	Toad Rush	N
Juncus effusus var. brunneus	Common Rush	N
Juncus texilis	Indian Rush	N
Juncus Xipihiodes	Iris-Leaved Juncus	N
LAMIACEAE		
Marrubium vulgare	Horehound	I
Stachys bullata	Wood Mint	N
LEMNACEAE		
Lemma sp.	Duckweed	N
MALVACEAE		
Malva prviflora	Cheeseweed	I
Sidalcea leprosa	Alkali Mallow	N

MYRTACEAE		
Eucalyptus globulus	Blue Gum	I
ONAGRACEAE		
Camissonia cheiranthifolia ssp. cheiranthifolia	Primose	N
Epilobium paniculatum	Willow-Herb	N
Epilobiumm ciliatum	Willow-Herb	N
PAPAVERACEAE		
Eschscholzia californica	California Poppy	N
PLANTANACEAE		
Platanus racemosa	Western Sycamore	N
PLUMBAGINACEAE		
Limonium sinatum	Statice	I
POACEAE		
Arundo donax	Giant Reed	I
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Cynodron dactylon	Bermuda Grass	I
Digitaria sanguinalis	Crab-Grass	I
Distichlis spicata	Saltgrass	I
Echinocgkia crysgakku	Barbyard Nukket	I
Elymus condensatus	Giant Rye	N
Hordeum glacum	Glausus Barley	I
Koeleria macrantha	June Grass	I
Leptochloa univeria	Sprangletop	I
Lolium perenne	Italian Ryegrass	I
Piptatherum miliaceum	Rice Grass	I
Phalaris stenoptera	Harding Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLEMONIACEAE		
Navarretia atractyloides	Navarretia	I
POLYGONACEAE		
Chorizanthe saticoides	Turkish Rugging	I
Polygonum arenastrum	Common Knotweed	I
Polygonum lapathiflium	Willow Smartweed	N
Polygonum punctatum	Dotted Smartweed	N
Rumex angiocarpus	Sheep Sorrel	I
Rumex crispus	Curly Dock	I
Rumex fueginus	Golden Dock	I

Rumex hymenosepalus	Wild Rhubarb	N
PORTULACEAE		
Portulaca oleracea	Purslane	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Rosa californica	Wild Rose	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus fremontii	Fremont Cottonwood	N
Populus balsamifera	Black Cottonwood	N
Salix exigua	Narrowleaf Willow	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SCROPHULARIACEAE		
Datura ferox	Chinese Thornapple	I
Datura meteloides	Jimson Weed	I
Diplacus longiflorus	Bush Monkeyflower	N
Mimulus guttatus	Marsh Monkey -Flower	N
Scrophularia californica	California Figwort	N
Veronica Americana	Speedwell	N
SOLANCEAE		
Nicotiana glauca	Tobacco Tree	I
Solananum douglasii	Douglas Nightshade	N
SPARGANIACEAE		
Sparganium euycarpum	Bur Reed	I
TAMARICACEAE		
Tamarix sp.	Tamarisk	I
TYPHACEAE		
Typha domingensis	Cattail	N
ULMACEAE		
Ulmus minor	Smoothleaved Elm	I

URTICACEAE		
Urtica holosericea	Giant Nettle	N
Urtica urens	Dwarf Nettle	N
VERBENACEAE		
Verbena lasiostachys	Verbena	N
VITACEAE		
Vitis sp.	Grape	I

*I = Introduced
N = Native



Department of Public Works County of Santa Barbara

Legend

- Sites
- Lengths
- Revegetation Sites

San Antonio - Los Alamos - A

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

1,200 600 0 Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
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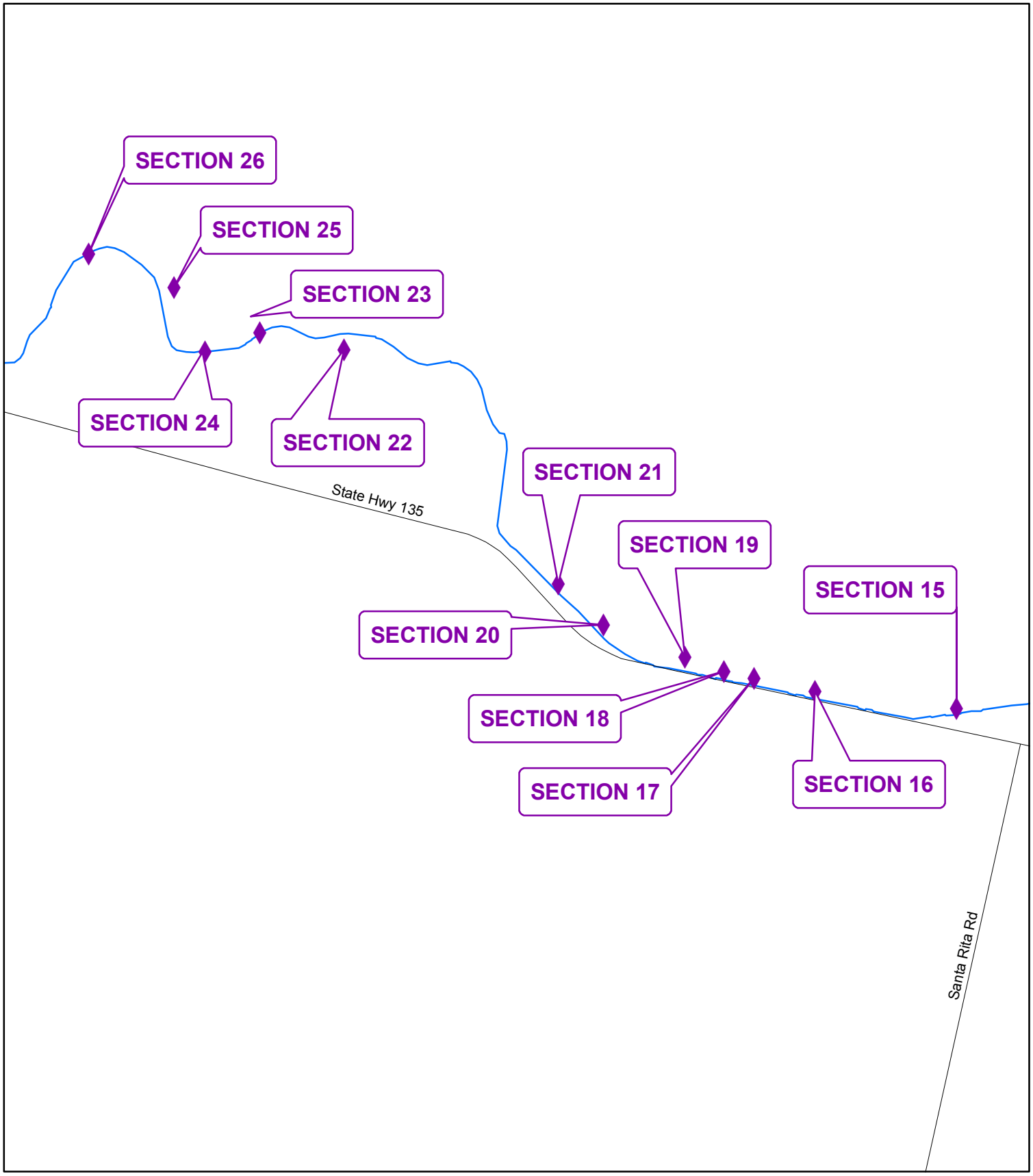


Department of Public Works County of Santa Barbara

Legend

Sites

Lengths

San Antonio - Los Alamos - B

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

830 415 0 830

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

San Antonio Creek- Los Alamos

Section 3

Section 12 (tree not cut by FC in this photo)

SANTA MARIA AIRPORT/ABEX CHANNELS
ROUTINE MAINTENANCE ADDENDUM
TO THE PROGRAM EIR FOR SANTA BARBARA
COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

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 March 17, 2016.

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				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	10,000	10,000	10,000	0
2005/2006	5,500	5,500	5,500	0
2006/2007	0	0	0	0
2007/2008	0	0	0	0
2008/2009	90	90	0	-90
2009/2010	0	1,600	1,600	1,510
2010/2011	0	0	0	1,510
2011/2012	0	0	0	0
2012/2013	1000	3000*	2650*	2910*
2013/2014	2600	1000	3400	6310
2014/2015	200	0	0	6110
2015/2016	0	0	0	6110
2016/2017	0	TBD	TBD	TBD

*Restoration on Airport Channel will be used to mitigate impacts on Airport Channel and Abex Channel which are adjacent channels with a confluence.

Maintenance-related impacts in Abex Channel were mitigated through a restoration site in 2004 and 2005.

Abex Channel				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	4,000	4,000	4,000	0
2005/2006	0	0	0	0
2006/2007	0	0	0	0
2007/2008	0	0	0	0
2008/2009	0	0	0	0
2009/2010	0	0	0	0
2010/2011	0	0	0	0
2011/2012	0	0	0	0
2012/2013	250	0	0	0
2013/2014	0	0	0	0
2014/2015	0	0	0	0
2015/2016	0	0	0	*

*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.

The Airport Channel is usually wetted year round. 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. No RLF were observed during biomonitoring for the 2009/2010 maintenance season, one RLF was relocated during 2011 maintenance. In 2013, two subadult RLF were detected at the weir at the downstream end of Airport Ditch

Similarly, RLF were observed in the Abex Channel in 2003 and 2004. No frogs were seen during the 2007/2008 maintenance activities or during a survey in March 2008 or during maintenance activities in the fall of 2009. However, 5 RLF were detected during biomonitoring in 2011. 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 Abex and Airport Ditch. Depending on weather in summer 2016, the entire work area may be 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. 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. Bank protection within Airport Channel will protect the Airport from damage as well.

Project Description:

Airport Channel

Section 1:
This site is near the confluence of Airport Ditch and Abex Ditch. The south slope of Airport Ditch is severely eroded, constricting the access road and guiding the channel away from the drainage culvert under the runway. To remedy this problem and guide the channel back into the culvert, the District will implement a bank-stabilization/repair project.

Using a Gradall or long excavator, the District will dig a footing in the sandy soil at the edge of the bank. Several large rocks will be placed in the footing, partially buried, and then soil material will be backfilled around the riprap. Accumulated sediment from the channel will be used to reinforce the bank. Additional soil may be imported from offsite sources.

The site is currently bare sediment and roadside weeds. The project will not result in impacts to native vegetation. The site will be seeded with a rapid-growing erosion control mix, including low-growing native species. The exact square footage of restoration area will be calculated after project completion.

Section 2:
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 or long excavator to move the existing cattails, root masses, and soil from the north edge of the channel to the south edge. The excavator will be stationed on the existing access road. The bucket will reach over to the cattails on the north side of the ditch, and scoop the vegetation and soil material from north to south. The material will be lightly pressed and compacted into the south bank to help armor the south bank.

This method will be continued downstream for approximately 200 feet, or until the south edge of the ditch no longer needs additional armoring from vegetation. The work is considered self-mitigating. The project area will be dry during maintenance.

Section 3:
The culvert under the golf course access road has accumulated sediment. Using a drag-sled attached to a small tractor, the District will pull sediment through the culvert towards the downstream end 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 4:
This section is a re-treatment for work performed in 2015. Downstream from the airport weir, the ditch flows into a pool and a dense, mature willow corridor. The weir pool periodically becomes colonized by bulrush, and the bulrush encroaches across the entire channel

This year, the District proposes light brushing and spot spray of the bulrush only along the center-line of the pool to allow a pathway for flowing water. Vegetation along the margins of the pool will not be treated. A strip of vegetation through the center of the pool (along the concrete weir structure) will be weed-whacked and spot-sprayed during the maintenance season. A followup spot-spray may be applied in the following late spring as needed. Spot-spray will be suspended during February/March/April for the RLF breeding season. Impacts at this area have been previously tabulated for mitigation.

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-D, H-E	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C, WQ-D	H-1, B-2, W-1, W-2, W-4, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-D	B-1, B-2, B-3, B-4
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-F, FAW-I	H-1, B-2, B-3, B-5, B-6, W-1, W-2,
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A, AQ-B	A-1, A-2
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1
Public Health and Safety EIR section 5.10	PHS-A	W-2

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

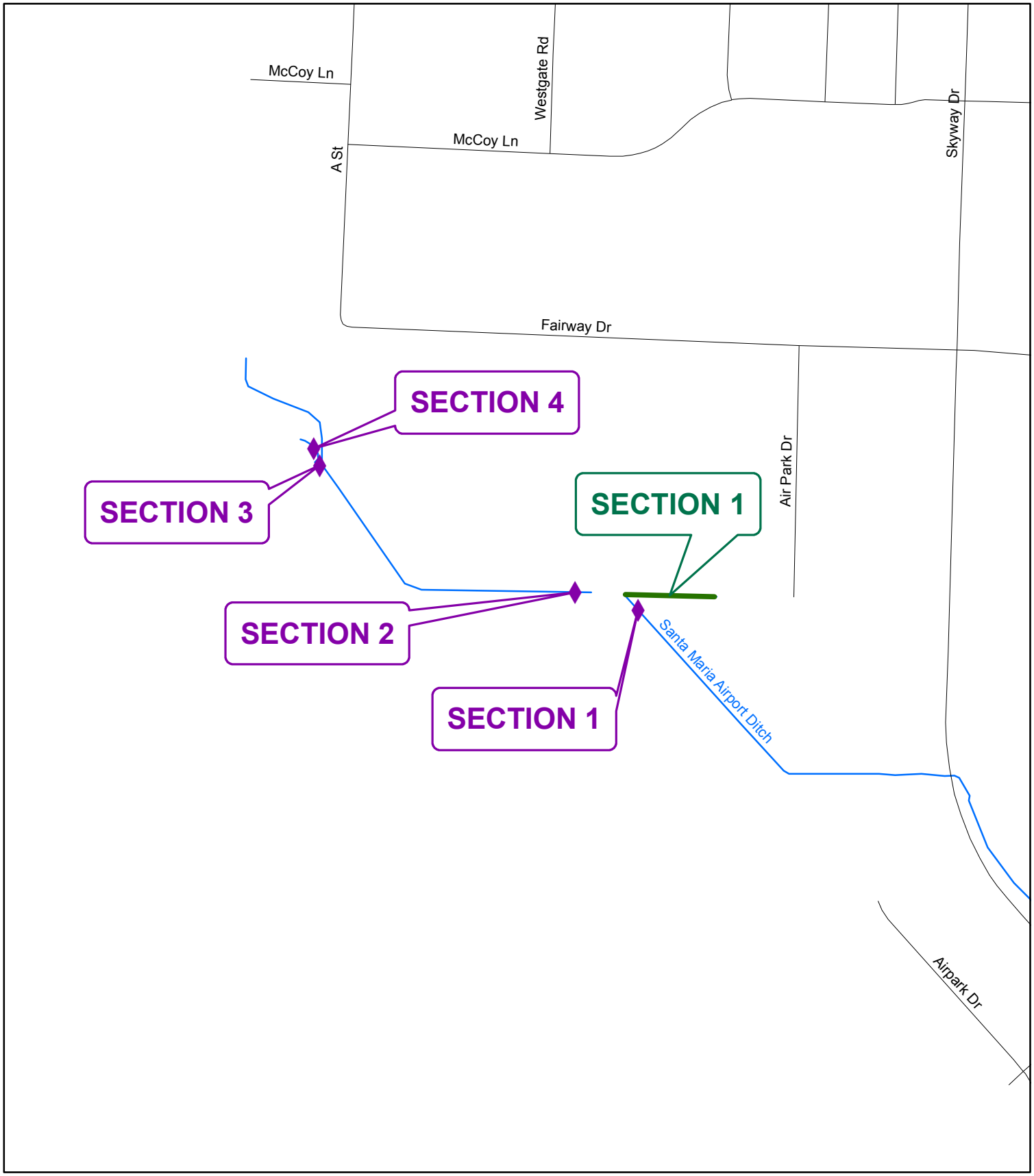
Project Specifics:
This project will take approximately 8 days to complete.

VASCULAR PLANT LIST
SANTA MARIA AIRPORT/ABEX CHANNELS

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
ANACARDIACEAE		
Schinus molle	Pepper Tree	I
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Carduus phonozephalus	Italian Thistle	I
Gnaphalium luteo-album	Weedy Everlasting	I
Picris echioides	Ox Tongue	I
Taraxcum officinale	Common Dandelion	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium	Watercress	I
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
Chenopodium murale	Nettle-Leaved -Goosefoot	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Cyperus esculentus	Yellow Nutgrass	I
Scirpus californicus	CA Bulrush	N
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Melilotus albus	White Sweet Clover	I
JUNCACEAE		
Juncus effusus var. brunneus	Common Rush	N
Juncus xiphioides	Iris-Leaved Juncus	N

LAMIACEAE		
Marrubium vulgare	Horebound	I
MYRTACEAE		
Eucalyptus	Eucalyptus	I
PAPAVERACEAE		
Eschscholia californica	California Poppy	N
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
Plantago major	Common Plantain	I
POACEAE		
Agrostis stolonifera	Redtop	I
Avena fatua	Wild Oats	I
Bromus rubens	Foxtail	I
Cortaderia acacamensis	Pampas Grass	I
Lolium perenne	Italian Rye	I
Oryzopsis miliacea	Rice Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
SALICACEAE		
Salix lasiolepis	Arroyo Willow	N
SOLANACEAE		
Nicotiana glauca	Tree Tobacco	I
TROPAELACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N

* I - Introduced
N - Native



Department of Public Works County of Santa Barbara

Legend

Sites

Lengths

Santa Maria Airport & ABEX Channels

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

550 275 0 550

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Santa Maria Airport/Abex Channels

Airport Section 2

Abex Section 1

SANTA MARIA RIVER ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

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, 2016.

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				
Annual Plan Year	New Temporal Impacts to Native Vegetation (acres)	Proposed Restoration (acres)	Restoration Implemented (acres)	Surplus Restoration (acres)
2003/2004*	0	~ 10 acres	*	~ 1.5 acres
2006/2007	1.2	0	0	0.3
2007/2008	12.65	11.15	13.5	1.15
2008/2009	0.6	0	0.6	1.15
2009/2010	0	0	0	1.15
2010/2011**	Annual Plan Cert……0 34210WQ17 Cert ….72,150ft^2, 1.7ac	0 2.3 acre	0 0	1.15 -1.7
2011/2012	Annual Plan Cert……800 ft^2 34210WQ17 Cert …..N/A	0 0	0 0	1.14 -1.7
2012/2013	Annual Plan Cert……325 ft^2 34210WQ17 Cert …..N/A	0 0	0 0	1.14 -1.7
2013/2014	Annual Plan Cert……100 ft^2 34210wq17 Cert…….N/A	0	0 ~1.7ac	1.14ac 0
2014/2015	Annual Plan Cert……1800 ft^2 (.04ac) 34210wq17 Cert…….N/A	1ac	0 0.3ac	1.1ac 0.3ac
2015/2016	Annual Plan Cert……0 34210wq17 Cert…….N/A	0	0 0	1.1ac 0.3ac
2016/2017	0			

*Included in the 2003/2004 Annual Routine Maintenance Plan was the Santa Maria River Mitigation Bank. This effort was not as successful as was hoped and although large areas were planted, the District did not gain large areas of useable acreage for mitigation.

**See the explanation of impacts and mitigation of scrub habitat associated with pilot channel construction below.

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

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. Long-term mitigation/restoration strategies are still under development, but for the 2010/2011 season an agreement was reached in which the District would mitigate by performing 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.

At the Highway 1 overpass and Railroad overpass, near the unincorporated community of Guadalupe, the District has historically maintained two pilot channels. The two pilot channels serve to capture low-flow and guide floodwaters through the River near the center of the wide channel, keeping erosive forces away from bridge abutments and the base of the levee. Without pilot channels, the River's flow may tend to meander north and south and could eventually reach sensitive infrastructure. The two pilot channels under the bridges have been maintained for several years. Typical maintenance does not require earthwork or grading, only the woody sprouts that emerge during the dry season are trimmed and/or spot sprayed to maintain a clear path for flow through the pilot channel. For the past three to four years, this area of the River has had little to no scouring flow, and the dry sediment allows more woody sprouts to colonize the site, threatening the structure and integrity of the pilot channels.

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 section is 4.8 miles along the north levee of the Santa Maria River. The levee provides critical flood protection for property adjacent to the River. The Army Corps of Engineers Levee management policies (ETL 1110-2-583) requires vegetation management along the levee to protect and preserve the levee structure and function. Management requirements include a 15-foot zone along the base of the levee to be maintained free of vegetation, other than grasses, weeds, and low ground cover.

This Section has been inspected by the District and the Army Corps of Engineers; the Army Corps has deemed it necessary to perform vegetation removal to re-establish the 15-foot management zone in accordance with ETL 1110-2-583. The section is mostly vegetated with coyote bush, sandbar willow and mulefat. There are also areas of bare sand, low weeds and grasses. Over the past several years with very low flow in the River channel, vegetation has emerged within the River and near the levee. The District has generally tolerated encroaching vegetation on the floor of the River, while brushing and removing vegetation from the actual levee structure. The level of vegetation has presently become too dense to allow further encroachment without violation of Army Corps requirements.

Using a combination of methods along the Section, the vegetation management zone will be treated. Methods will include spot-spray with herbicide and pre-emergent treatment, brushing with chain saws and hand tools, mowing, and disking with a small tractor. The entire work area is dry. The mower will be used in areas with low, mostly non-woody vegetation. Where denser woody shrubs exist, brushing will be required. Disking will be implemented in those areas with loose sandy soil and only intermittent patches of vegetation. Spot-spray and pre-emergent treatment will be used to control the regrowth of vegetation. Once vegetation is removed, other than grasses, weeds, and low ground cover, the 15'-wide area will be maintained vegetation free.

From Bonita School Road, upstream approximately 2.2 miles, the 15'-wide area is well vegetated. Vegetation removal will result in approximately 4 acres of vegetation removal, mainly of mulefat, coyote bush, sandbar willow, and an occasional small arroyo willow. The upstream-most 1 mile of the north levee is less densely vegetated and vegetation removal will result in approximately 1.3 acres of vegetation removal. From Bonita School Rd, downstream approximately 1.6 miles, vegetation is less dense overall and more sporadic with areas devoid of vegetation along the levee. Vegetation removal along this 1.6 mile stretch will result in approximately 2.3 acres of vegetation removal, again, mainly of mulefat and coyote bush. Total vegetation removal will be approximately 7.5 acres. The Army Corps of Engineers is requiring the permanent removal of this vegetation. The District allows vegetation to colonize the rest of the Santa Maria River between the two levees and as such, the removal of the vegetation along the base of the levee is mitigated as described above in the Revegetation Section.

The proposed maintenance will bring the north levee into compliance with the Army Corps of Engineers' requirements.

Section 2

Section 2 involves the previously established pilot channels at the Railroad crossing and Highway 1 bridge. Pilot channels were established in the early 2000s to address channel constriction at this location near the town of Guadalupe. The pilot channels allow flowing water to drain under the Railroad bridge at a safe location, central in the channel, rather than eroding toward the levee or north bank. The pilot channel continues downstream and splits into two channels at the Highway 1 bridge, also to allow drainage at optimal locations within the channel. The pilot channels also allow vegetation to remain and persist at the north and south borders of the river channel. Once established, the pilot channels need periodic maintenance to prevent colonization and succession of a woody thicket.

The last three seasons have been incredibly dry and no scouring flow occurred in the River to perpetuate the pilot channels. Weeds and willow sprouts are colonizing the channels. The District will spot spray the woody growth and weedy thickets within the pilot channels only. Low, sparse, and herbaceous species will not be sprayed, only denser patches that threaten to form thickets will be treated.

Vegetation in between the pilot channels will not be treated and will be allowed to persist. If dense weeds re-colonize the pilot channels in the fall, a re-treatment may be needed in the spring or summer.

The treatment area is mostly non-natives (wild raddish, hemlock, mustard, white-top, ripgut brome) with occasional sprouts of arroyo willow, mulefat and coyotebrush. Native cover is less than 5% currently, but the weeds and native species can rapidly form dense thickets if not maintained. The total area of the pilot channels is approximately 39,000 square feet, of which 4-5 % is native cover. The work area was previously 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.

Resource	Impacts	Mitigation Measures*
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-D, H-E	H-1, H-2, H-3, H-8
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-C, WQ-D	H-1, B-2, W-1, W-4,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-D	B-1, B-2, B-3, B-6
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-E, FAW-I	H-1, B-1, B-2, B-3, B-5, B-6, W-2,
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A, AQ-B	A-1, A-2
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1

*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.

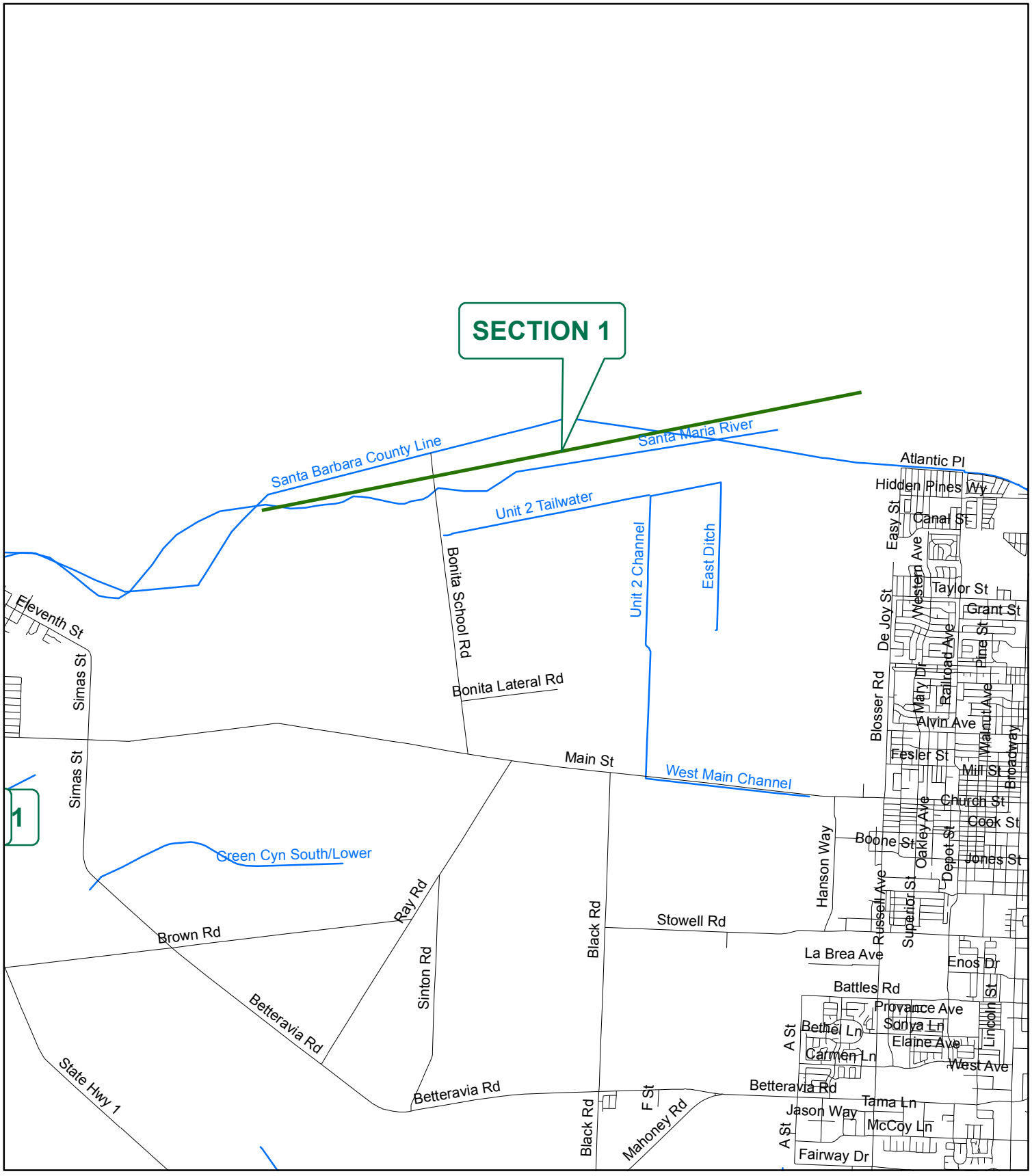
SANTA MARIA RIVER
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
ANACARDIACEA		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Artemiasia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis douglasii	Marsh Baccharis	N
Baccharis pilularis	Coyotebrush	N
Cotula coronopifolia	Brass Buttons	I
Gnaphalium luteo-album	Weedy Everlasting	I
Picris echioides	Ox Tongue	I
Silybum marianum	Milk Thistle	I
Taraxcum officinale	Common Dandelion	I
Senecio blochmaniae	Dune ragwort	N
Xanthium strumarium	Cocklebur	N
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium-aquaticum	Watercress	I
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
Chenopodium berlandieri	Lamb’s Quarters	N
CONVOLVULACEAE		
Convolvulus althaeoides	Garden Morning Glory	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Cyperus eragrostis	Sedge	N

CYPERACEAE		
Scirpus americanus	Three square	N
Scirpus californicus	California Bulrush	N
EQUISATACEAE		
Equisetum telmateia	Giant Horsetail	N
EUPHORBIACEAE		
Eremocarpus setigerus	Turkey Mullein	N
Ricinus communis	Castor Bean	I
FABACEAE		
Lupinus arborus	Lupine	N
Melilotus albus	White Sweet Clover	I
Melilotus indicus	Yellow Sweet Clover	I
Vicia benghalensis	Vetch	N
GROSSULARIACEAE		
Ribes amarum	Bitter Gooseberry	N
LAMIACEAE		
Marrubium vulgare	Horehound	I
Mentha xpiperita	Peppermint	I
MALVACEAE		
Malva parviflora	Cheeseweed	I
ONAGRACEAE		
Epilobium ciliatum	Willow-Herb	N
Camissonia cheiranthifolia	Beach Evening-primrose	N
PAPAVERACEAE		
Argemone munita	Prickly Poppy	N
PLANTAGINACEAE		
Plantago major	Common Plantain	I
POACEAE		
Avena fatua	Wild Oats	I
Pennisetum calnestinum	Kikuyu Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Rumex crispus	Curly Dock	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I

ROSACEAE		
Rosa californica	Wild Rose	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus fremontii	Fremont Cottonwood	N
Salix lasiolepis	Arroyo Willow	N
Salix exigua	Sandbar Willow	N
SCROPHULARIACEAE		
Mimulus guttatus	Marsh Monkey Flower	N
Minmulus guttatus	Monkey Flower	N
Veronica angallis-aquatica	Speedwell	N
SOLANCEAE		
Nicotiana glauca	Tobacco Tree	I
URTICACEAE		
Urtica holosericea	Giant Nettle	N
VERBENACEAE		
Verbena lasiostachys	Verbena	N

* I = Introduced
N = Native



Department of Public Works County of Santa Barbara

Santa Maria River - A

Legend

Lengths

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

4,000 2,000 0 4,000

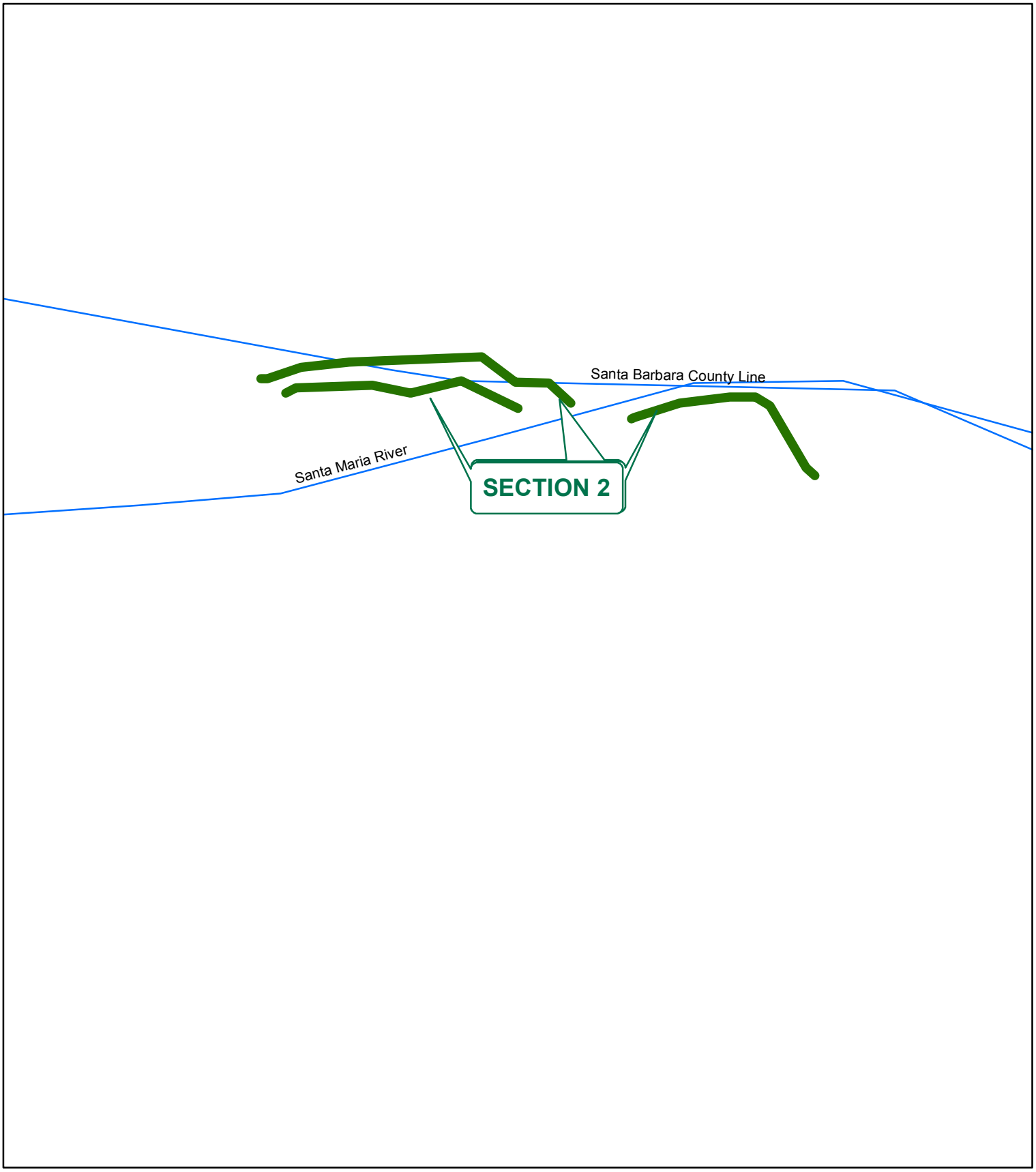
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Santa Maria River - B

Department of Public Works County of Santa Barbara

Legend

Lengths

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

310 155 0 310

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Santa Maira River

Section 1

Section 1

SANTA YNEZ RIVER
ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:

The proposed maintenance within the Santa Ynez River begins approximately 2,000' downstream of the Lompoc Wastewater Treatment Plant (WWTP) and continues to approximately 1,000' feet downstream of the Floradale Bridge, a complete distance of .6 miles. This same area was maintained during the 2011/2012 Annual Routine Maintenance Season and since then, willows have grown back.

Setting:

Inspected on May 5, 2016.

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 project length stretches from the Floradale Bridge approximately 2500' downstream. The California Natural Diversity Database (CNDDB) shows historical observations of steelhead trout and red legged frog near the project location. 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, and 2015. 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 are expected to be present in standing water during maintenance operations. Several large tadpoles (either red-legged frog or bullfrog) were detected in the area of project reach in 2013 and 2014. 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:

Obstructive vegetation in this portion of the Santa Ynez River was last cut during the 2011/2012 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.

During the summer months, flows within the Santa Ynez River are greatly reduced with flows drying up upstream of the Robinson Street Bridge. Flows within the lower Lompoc Valley outside of the winter rains 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.

Section 1:

At the starting point, approximately 2,000 feet downstream from the Lompoc Wastewater Treatment Plant, and continuing 1,500 feet downstream to Floradale Bridge, the channel (which currently averages 50'-wide) will be widened to 100'-wide by removing willows using chainsaws. The willows will be cut into 4'-5' lengths and cast aside outside of the wetted channel. This removal will result in approximately 1.6 acres of temporal impacts to native vegetation.

Section 2:

Section 2 begins just downstream of Floradale Bridge and is approximately 1,000 feet long and within this section islands or benches of willows have formed within the flow area of the channel that are blocking flows and creating areas for debris plugs to form. The obstructive vegetation will be cut into 4'-5' lengths using chain saws and cast aside outside of the wetted channel. This removal will result in approximately .4 acres of temporal 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.

Mitigation Measures:

Mitigation measures are taken from the Section 6.0 Environmental Setting, Impacts and Mitigations-Santa Ynez River Program of the 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.

Resource	Impacts	Mitigation Measures*
Hydrology EIR sections 6.1.2, 6.1.3	SY-H-A	None required
Water Quality EIR sections 6.1.2, 6.1.3	SY-WQ-A, SY-WQ-B,	SY-H-1
Wetlands, Riparian Habitat, and Rare Plants EIR sections 6.2.2, 6.2.3	SY-WRR-A, SY-WRR-B, SY-WRR-C, SY-WRR-D	SY-B-1, SY-B-2, SY-B-3, SY-B-4, SY-B-5, SY-B-6, SY-B-7
Fish, Aquatic Species, and Wildlife EIR sections 6.3.2, 6.3.3	SY-FAW-A, SY-FAW-B, SY-FAW-C, SY-FAW-D	SY-H-1, SY-B-2, SY-B-5, SY-B-7, SY-B-8, SY-B-9
Air Quality EIR sections 6.4.2, 6.4.3	SY-AQ-A, AY-AQ-B	SY-A-1
Noise EIR sections 6.5.2	SY-N-A	None required
Visual EIR sections 6.7.2, 6.7.3	SY-V-A	None required

*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.

Table 3

Santa Ynez River - West of Lompoc

Plant Species Inventory

Species	Habit[1]	Status[2]
Agrostis exarata **Trin.** "Spike bentgrass"	PG	N
Ambrosia acanthicarpa Hook. "Sand-bur"	AH	N
Ambrosia psilostachya DC. "Western ragweed"	PH	N
Amsinckia intermedia F. & M. "Fiddleneck"	AH	N
Amsinckia spectabilis F. & M. var. ***microcarpa*** (Greene) Jeps. & Hoov. "Seaside Amsinckia"	AH	N
Anemopsis californica Hook. "Yerba mansa"	PH	N
Apium graveolens L. "Celery"	PH	I
Artemisia californica Less. "California sagebrush"	S	N
Artemisia douglasiana Bess. in Hook. "Mugwort"	PH	N
Artemisia dracunculus L. "Tarragon"	PH	N
Astragalus sp. "Locoweed"	PH	N

(continued)

Table 3
(continued)
Santa Ynez River - West of Lompoc
Plant Species Inventory

Species	Habit[1]	Status[2]
Avena barbata Brot. "Slender wild oat"	AG	I
Avena fatua L. "Wild oat"	AG	I
Baccharis douglasii DC. "Douglas' Baccharis"	PH	N
Baccharis glutinosa Pers. "Mule fat"	S	N
Baccharis pilularis DC. ssp. ***consanguinea*** (DC.) C. B. Wolf. "Coyote brush"	S	N
Brassica geniculata (Desf.) J. Ball. "Mediterranean mustard"	BH	I
Brassica nigra (L.) Koch. "Black mustard"	AH	I
Bromus diandrus Roth. "Ripgut brome"	AG	I
Bromus mollis L. "Soft chess"	AG	I
Bromus rubens L. "Red brome"	AG	I
Bromus willdenovii Kunth. "Rescue grass"	AG	I
Calandrinia ciliata (R. & P.) DC. var. ***menziesii*** (Hook.) Macbr. "Red maids"	AH	N
Camissonia micrantha (Hornem. ex Spreng.) Raven. "Small primrose"	AH	N

(continued)

Table 3
(continued)
Santa Ynez River - West of Lompoc
Plant Species Inventory

Species	Habit[1]	Status[2]
Camissonia strigulosa (Fisch. & Meyer) Raven. "Contorted primrose"	AH	N
Cardaria draba (L.) Desv. "Hoary cress"	PH	I
Carduus pycnocephalus L. "Italian thistle"	AH	I
Centaurea melitensis L. "Tocalote"	AH	I
Claytonia perfoliata Donn. "Miner's lettuce"	AH	N
Clematis ligusticifolia Nutt. in T. & G. "Virgin's bower"	V	N
Conium maculatum L. "Poison hemlock"	BH	I
Cortaderia atacamensis (Phil.) Pilger. "Pampas grass"	PG	I
Cotula coronopifolia L. "Brass buttons"	PH	I
Cryptantha sp. "Popcorn flower"	AH	N
Cyperus eragrostis Lam. "Tall Cyperus"	PH	N
Descurainia pinnata (Walt.) Britton ssp. ***menziesii*** (DC.) Detl. "Tansy mustard"	AH	N
Dipsacus sativus (L.) Honckeny. "Teasel"	BH	I
Ehrharta calycina Sm. "Veldt grass"	PG	I

(continued)

Table 3
(continued)
Santa Ynez River - West of Lompoc
Plant Species Inventory

Species	Habit[1]	Status[2]
Eleocharis macrostachya Britton in Small. "Common spikerush"	PH	N
Epilobium adenocaulon Hausskn. "Willow-herb"	PH	N
Equisetum telmateia Ehrh. var. ***braunii*** Milde. "Giant horsetail"	PH	N
Eremocarpus setigerus (Hook.) Benth. "Doveweed"	AH	N
Eriogonum fasciculatum Benth. "California buckwheat"	S	N
Erodium cicutarium L. "Filaree"	AH; I	
Eucrypta chrysanthemifolia (Benth.) Greene. "Common Eucrypta"	AH	N
Euphorbia peplus L. "Petty spurge"	AH	I
Festuca arundinacea Schreb. "Alta fescue"	PG	I
Festuca megalura Nutt. "Foxtail fescue"	AG	N
Foeniculum vulgare Mill. "Sweet fennel"	PH	I
Galium aparine L. "Bedstraw"	AH	I
Geranium dissectum L. "Cranesbill"	AH	I
Gnaphalium luteo-album L. "Cudweed"	AH	I

(continued)

Table 3
(continued)
Santa Ynez River - West of Lompoc
Plant Species Inventory

Species	Habit[1]	Status[2]
Gnaphalium sp. "Everlasting"	AH or BH	N
Haplopappus ericoides (Less.) H. & A. "Mock heather"	S	N
Hedypnois cretica (L.) Willd. "Crete Hedypnois"	AH	I
Helenium puberulum DC. "Sneezeweed"	BH	N
Heliotropium curassavicum L. var. ***oculatum*** (Heller) Jtn. "Heliotrope"	PH	N
Heterotheca grandiflora Nutt. "Telegraph weed"	BH	N
Hordeum leporinum Link. "Foxtail"	AG	I
Hypochoeris glabra L. "Cat's ear"	AH	I
Juncus bufonius L. "Toad rush"	AH	N
Juncus effusus L. var. ***brunneus*** Engelm. "Bog rush"	PH	N
Juncus patens E. Mey. "Wire grass"	PH	N
Juncus xiphioides E. Mey. "Iris-leaved rush"	PH	N
Lemna sp. "Duckweed"	AH	N
Lupinus latifolius J. G. Agardh. "Canyon lupine"	PH	N

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

Species	Habit[1]	Status[2]
Lupinus succulentus Dougl. ex Koch. "Succulent lupine"	AH	N
Marah macrocarpus (Greene) Greene. "Wild cucumber"	PH	N
Marrubium vulgare L. "Horehound"	PH	I
Medicago polymorpha L. "Burr clover"	AH	I
Melilotus albus Desr. "Sweet clover"	AH	I
Melilotus indicus L. "Yellow sweet clover"	AH	I
Mimulus guttatus Fisch. ex DC. "Monkey flower"	PH	N
Nicotiana glauca Grah. "Tree tobacco"	S	I
Picris echioides L. "Ox tongue"	AH	I
Phalaris minor Retz. "Mediterranean canary grass"	AG	I
Plantago lanceolata L. "English plantain"	PH	I
Plantago major L. "Common plantain"	PH	I
Polygonum lapathifolium L. "Willow weed"	AH	I

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

Species	Habit[1]	Status[2]
Polypogon monspeliensis (L.) Desf. "Beard grass"	AG	I
Populus trichocarpa T. & G. "Black cottonwood"	T	N
Psoralea macrostachya DC. "Leather root"	S	N
Raphanus sativus L. "Wild radish"	AH	I
Ribes sp. "Gooseberry"	S; N	
Rorippa nasturtium-aquaticum (L.) Schinz & Thell. "Water-cress"	PH	I
Rorippa palustris (L.) Besser ssp. ***occidentalis*** (Wats. in Gray) Abrams "Marsh cress"	AH	N
Rubus ursinus C. & S. "California blackberry"	S	N
Rumex crispus L. "Curly dock"	PH	I
Salix hindsiana Benth. "Sandbar willow"	S	N
Salix laevigata Bebb. "Red willow"	T	N
Salix lasiolepis Benth. "Arroyo willow"	T	N
Sambucus mexicana Presl. "Mexican elderberry"	T	N

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

Species	Habit[1]	Status[2]
Satureja douglasii (Benth.) Briq. "Yerba buena"	PH	N
Schismus barbatus (L.) Thell.	AG	I
Scirpus californicus (C. A. Mey.) Steudel. "California bulrush"	PH	N
Scirpus microcarpus Presl. "Small-fruited bulrush"	PH	N
Scirpus robustus Pursh. "Prairie bulrush"	PH	N
Scrophularia atrata Penn. "Black-flowered figwort"	PH	N*
Scrophularia californica C. & S. var. ***floribunda*** Greene. "California figwort"	PH	N
Silybum marianum (L.) Gaertn. "Milk thistle"	AH	I
Sonchus oleraceus L. "Sow thistle"	AH	I
Sparganium angustifolium Michx. "Bur-reed"	PH	N
Stachys bullata Benth. "Hedge-nettle"	PH	N
Toxicodendron diversilobum (T. & G.) Greene. "Poison oak"	S	N
Trifolium sp. "Clover"	AH	

(continued)

Table 3
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Santa Ynez River - West of Lompoc
Plant Species Inventory

Species	Habit[1]	Status[2]
Typha domingensis Pers. "Cattail"	PH	N
Urtica holosericea Nutt. "Giant creek nettle"	PH	N
Urtica urens L. "Dwarf nettle"	AH	I
Verbena lasiostachys Link. "Verbena"	PH	N
Veronica anagallis-aquatica L. "Great water speedwell"	PH	I
Vicia sativa L. "Spring vetch"	AH	I
Xanthium strumarium L. var. ***canadense*** (Mill.) T. & G. "Cocklebur"	AH	I

Habit abbreviations:
AH = Annual herb; BH = Biennial herb; PH = Perennial herb; AG = Annual grass; PG = Perennial grass; V = Vine; S = Shrub; T = Tree

Native/introduced species:
N = Native; I = Introduced

*California Native Plant Society List 4 species

Sources: Munz, P. A. 1974. A Flora of Southern California. Univ. of Calif. Press,

Department of Public Works County of Santa Barbara

Santa Ynez River

Legend

Lengths

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

420 210 0 420

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

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 3-24-2016

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. Unit II

tail water suffered from erosion and bank failure at several locations during storms in December 2010 and January/March 2011. Some emergency protective measures were deployed, but erosion damage remained into spring 2011.

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.

Unit 2, Unit 2 Tailwater, West Main, and East Channel				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	0	0	0	0
2005/2006	415	415	415	0
2006/2007	0	0	0	0
2007/2008	50	50	50	0
2008/2009	0	0	0	0
2011/2012	150	500	0	-150
2012/2013	300	0	0	-450
2013/2014	0	0	0	-450
2014/2015	0	0	0	-450
2015/2016	0	0	0	-450

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 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 every year. As adjacent agricultural practices have switched from flood-irrigation to drip irrigation, the amount of tail water has dropped and the number of red-legged frogs is lower during these periods.

During the maintenance seasons since 2006, the District has monitored for red legged frogs during equipment operation in these four drainages. The number of RLF detected varies from year to year, depending on the area surveyed and the amount of water persisting in the ditches during summer months. Over the past few years, some of the ag operations have converted from flood-irrigation to drip-irrigation, resulting in less runoff and less standing water in the ditches. RLF numbers have subsequently dropped.

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 are present and 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.

In 2013 through 2015, a burrowing owl was 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. Active burrows were detected in 2015. The channel has many rodents and existing burrows available that may be attractive to burrowing owls.

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. Additional focused surveys are underway.

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.

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, 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.

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.

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:

Unit 2 Channel has a sharp bend and the District is engaged in a multi-phased project to re-align this section of the channel to create a softer bend in the channel and increase channel capacity.

Annual Plan work involves excavating the upstream (south) section of Unit 2 channel along the west bank to widen the channel and reduce the meander of the ditch as it approaches the sharp bend. Using a Gradall excavator stationed along the access road that runs along the channel, the District crew will remove soil material from the west bank to widen the channel. Channel widening ranges from 1'-5' in width along 4,700 linear feet of the channel from West Main Street to the site of the sharp bend. Approximately 5,000 cubic yards of material will be removed along the west bank and hauled to an upland disposal site away from the drainage.

This project area also includes 5 existing concrete check structures that are partially buried in each bank. As part of the realignment, the District crew will excavate the west edge of the check structures and sawcut the newly exposed west edge of the concrete structures; then approximately 3 cubic yards of ½ ton rock rip rap will be placed on the west bank of each structure to tie the existing structures into the newly graded slope.

At the downstream (north) end of the District's project area, the widened west bank will be tapered back into the existing bank near the sharp bend.

Depending upon background turbidity at the time of construction, flowing water (agriculture tailwater) may be diverted around the work area. A temporary diversion dam would be constructed over the concrete floor of the channel near West Main Street. An electric pump will pull water from the concrete-lined culvert into a settling tank, from which a drain pipe will run downstream to release water outside of the work area. The downstream end of the work area will have a turbidity barrier and a coffer dam to prevent water from percolating back into the work site.

All work is proposed on Flood Control Property or within Flood Control right-of-way. The work will be performed during the late summer and fall, outside of riparian bird season and burrowing owl nesting season. A biomonitor will be on site to flush and relocate RLF that may be exposed during the excavation. The work site is bare sediment, bare rock, weedy grasses, hemlock, mustards, and watercress. No native vegetation will be impacted.

Following construction, the slopes will be available for recolonization with native and non-native species. Impacts will be minor and temporary.

Section 3
This site is on the east bank of Unit 2 Channel. The slopes of Unit 2 have frequent gopher holes and ground squirrel burrows. At this site, extensive burrows combined with runoff from recent rains have created a large erosion hole and collapsing bank. The bank is in danger of failing while the access road is nearly impassable.

To correct this problem, the District crew will use a Gradall excavator stations on the top of the adjacent roadway. The eroded hole will be scraped and cleared of loose material to prepare the surface for filling. Damp sediment will be removed from the lower channel (excess material from the project at Section 2), and the sediment will be compacted into the scour hole. The hole will be filled, compacted, and groomed. The surface will be seeded with a rapid-growing erosion control seed mix.

The work site is bare sediment and weedy growth. The project will not result in impacts to native vegetation.

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.

Periodic spot spraying may be necessary 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 this area using a Gradall excavator stationed along the existing access road. The crew will excavate a trench 4 feet wide, approximately 2 feet deep, and 600 feet long. The material will be placed behind the machine on the access road. After the material has dried for 1-5 days, the sediment will be graded and groomed over the existing dirt road.

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 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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-D, H-E	H-1, H-2, H-3
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C, WQ-D	H-1, B-2, W-1, W-2, W-3, W-4, W-8

Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-D, WRR-F	B-1, B-2, B-3, B-4
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-E, FAW-F, FAW-I	H-1, B-1, B-2, B-3, B-5, B-6, W-1, W-2, W-3
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A, AQ-B	A-1, A-2
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1
Public Health and Safety EIR section 5.10	PHS-A	W-2

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

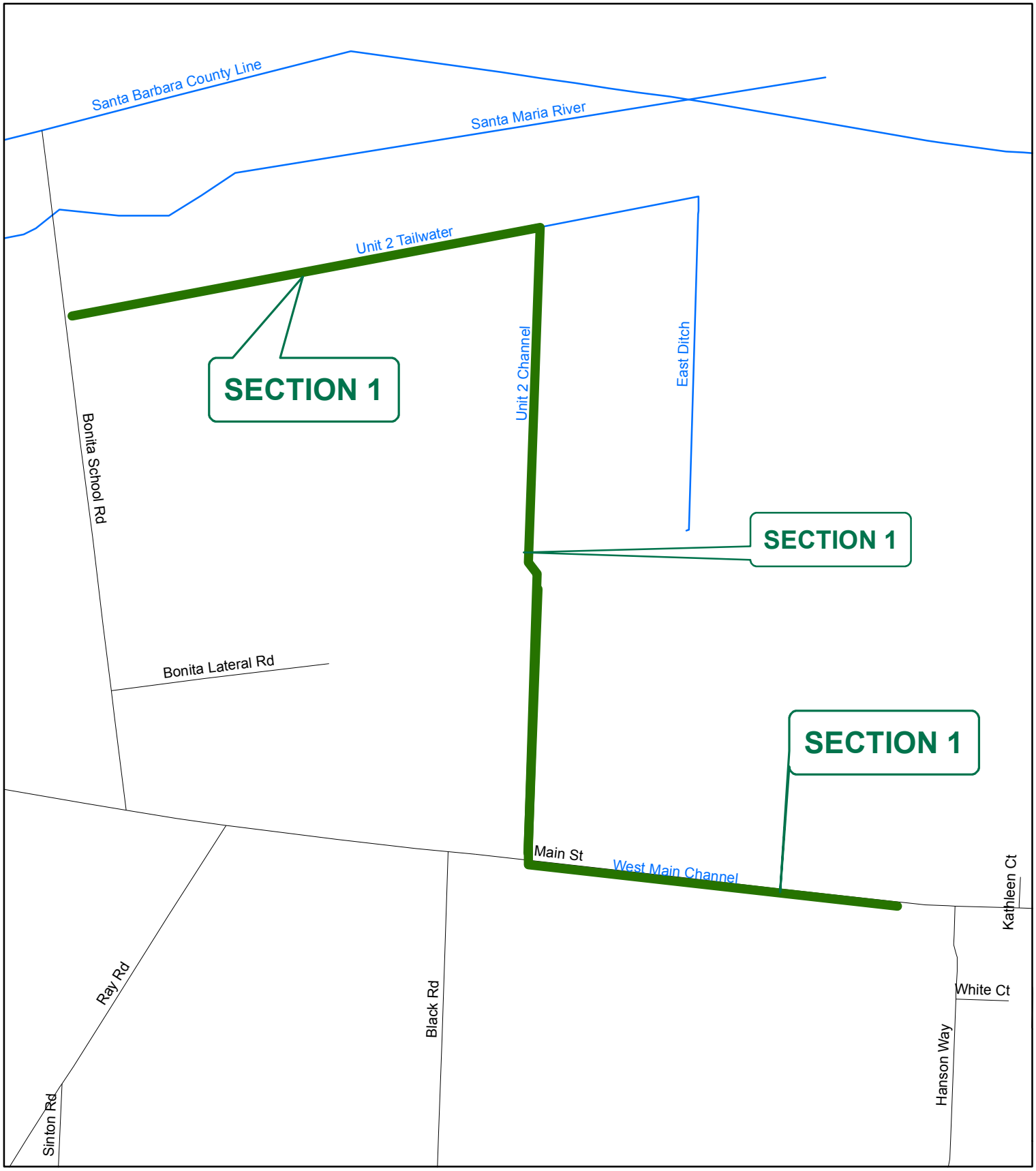
Project Specifics:
These projects will take 3 weeks to complete.

VASCULAR PLANT LIST
Unit II/West Main, East and Unit II Tailwater Channels

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
AIZOACEAE		
Carpobrotus edulis	Iceplant	I
APIACEAE		
Conium maculatum	Poison Hemlock	I
ASTERACEAE		
Ambrosia psilostachya	Western Ragweed	I
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Cotula coronopifolia	Brass Buttons	I
Heterotheca grandiflora	Telegraph Weed	I
Lactuca serriola	Prickly Lettuce	I
Silybum marianum	Milk thistle	I
Xanthium spinosum	Spiny Cocklebur	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Rrippa nasturium -aquaticum	Watercress	I
CHENOPDIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
CYPERACEAE		
Scirpus californicus	Ca. Bullrush	N
MALVACEAE		
Malva parviflora	Cheeseweed	I
ONAGRACEAE		
Epilobium adenocaulation	Willow-Herb	N
POACEAE		
Echinochloa crusgalli	Barnyard Millet	I
Oryzopsis sp.	Rice grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Polygonum arenastrum	Common Knotweed	I

SALICACEAE		
Salix lasiolepis	Arroyo Willow	N
TYPHACEAE		
Typha sp.	Cattail	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N

* I = Introduced
N = Native



Department of Public Works County of Santa Barbara

Legend

Lengths

West Main, Unit 2 Channel, Unit 2 Tailwater, MOWING

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

1,750 875 0 1,750

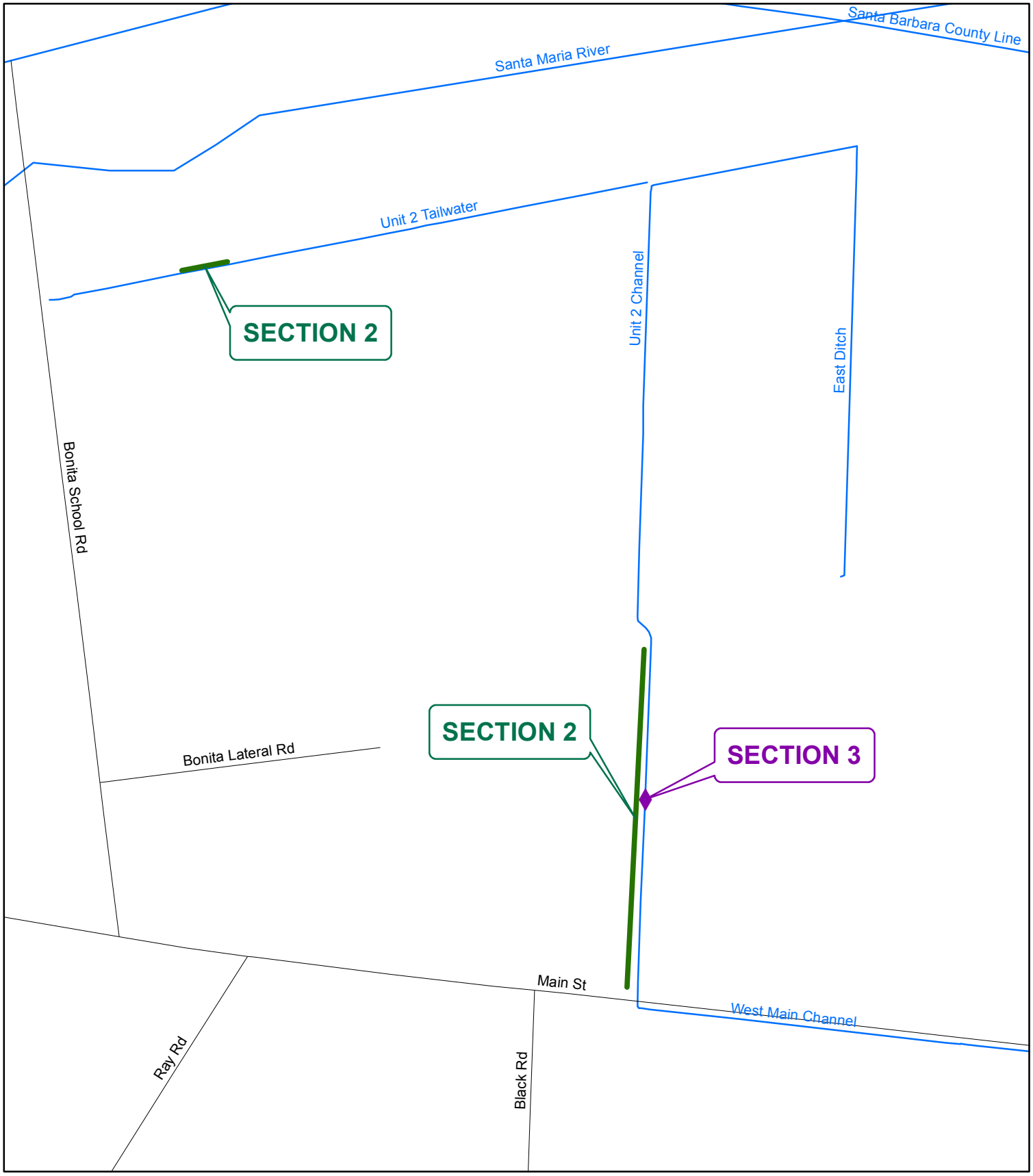
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

West Main, Unit 2 Channel, Unit 2 Tailwater, East Ditch

Legend

- Sites
- Lengths

PUBLIC WORKS ENTERPRISE GIS

N W E S

1,400 700 0 1,400

Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Unit II, Unit II Tailwater, West Main, East Ditch

Unit II Section 1 and 2

ZACA CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL MAINTENANCE

Location: The project begins 150 feet downstream of McMurray Road and continues downstream to Avenue of the Flags in Buellton.

Setting:
Inspected on March 29, 2016.

Zaca Creek is a tributary to the Santa Ynez River and runs through the central portion of the city of Buellton. The District routinely maintains Zaca Creek from just upstream of Highway 101 to the Santa Ynez River. Zaca Creek drains a 21,000 acre watershed capable of producing 4,600 cfs during a 100 year return period precipitation event.

Flows within Zaca Creek occur during storm events and don't persist long after the rainfall ceases as it is a small watershed with very sandy substrate. The quality of the habitat varies greatly along the creek with portions of the creek within a concrete box culvert upstream of Highway 246. The banks are vegetated with willows and mostly non-native ornamental species through the residential and commercial developments. The invert does not typically contain riparian or emergent vegetation but does grow grasses or other non-native weedy species.

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.

Zaca Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2003/2004	500	700	700	**200**
2008/2009	600	4,000	0	-400
2010/2011	0	2,000	0	-400
2012/2013	50	2,100	0	-2150
2014/2015	0	*	2150*	0
2015/2016	495	*	495*	0
2016/2017	400	TBD	TBD	TBD

*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)

Wildlife Survey:
Maintenance at Section 1 involves excavating a drainage culvert in the wetted channel. No sensitive species are known or likely to occur at the project area. The site will likely retain a trickle of flow during the maintenance season. If flowing water is leaving the work site, a haybale and erosion-control fabric barrier will be placed downstream. The District Biologist will inspect and monitoring the work as needed to minimize disturbance to wildlife and habitat.

Engineering Analysis:
Zaca Creek flows directly through the City of Buellton. Several culverts exist on the creek that can be prone to plugging. These culverts must remain clear and able to drain into Zaca Creek so the surrounding properties and roadways are not subject to severe inundation. Additionally, obstructive and downed vegetation must be controlled within the channel because if left unabated, obstructive vegetation will reduce the conveyance capacity of the creek, contribute to debris plugs, potentially cause flows to be directed towards banks that could lead to erosion and loss of property and additional riparian vegetation, and threaten adjacent properties and roadways. The main channel must remain free and clear of obstructive vegetation and deposited sediment to preserve channel conveyance.

Project Description:

Section 1:
This section runs between two housing developments. The riparian corridor is moderately dense and intact. A drainage pipe meets the creek channel at this location. The pipe drains from two retention basins in Buellton. The agricultural land use around the basins creates excess runoff and sediment. The sediment is delivered to Zaca Creek, resulting in a sediment deposit in the creek channel. The sediment deposit has accumulated at the pipe opening and is now nearly blocking the entire pipe outlet.

To alleviate the flood hazard, the District crew will excavate the sediment to expose the pipe opening. The District will excavate 3 feet down to expose the pipe then continue excavating a trench through the sediment approximately 6 feet wide. The trench will be dug from the pipe opening downstream approximately 200 feet to taper into the existing creek channel.

The small excavator machine will enter the channel from the south bank at a grassy opening in the willow canopy just downstream from the work area. A few willows may be limbed or brushed to provide access; the District will replant willows and low-growing native vegetation when the work is completed. The access area is considered self-mitigating.

Section 2:
The excess material that is excavated from Section 1 will be used as a bank-shaping and restoration site on the north side of the creek, just downstream of the work area. This site is currently populated with hemlock, ripgut brome, and other non-native weedy plants. The District will spot-spray and weed-eat this area, then place the extra sediment over the site. The sediment will be compacted and groomed over the area, then planted with native riparian species. The project will result in 400 square feet of additional native restoration at this location.

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.

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

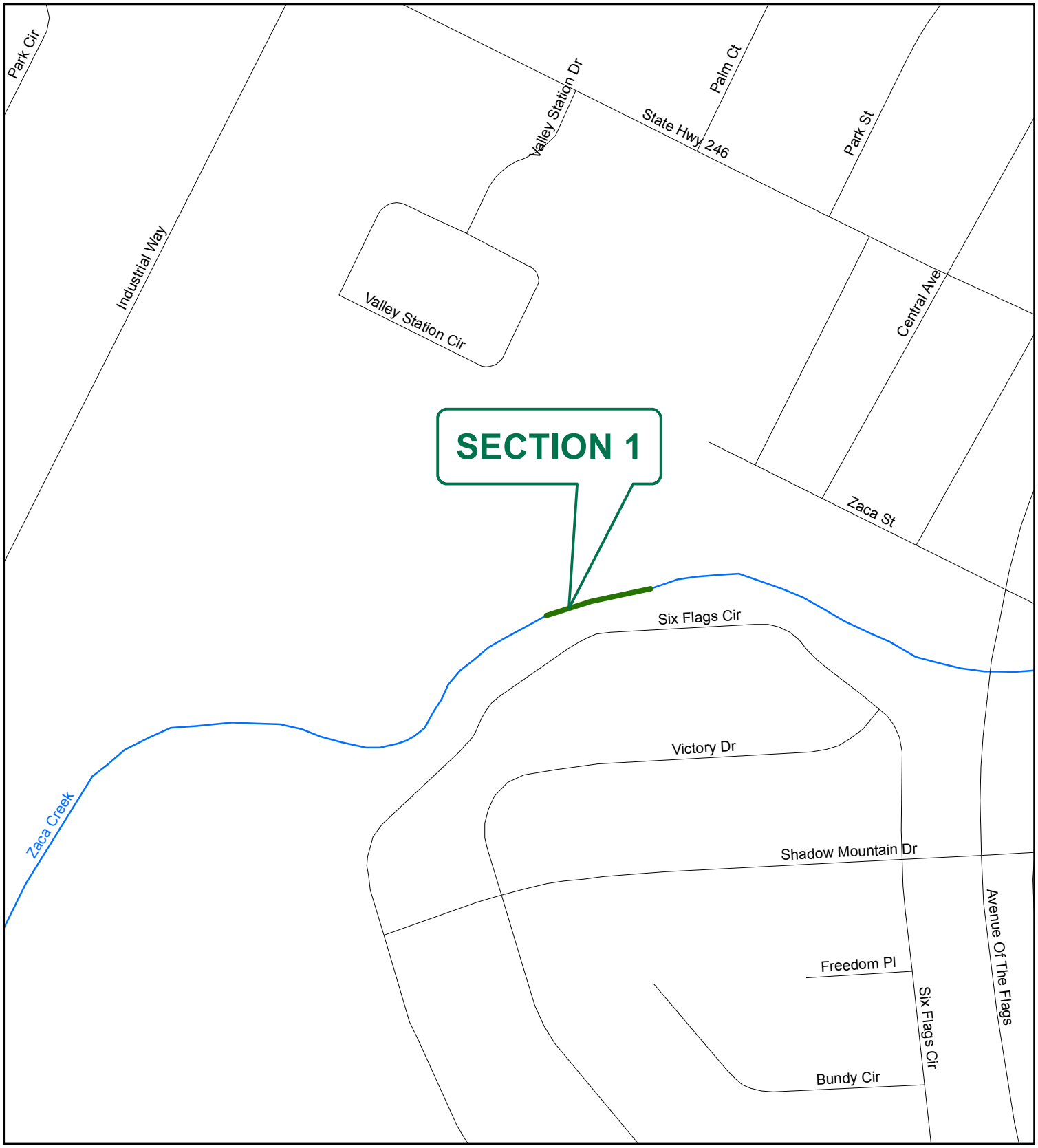
*Residual Impacts:
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels

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

VASCULAR PLANT LIST
ZACA CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
APIACEAE		
Conium maculatum	Poison Hemlock	I
Sanicula crassicaulis	Senicle	
Foeniculum Vulgare	Fennel	I
ASTERACEAE		
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyotebush	N
Cirsium vulgare	Bull Thistle	I
BRASSICACEAE		
Brassica nigra	Black Mustard	N
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
FABACEAE		
Lupinus arboreus	Bush Lupine	N
Melilotus indicus	Yellow Sweet Clover	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
MYRTACEAE		
Eucaplyptus globulus	Blue Gum	I
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Hordeum sp.	Hordeum	I
SALICACEAE		
Salix laevigata	Red Willow	N
Salix exigua	Sandbar Willow	N
Populus balsamifera	Black Cottonwood	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I

* I = Introduced
N = Native



Zaca Creek

Department of Public Works County of Santa Barbara

Legend

Lengths

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

190 95 0 190

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Zaca Creek

Section 1

Section 2

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 6, 2016.

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 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. In 2016, the pools were recovering and the amount of sediment in the creek had not changed due to low rainfall.

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 entered the 2009/2010 with a slight restoration deficit due to temporal impacts to riparian vegetation. A 2,000 was planted in May 2010 at San Roque Creek (a tributary to Arroyo Burro) with better access and a more direct need for riparian cover. The surplus footage will be used to offset small future impacts in this watershed.

The District and the City of Santa Barbara are engaged in Arundo donax removal projects which will likely result in temporarily exposed soil and associated restoration. The arundo removal has not been performed yet, but when it is conducted, andyrestoration performed with District involvement will be claimed for partial restoration credit, while any restoration performed solely by the City staff/funds will not be claimed as credit by the District.

Arroyo Burro				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	1,250	1,250	1,250	0
2008/2009	375	2,000	0	-375*
2009/2010	0	2,000* +7,400**	2,000	1,625
2010/2011	0	0	0	1,625
2012/2013	200	0	0	1,425
2013/2014	265	200	200	1,360
2014/2015	240	0	0	1,120
2015/2016	0	0	0	1,120
2016.2017	5	0	0	TBD

*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 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 down willow branch in the active channel that will be removed.

Section 2:
There is a small island on the left side of the channel with willow seedlings growing on it that will be removed, resulting in 30 square feet of mitigation. A willow branch projecting into the active channel will be limbed.

Section 3:
Near the right bank there is a down willow branch in the active channel and willow branches that will be limbed.

Section 4:
There is a down cottonwood branch in the active channel that will be removed.

Section 5:
A willow limb is projecting into the active channel and will be limbed.

Section 6:
A willow branch is projecting into the active channel and nonnative Arundo will be removed from the channel.

Section 7:
A willow seedling is growing in the active channel and will be brushed resulting in 5 square feet of mitigation.

Section 8:
There is a down tree with DBH greater than 4" and length of approximately 25'. The tree is too large and blocking the channel to leave as is so the crew will cut an 8' long piece of LWD and wedge it into the bank. The rest of the tree will be removed from the creek.

Section 9:
There is a down willow on the left side of the channel that continues to grow. The crew will limb the branches projecting into the active channel and leave the willow to continue to grow.

Section 10:
There is a piece of LWD (8"DBH x 10'L) in the active channel. The LWD will be moved to either the left or right bank and one end either partially buried or placed in a manner to be better secured during flow events.

Section 11:
Poison oak growing from the right bank into the channel will be limbed and some old remaining metal pipes in the channel will be cut down and removed.

Section 12:
There are 3 down willow branches that will be removed from the active channel.

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

Section 14:
In this length of approximately 1200 lf there are multiple down willow branches that will be removed and branches projecting into the active channel that will be limbed.

Arundo Removal (on going 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 fifth year of the effort and active arundo removal work will focus on the areas downstream of Veronica Springs Road. Revegetation and re-treatment of arundo resprouts will occur in areas where arundo has already been removed (primarily from Veronica Springs Road upstream to Jerry Harwin Parkway)

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 4.5-acres have been removed during the past four field seasons, with the final two acres 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 Richelle Lane, and Las Positas Road. Retreatment surveys will be accessed from Modoc Road, the La Cumbre Country Club, the City's creek side property off Calle de los Amigos (near Portofino Way), Hidden Valley Park, and Veronica Springs Road. Approximately 60 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.

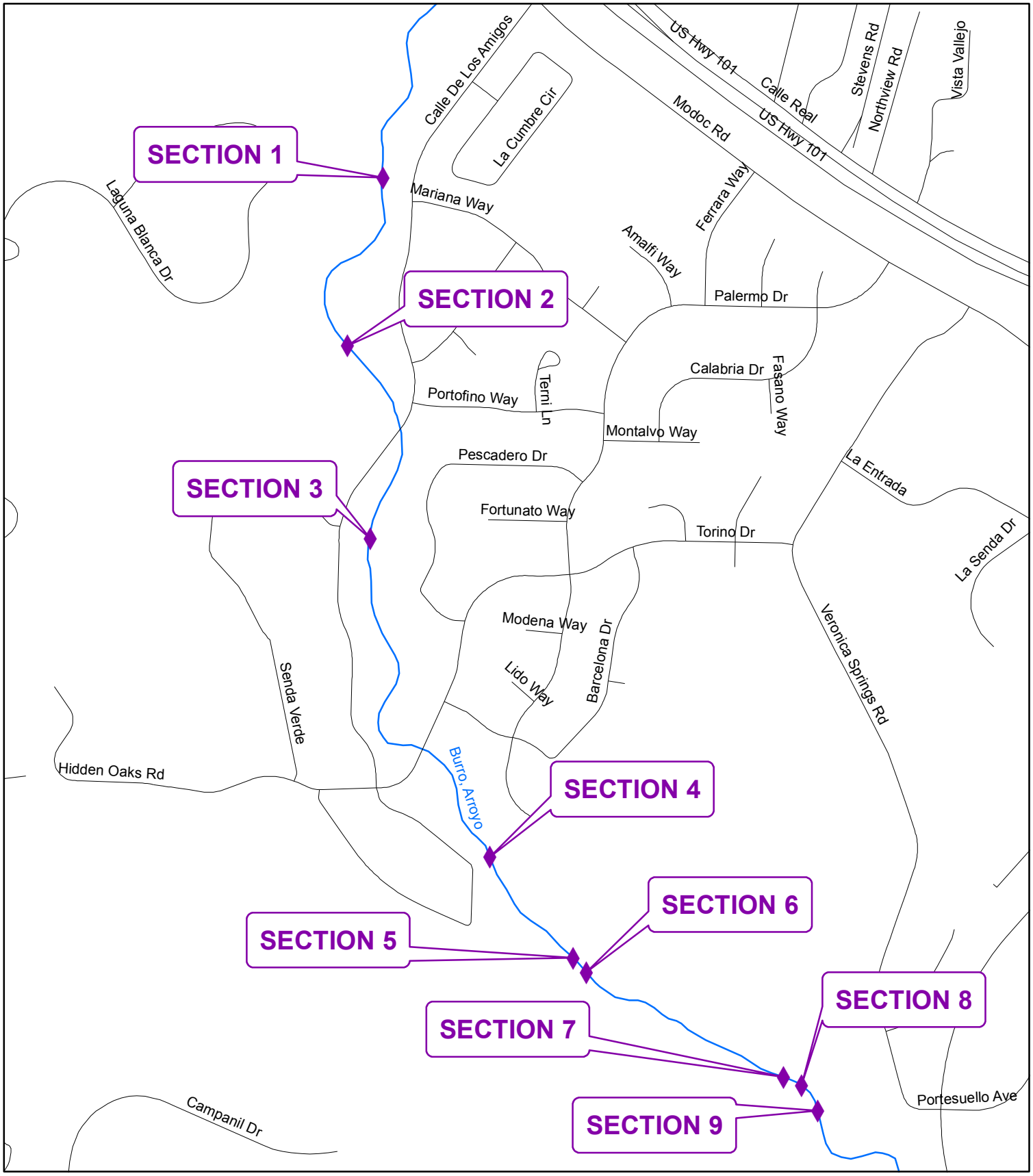
Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C	H-1, B-2, W-2, W-4, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I	B-1, B-2, B-3, B-5, W-1, W-2, W-5
Public Health EIR section 5.10	PH-A	W-2

Project Specifics:
This project will take 4 days to complete



Department of Public Works County of Santa Barbara

Arroyo Burro-A

Legend

♦ Sites

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

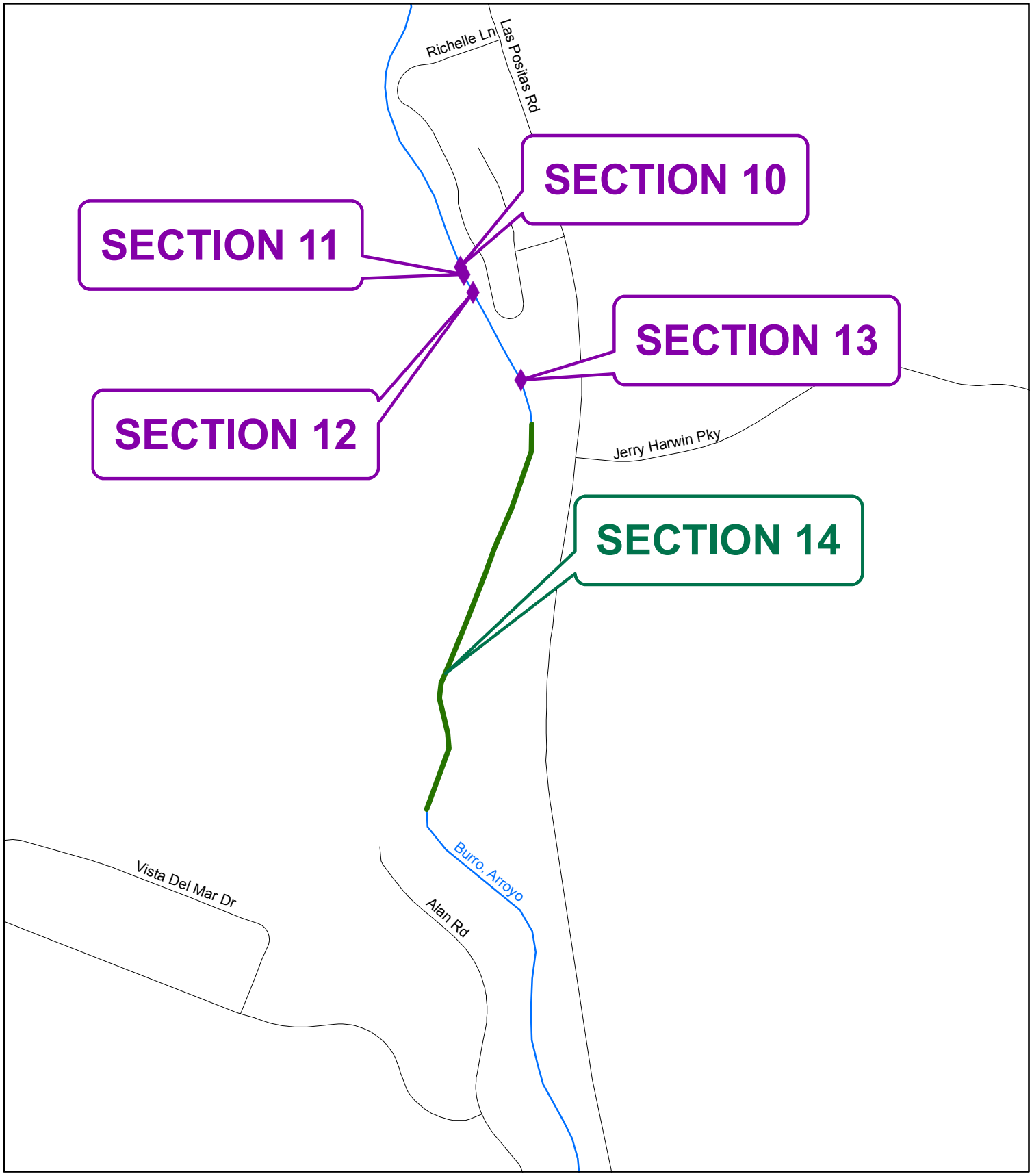
540 270 0 540

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Arroyo Burro-B

Legend

- Sites
- Lengths

N W E S

Feet

340 170 0 340

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Arroyo Burro Creek

Section 5

Section 11

VASCULAR PLANT LIST
ARROYO BURRO CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Apium graveolens	Celery	I
Conium maculatum	Poison Hemlock	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALICEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Conyza canadensis	Horseweed	I
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Sonchus arvensis	Prickly Sow Thistle	I
Venegasia carpesioides	Canyon Sunflower	N
Xanthium strumarium	Cocklebur	I
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
CAPRIFOLIACEAE		
Lonicera sp.	Honeysuckle	I
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		

Chenopodium ambrosioides	Mexican Tea	I
Chenopodium macrospermum var. farinosum	Coast Goosefoot	I
Chenopodium murale	Nettle-Leaved -Goosefoot	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Cyperus eragrostis	Umbrella Sedge	I
Scirpus micrcarpus	Small-Fruited Bulrush	N
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
JUGLANDACEAE		
Juglans sp.	Walnut	I
LAMIACEAE		
Marrubim vulgare	Horehound	I
Mentha citrata	Bargamont Mint	I
MYRTACEAE		
Euclayptus globulus	Blue Gum	I
ONAGRACEAE		
Epilobium adenocaulon	Willow-Herb	N
OXALIDACEAE		
Oxails pes-caprae	Sour Grass	I
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
Plantago major	Common Plantain	I
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Arundo donax	Giant Reed	I
Bromus diandrus	Ripgut Grass	I
Cortaderia atacamensis	Pampas Grass	I
Oryzopsis miliacea	Rice Grass	I
Polypogon interruptus	Beard Grass	I

POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	I
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
PRIMULACEAE		
Anagallis arvenisis	Scarlet Pimpernel	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Rubus urnsinus	California Blackberry	N
SALICACEAE		
Populus fremonti	Fremont Cottonwood	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SCOPHULARIACEAE		
Mimulus cardinalis	Scarlet Monkey	N
Scrophularia californica	California Figwort	N
SOLANCEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TROPAELACEAE		
Tropaeolum majus	Garden Nastutium	I
TYPHACEAE		
Typha sp.	Cattail	N
VALERIANACEAE		
Centranthus rubber	Red Valerian	I
VERBENACEAE		
Verbena lasiostachys	Verbena	N

* I - Introduced
N – Native

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

Location:
The project begins just downstream of Highway 192 and terminates at Highway 101.

Setting:
Inspected on March 15, 2016.

Arroyo Paredon Creek originates in the foothills of the Santa Ynez Mountains and drains a 2,995 acre watershed capable of producing 3,500 cfs during a 100-year precipitation event.

The creek features an intact riparian canopy of mature willow, sycamore, black cottonwood, Fremont cottonwood, coast live oak, and occasional eucalyptus stands. Cape ivy, blackberry, clematis, and garden nasturtium are common components of the understory. The creek channel is covered in fine sediment deposits overlying cobbles and boulders.

Adjacent land is predominantly agriculture, nurseries and greenhouses with several access roads and trails along the banks. The creek was completely dry during the inspection.

Arroyo Paredon 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 Paredon Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bankfull width cannot be tolerated due to a small drainage corridor with shallow banks and undersized culvert.

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 2011/2012 Annual Routine Maintenance Plan addenda to more easily display and track the District's restoration efforts.

Arroyo Paredon Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2003/2004	900	2400	2400	1500
2004/2005	3250	3000	3000	1250
2005/2006	200	0	0	1050
2007/2008	600	0	0	450
2009/2010	200	1,600	1,600	1,850
2011/2012	0	0	0	1,850
2013/2014	310	0	0	1,540
2015/2016	50	0	0	1,490
2016/2017	0	0	0	TBD

Engineering Analysis:
The culvert on Arroyo Paredon Creek at Via Real is susceptible to plugging causing significant flooding of the adjacent agricultural areas as well as Via Real and Highway 101. In an effort to reduce the potential for plugging the culvert, downed trees and obstructive vegetation that could be mobilized during high flows should be removed. The bankfull discharge* for Arroyo Paredon Creek downstream of Foothill Road is approximately 273 cfs. With a velocity of approximately 6 fps and a typical depth of 2.5', the width of clearing should be 18' 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:
30 square feet of mulefat seedlings are regrowing in the active channel and will be brushed. This section was previously mitigated for under the 13/14 AP.

Section 2:
500 square feet of nonnative arundo will be brushed.

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

Section 4:
There is a 7' wide by 100' long area of nonnative cape ivy growing in the active channel that will be brushed.

Section 5:
A 22" DBH by 30' long sycamore branch will be removed from the active channel.

Section 6:
A down willow branch 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

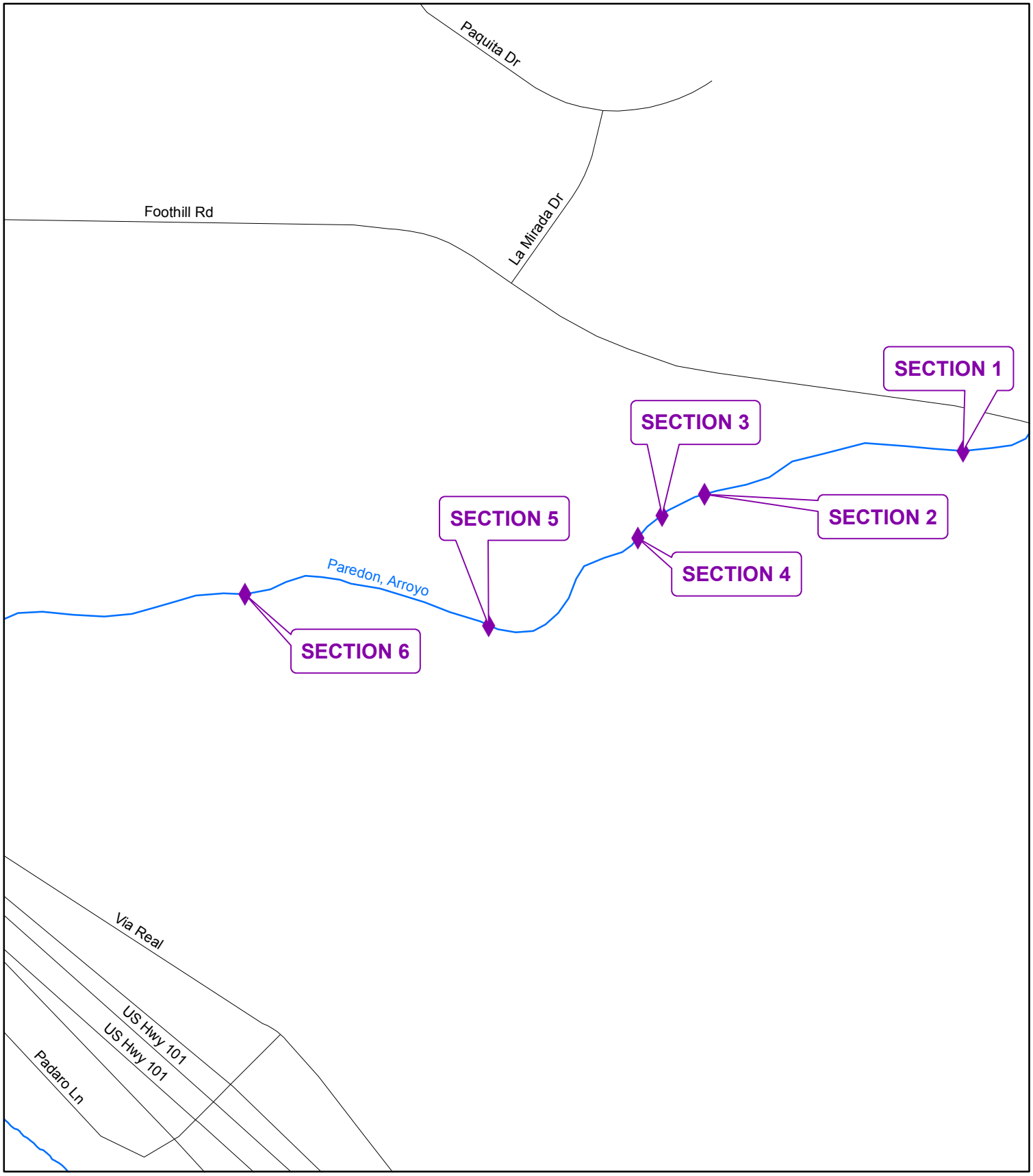
and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-D	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-E	H-1, B-2, W-4, W-2, W-6, W-7, W-8, W-4,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A,	B-1, B-2, B-3,
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I, FAW-J	B-1, B-2, B-3, H-1, W-2, W-1, W-4
Recreation EIR sections 5.8.2, 5.8.3	R-A	W-2

*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.



Department of Public Works County of Santa Barbara

Arroyo Paredon

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

360 180 0 360

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Arroyo Paredon Creek

Section 4

Section 5

ARROYO PAREDON CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equistum telmateia	Giant Horsetail	N
ANACARDIACEAE		
Rhus integrefolia	Lemonadeberry	N
Malosma laurina	Laurel Sumac	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Ageratina adenophora	Ironweed	I
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyotebush	N
Gnaphalium palustre	Wooly Everlasting	N
Picris ecioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Sonchus asper	Sow Thistle	I
Venegasia carpesioides	Canyon Sunflower	N
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
Chenopodium murate	Nettle-Leaved -Goosefoot	I

CONVOLVULACEAE		
Calystegia macrostegia ssp. cyclostegia	Morning-Glory	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Cyperus esculentus	Yellow Nutgrass	N
Scirpus robustus	Prairie Bulrush	N
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Melilotus albus	White Sweet Clover	I
Vicia benghalensis	Vetch	I
FAGACEAE		
Quercus agrifloia	Coast Live Oak	N
GROSSULARIACEAE		
Ribes amarum	Bitter Gooseberry	N
Ribes malvaceum	Chapperal-Flowering -Gooseberry	N
Ribes speciosum	Fuchsia-Flowered -Ribes	N
HYDROPHYLLACEAE		
Phacelia ramossissima	Branching Phacelia	N
JUNCACEAE		
Juncus xiphioides	Iris-Leaved Juncus	N
LAMIACEAE		
Salvia mellifera	Black Sage	N
Salvia spatheca	Pithcher Sage	N
LAURACEAE		
Umbellularia californica	California Laurel	N
MALCACEAE		
Lavatera sp.	Lavatera	N
MYOPORUM		
Myoporum laetum	Myoporum	I

MYRTACEAE		
Eucalyptus globulus	Blue Gum	I
ONAGRACEAE		
Epilobium paniculatum	Willow-Herb	N
OXALIDACEAE		
Oxalis pes-caprae	Sour Grass	I
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
Plantago major	Common Plantain	I
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Bromus mollis	Soft Chess	I
Bromus rubens	Foxtail	I
Cortaderia atacamensis	Pampas Grass	I
Lolium perenne	Italian Ryegrass	I
POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	N
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
RHAMNACEAE		
Ceanothus spinosus	Greenbark	N
ROSACEAE		
Cerocarpus betuloides	Mountain Mahogany	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus fremontii	Fremont Cottonwood	N

Populus balsamifera	Black cottonwood	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
Salix exigua	Sandbar Willow	N
SCHROPHULARIACEAE		
Mimulus aurantiacus	Bush Monkeyflower	N
Keckiella cordifolia	Climbing Pensteman	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	N
Solanum douglasii	Douglas Nightshade	N
Solanum xanti	Chaparral Nightshade	N
TAMARICACEAE		
Tamarix sp.	Tamarisk	I
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N
VERBENACEAE		
Verbena lasiostchys	Verbena	N

* I = Introduced
N = Native

BARGER CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins just downstream of Brenner Drive and terminates just downstream of State Street.

Setting:
Inspected on April 6, 2016.

Barger Canyon Creek originates in the foothills of the Santa Ynez Mountains and drains a 1,034 acre watershed capable of producing 1,800 cfs during a 100 year return period precipitation event. Land use adjacent to the creek is residential and commercial. The creek is one of the main tributaries to Arroyo Burro Creek, joining into Arroyo Burro at the Hope Avenue Bridge.

Barger Canyon Creek flows through a developed portion of Santa Barbara and although the deeply incised creek lends itself to large bank areas, the residential back yards are immediately adjacent to the top of the bank with ornamental vegetation extending onto the bank slopes. The banks are vegetated with mostly non-native understory such as vinca, castor bean, nasturtium and grasses; however the majority of large trees are native such as sycamore, oak, and bay, many of which exceed 36" dbh. As the creek flows under State Street it enters a highly developed commercial area containing little native habitat. The creek bottom is rocky soil and gravel.

During the assessment, no water was present in the project reach due to below average rainfall.

Barger 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.

Barger 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 corridor is urbanized, narrow, and incised with several culvert crossings and barriers.

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.

Barger Canyon Creek				
Annual Plan Year	Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2005/2006	1,700*	1,700	1,250	1,250
2007/2008	0	0	0	1,250
2009/2010	40	0	0	1,210
2010/2011	0	0	0	1,210
2011/2012	0	0	0	1,210
2013/2014	40	0	0	1,170
2015/2016	40	0	0	1,130
2016/2017	100	0	0	TBD

*In the 2005/2006 a project written up for Hope School District identified 566 square feet of permanent impact which requires a 3:1 replacement ratio for mitigation (1,700 square feet), however this project has never been completed.

Engineering Analysis:

Although Barger Canyon Creek is deeply incised in some areas, there are several very small bridges and culverts. Removing downed trees and obstructive vegetation and other obstructions that lead to bank erosion, will reduce the potential for plugging the bridges and culverts and the associated damage from flooding.

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
Nonnative ivy is growing into the channel from the left bank and will be brushed.

Section 2
A nonnative tree of heaven has branches projecting into the active channel that will be limbed.

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

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

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

Section 6
Nonnative tree of heaven seedlings and ivy will be brushed from the active channel.

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

Section 8
There is a sheer cliff on the right bank that is eroding. Sediment is accumulating on the left side of the channel, compounding the problem by pushing flows to the right bank. A piece of equipment will access the channel from the right bank upstream and push approximately 5cy of sediment back to the right bank in order to move flows away from the eroding bank. The sediment island has willow sprouts growing that will be left in place to continue growing once the sediment is moved. This project will result in 100 square feet of mitigation.

Section 9
A yucca plant is projecting into the active channel and will be limbed.

Section 10
A 14" DBH by 12' long old dead willow tree has rolled down the left bank and will be cut up and removed. Nonnative ivy will be brushed.

Section 11
A 6" DBH by 10' long branch will be removed from the active channel.

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

Section 13
A large eucalyptus tree has fallen into the active channel and will be removed.

Section 14
Nonnative ivy will be brushed from the active channel.

Section 15
Nonnative ivy is growing down and into the box culvert at this location and will be brushed to avoid catching debris during storm 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.

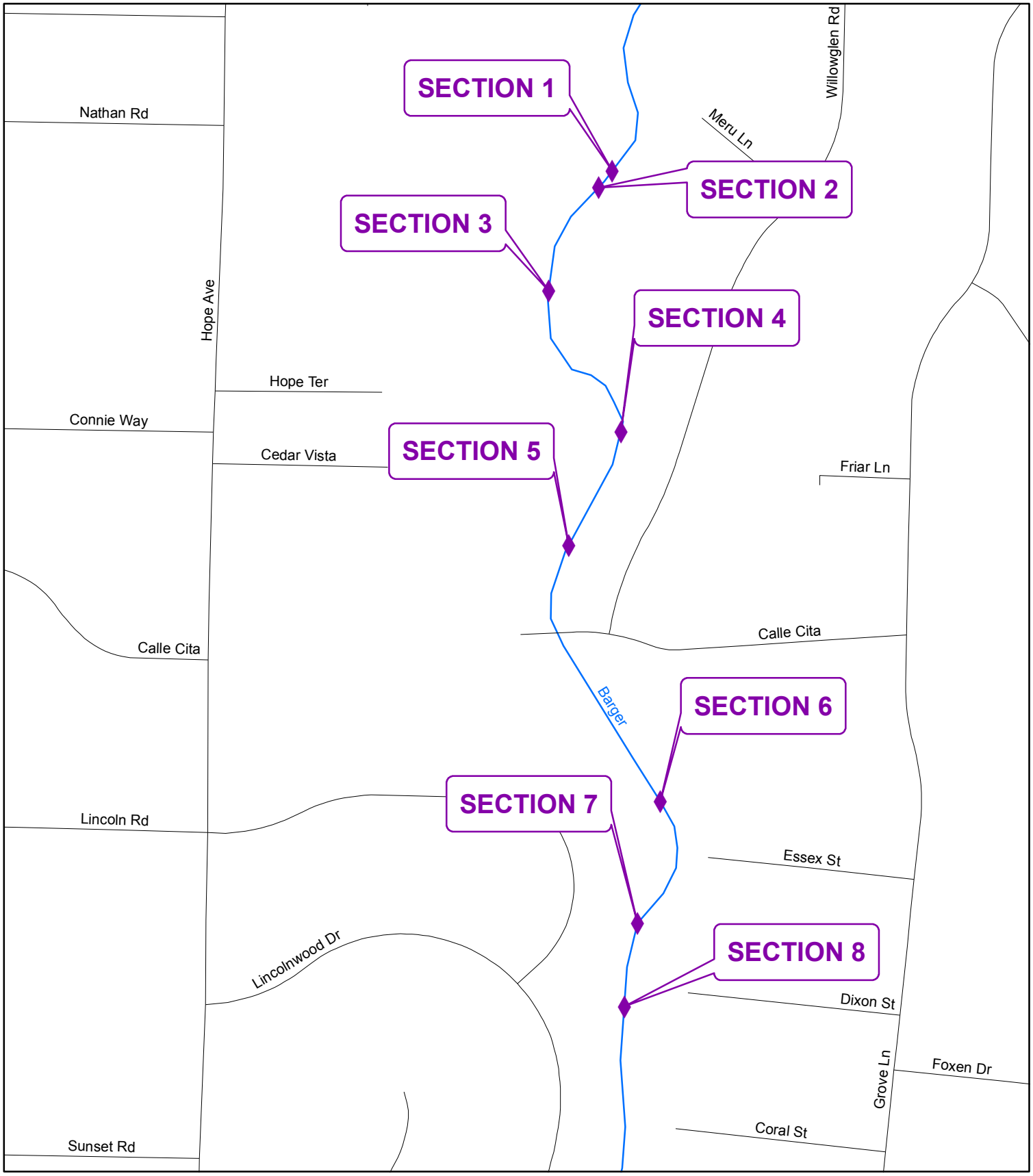
Mitigation Measures:
Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously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

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C	H-1, B-2, W-2, W-4, W-6, W-7, W-8,

Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I	B-1, B-2, B-3, B-5, W-1, W-2, W-5
Public Health EIR section 5.10	PH-A	W-2

Project Specifics:

The project will take 4 days to complete.



Department of Public Works County of Santa Barbara

Barger Creek-A

Legend

♦ Sites

N W E S

Feet

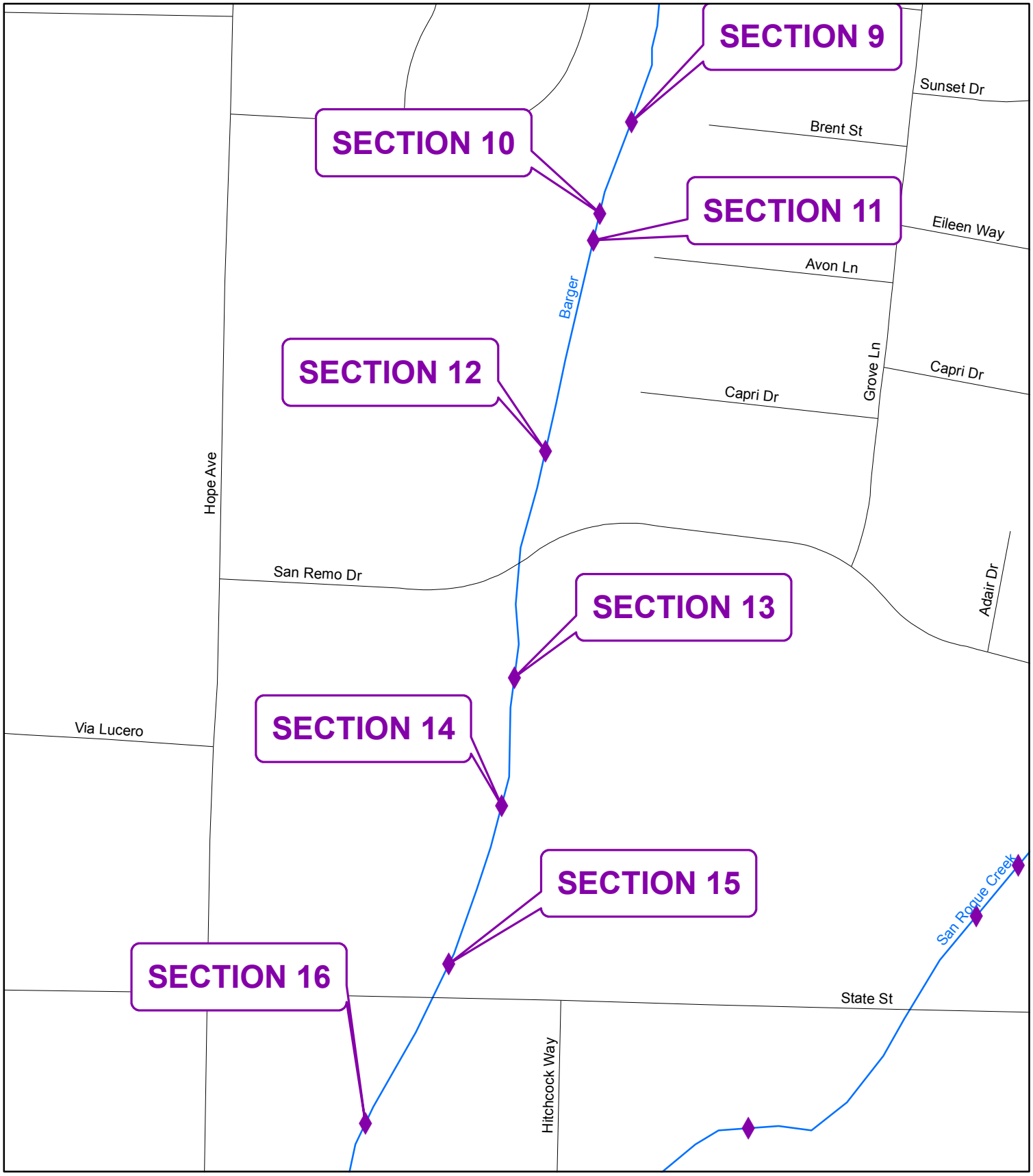
220 110 0 220

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Barger Creek-B

Legend

♦ Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

225 112.5 0 225 Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Barger Creek

Section 1

Section 4

Barger Creek

Section 8

Section 13

BARGER CANYON CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Apium graveolens	Celery	I
Conium maculatum	Poison Hemlock	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALICEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Conyza canadensis	Horseweed	I
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Sonchus arvensis	Prickly Sow Thistle	I
Venegasia carpesioides	Canyon Sunflower	N
Xanthium strumarium	Cocklebur	I
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
CAPRIFOLIACEAE		
Lonicera sp.	Honeysuckle	I
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I

Chenopodium macrospermum var. farinosum	Coast Goosefoot	I
Chenopodium murale	Nettle-Leaved -Goosefoot	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Cyperus eragrostis	Umbrella Sedge	I
Scirpus micrcarpus	Small-Fruited Bulrush	N
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
JUGLANDACEAE		
Juglans sp.	Walnut	I
LAMIACEAE		
Marrubim vulgare	Horehound	I
Mentha citrata	Bargamont Mint	I
MYRTACEAE		
Euclayptus globulus	Blue Gum	I
ONAGRACEAE		
Epilobium adenocaulon	Willow-Herb	N
OXALIDACEAE		
Oxails pes-caprae	Sour Grass	I
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
Plantago major	Common Plantain	I
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Arundo donax	Giant Reed	I
Bromus diandrus	Ripgut Grass	I
Cortaderia atacamensis	Pampas Grass	I
Oryzopsis miliacea	Rice Grass	I

Polypogon interruptus	Beard Grass	I
POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	I
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
PRIMULACEAE		
Anagallis arvenisis	Scarlet Pimpernel	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Rubus urnsinus	California Blackberry	N
SALICACEAE		
Populus fremonti	Fremont Cottonwood	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SCOPHULARIACEAE		
Mimulus cardinalis	Scarlet Monkey	N
Scrophularia californica	California Figwort	N
SOLANCEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TROPAELACEAE		
Tropaeolum majus	Garden Nastutium	I
TYPHACEAE		
Typha sp.	Cattail	N
VALERIANACEAE		
Centranthus rubber	Red Valerian	I
VERBENACEAE		
Verbena lasiostachys	Verbena	N

* I - Introduced
N – Native

CANADA DE LA PILA CREEK ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

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 31, 2016

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 proposed project will not result in impacts to native vegetation, therefore restoration is not proposed as mitigation for this project. Please refer to the impacts and mitigation section of this project to review the mitigation measures that will be used to mitigate any other potential impacts.

Canada de la Pila Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2003/2004	0	0	~480*	~480
2005/2006	0	0	0	480
2006/2007	0	0	0	480
2007/2008	0	0	~620*	1100
2008/2009	0	0	0	1100
2010/2011	0	0	0	1100
2011/2012	0	0	0	1100
2012/2013	300	0	0	800
2016/2017	0	0	0	800

* The management of Canada de la Pila Creek is part of Resource Recovery and Waste Management Division. The Flood Control District assists Public Works in planning and permitting for creek-related projects, but the work and mitigation are performed by RRWMD staff. RRWMD has ongoing voluntary 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 compensate for small temporal impacts within low-quality cover during annual maintenance of the trash racks.

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:
A Litter Containment Work Plan has been developed by and for the Tajiguas Landfill to ensure that all litter remains on-site. The plan requires at a minimum; 1) all drains have grates placed over them, 2) daily litter collection from the face of the landfill, 3) portable and permanent litter fences around the landfill, 4) establishment of a tree line to trap litter blowing off-site, and 5) litter fences (trash racks) in the creek. The trash racks are currently functioning as check structures. The racks have impounded 2'-3' of sediment behind them within a distance of approximately 300'.

The sediment will be removed with a Gradall or excavator working from the top of the bank and loading the material directly into trucks. The creek will be desilted for a distance of 200' x 6' wide and 1' deep producing approximately 44 c.y. of material. The material would then be hauled up to the landfill where it would be used as daily cover for landfill operations. The creek is dry and the invert is mostly devoid of vegetation except for nonnative grasses. There will be no impact to native vegetation.

Work under this section is being included to assist the Resource Recovery & Waste Management Division in the compliance with CEQA and permitting requirements. The District's role in the project is limited to assisting the Public Works Department by

including the work the planning process and monitoring the work to ensure permit conditions and mitigation measures are adhered to in order to protect riparian resources. The work will be constructed by, and will be the responsibility of the Resource Recovery & Waste Management Division. The proposed creek desilting has occurred periodically and routinely over the past 35 years as part of historic landfill operations.

Section 2:
In this section there are willow branches projecting into the active channel for 300 linear feet that 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.

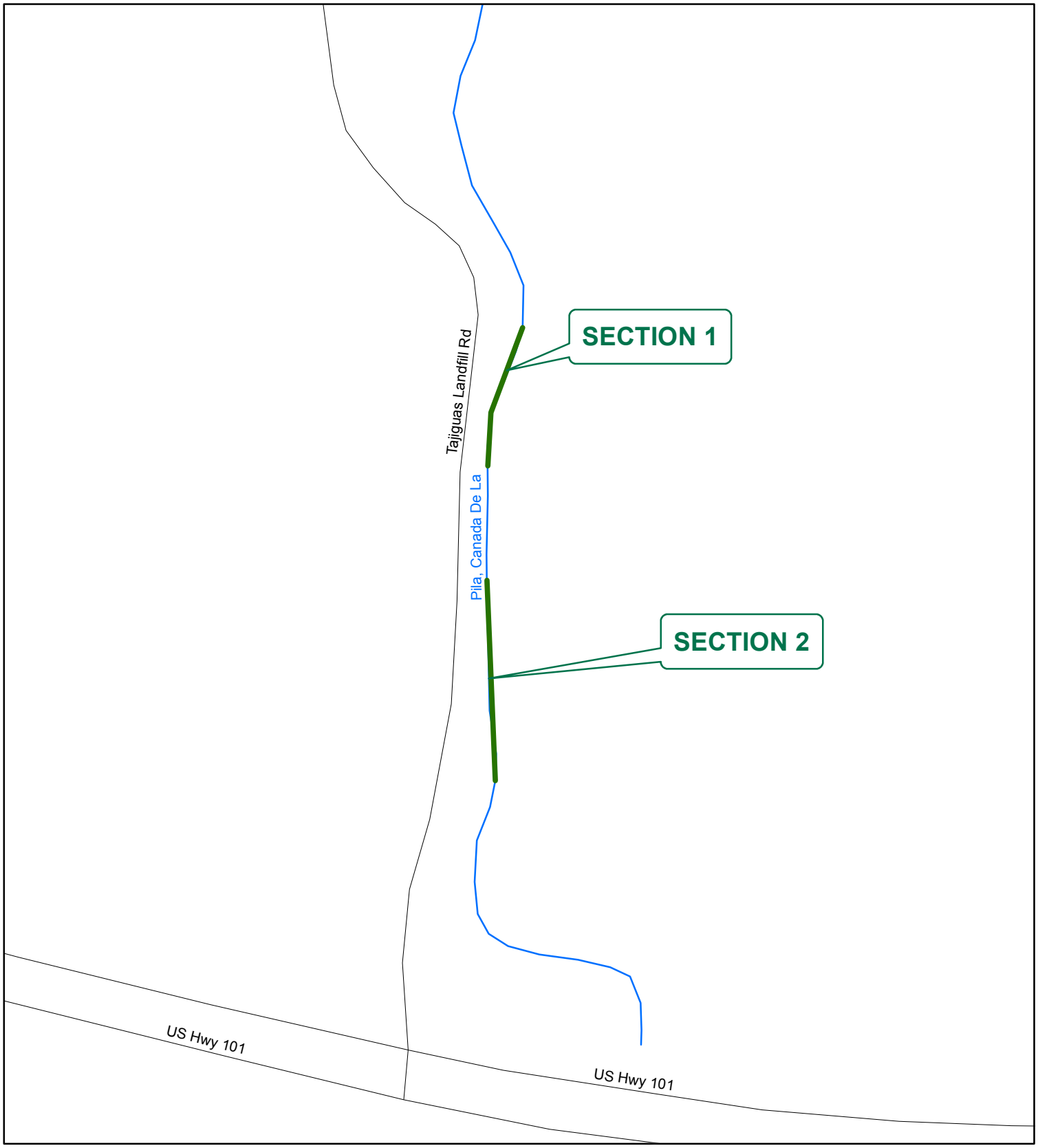
Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below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

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-D, H-E	H-1, H-2, B-7
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-C, WQ-D	H-1, B-2, W-1, W-4

Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-D, WRR-E	B-1, B-2, B-3, B-4, B-5, B-6,
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-E, FAW-I	B-1, B-2, B-3, B-5, B-6, W-1
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A, AQ-B	A-1, A-2
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1

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



Canada De La Pila Creek

Department of Public Works County of Santa Barbara

Legend

Lengths

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N W E S

Feet

200 100 0 200

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Canada De La Pila Creek

Section 1

Section 2

CANADA DE LA PILA CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	***COMMON NAME***	***ORIGIN****
ANACARDIACEAE		
Malosma laurina	Laurel Sumac	N
Toxicodendron diversilobumPoison	Oak	N
ASTERACEAE		
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyote Bush	N
Carduus pycnocephalus	Italian Thistle	I
Gnaphalium luteo-album	Weedy Everlasting	
Picris echioides	Ox Tongue	I
Silybum marianum	Milk Thistle	I
Sonchus arvensis	Prickly sow Thistle	I
Taraxcum officinale	Common Dandelion	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
Chenopodium belandieri	Lamb's Quarters	
CYPERACEAE		
Cyperus alternifolium	Umbrella Plant	I
Scirpus californicus	California Bulrush	N
EUPHORBIACEAE		
Eremocarpus setigerus	Turkey Mullein	N
Ricinus communis	Castor Bean	I
FABACEAE		
Melilotus albus	White sweet Clover	I
Vicia benghalensis	Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N

SCIENTIFIC NAME (cont'd)	***COMMON NAME*** (cont'd)	***ORIGIN*** (cont'd)
LAMIACEAE		
Marrubium vulgare	Horehound	I
Mentha spicata	Spearment	I
ONAGRACEAE		
Epilobium ciliatum	Willow-Herb	N
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Elymus condensatus	Giant Rye	I
Piptatherum miliacea	Rice Grass	I
Pennisetum clandestinum	Kikuyu Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Rumex crispus	Curly Dock	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
ROSACEAE		
Rubus ursinus	California Blackberry	N
SALICACEAE		
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SOLANACEAE		
Solanum douglasii	Douglas Nightshade	N
TYPHACEAE		
Typha sp.	Cattail	N
VERBENACEAE		
Verbena lasiostachys	Verbena	N

* I = Introduced
N = Native

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 March 15, 2016.

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 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.

Carpinteria Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2002/2003	2,710	4,750	3,750	1,040
2003/2004	900	0	0	140*
2008/2009	1,250	16,750	0	-1250
2009/2010	1,500	6,750	6,750	4,000
2010/2011	550+100	1,400	Carp Valley: 22,464	25,814
2012/2013	5,200	1,800	1,800	22,414
2013/2014	565, Incl 3 Trees >3" dbh	600	14 alders (voluntary extra planting)	21,849
2014/2015	520, Inch 8 Syc>3" dbh	0	0	21,329
2016/2017	550	0	TBD	TBD

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 down cottonwood branch in the active channel that will be removed as well as 15 square feet of sycamore seedlings that will be brushed. This section was mitigated for under the 12/13 AP.

Section 2:
3 down willow branches will be removed from the active channel.

Section 3:
A willow branch is projecting into the active channel and will be limbed at a location approximately 8' from the bank where the branch is above 6' high and not likely to catch debris during flows.

Section 4:
There is a down cottonwood limb in the active channel. The crew will leave one 8' long piece of LWD in a scour hole on the left side of the channel and remove the rest of the small auxiliary branches from the active channel.

Section 5:
5 square feet of mulefat seedlings will be brushed from the active channel. This area was mitigated for under the 12/13 AP.

Section 6:
There is a down willow limb in the active channel.

Section 7:
An 18" DBH by 40' long cottonwood is down across the active channel. The tree will be cut where the branches fork off from the main trunk and the trunk will be left in place as KWD and anchored if necessary. Any lateral branches that can be kept as LWD and can be salvaged will be left on site. The biological monitor will work with the maintenance crew to place LWD/KWD in an appropriate manner.

Section 8:
Willow branches are projecting into the active channel from the right bank for a length of approximately 150lf. Only the lower willow branches will be limbed.

Section 9:
In this length of approximately 250' there is an island with fennel and other nonnatives growing on it that will be brushed. On the island there is a 12' tall by 1" DBH cottonwood that will be left in place as a single trunked tree and allowed to grow. Exterior branches under 4' tall will be removed so that debris will be less likely to collect on the tree during storm flows.

Section 10:
In this length of approximately 150' willow branches are projecting into the active channel from the right bank. Branches under 6' tall will be limbed for a width of 5'.

Section 11:
Willow branches are projecting into the active channel and will be limbed.

Section 12:
A down willow branch on the left side of the channel will be removed.

Section 13:
A down willow branch will be removed.

Section 14:
3 down willow branches will be removed.

Section 15:
In this length of approximately 300' willow and cottonwood branches are projecting into the active channel. Only the lower branches will be limbed leaving the canopy intact.

Section 16:
There are 5 down alders (all over 4"DBH and 15' long) that will be removed because they are just upstream of the HWY 101 underpass.

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

Section 18:
This is just upstream of the bike path that goes over Carpinteria Creek at the HWY 101 overpass. Vegetation and tree growth on the right bank has pushed the creek to the left over the years, obstructing the low flow culvert. In order to allow flow to return to this side and avoid vegetation blocks during storm flows the understory vegetation will be brushed and all trees will be left in place. The work area is 10' wide and 20' long and will result in 200 square feet of mitigation.

Section 19:
A willow is growing horizontally across the creek with branches projecting into the active channel. Only branches below 6' will be limbed, everything else will be left in place.

Section 20:
In a 10' x 50' area cottonwood seedlings will be brushed from the active channel resulting in 300 square feet of mitigation.

Section 21:
There is a down willow branch in the active channel.

Section 22:
50 square feet of cattail growing in the active channel will be brushed. This section was mitigated for under the 12/13 AP.

Section 23:
The creek bends to the right sharply in this section. Right where it begins to bend there is a 10' by 20' area with nonnative umbrella sedge, 50 square feet of black berry and two large alders and two large sycamores. The large trees will be left in place and only the umbrella sedge and blackberry will be brushed in order to open up the bend to convey storm flows. This will result in 50 square feet of mitigation.

Section 24:
A 6' wide by 75' long band of cattail is growing in the active channel and will be brushed. This section was mitigated for under the 12/13 AP.

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.

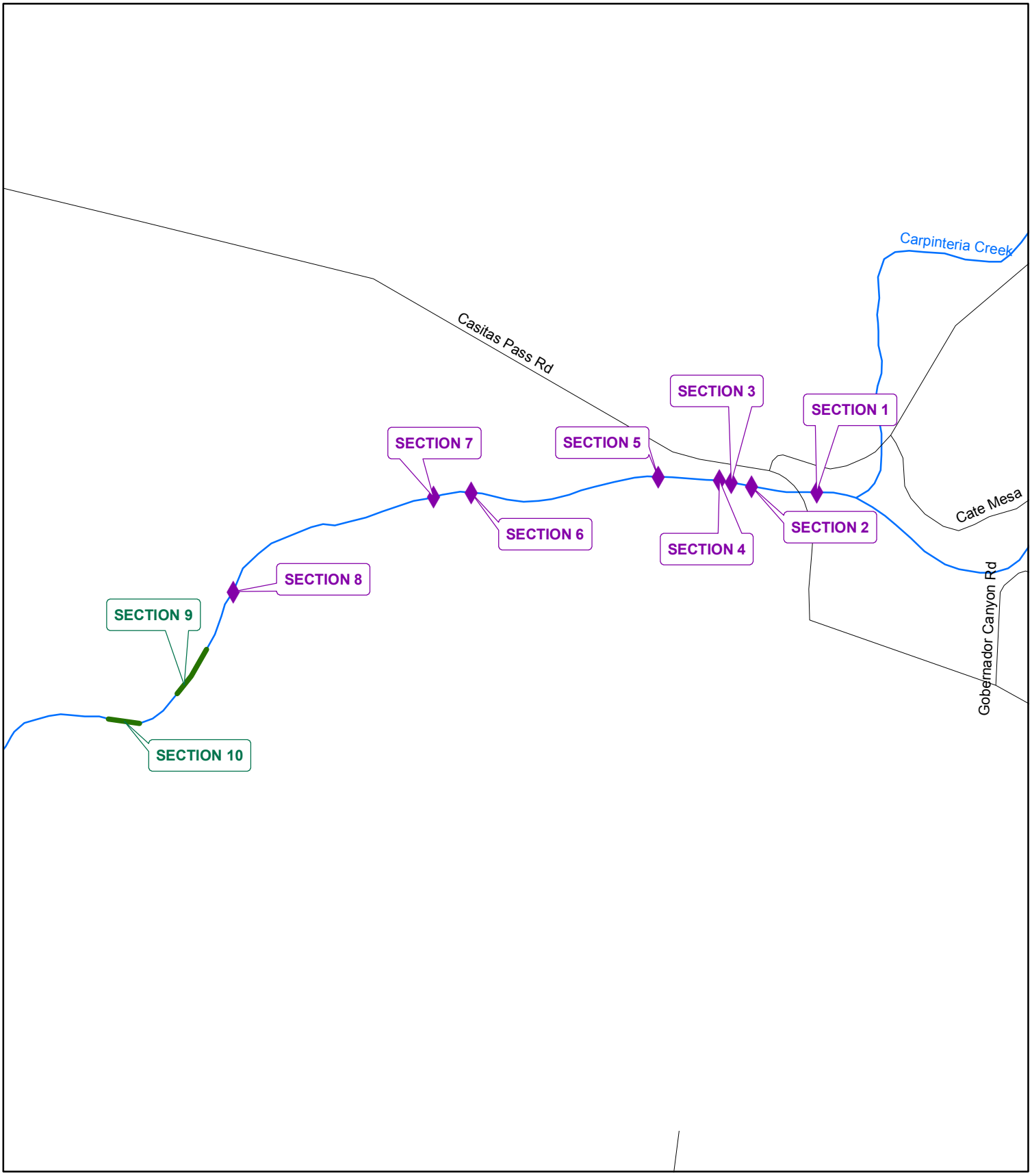
Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below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

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C	H-1, B-2, W-2, W-4, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-B	B-1, B-3, H-9
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I	B-1, B-2, B-3, B-5, W-1, W-2
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A	A-1
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1

Project Specifics:
This project will take 4 days to complete.



Department of Public Works County of Santa Barbara

Carpinteria Creek-A

Legend

- Sites
- Lengths

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

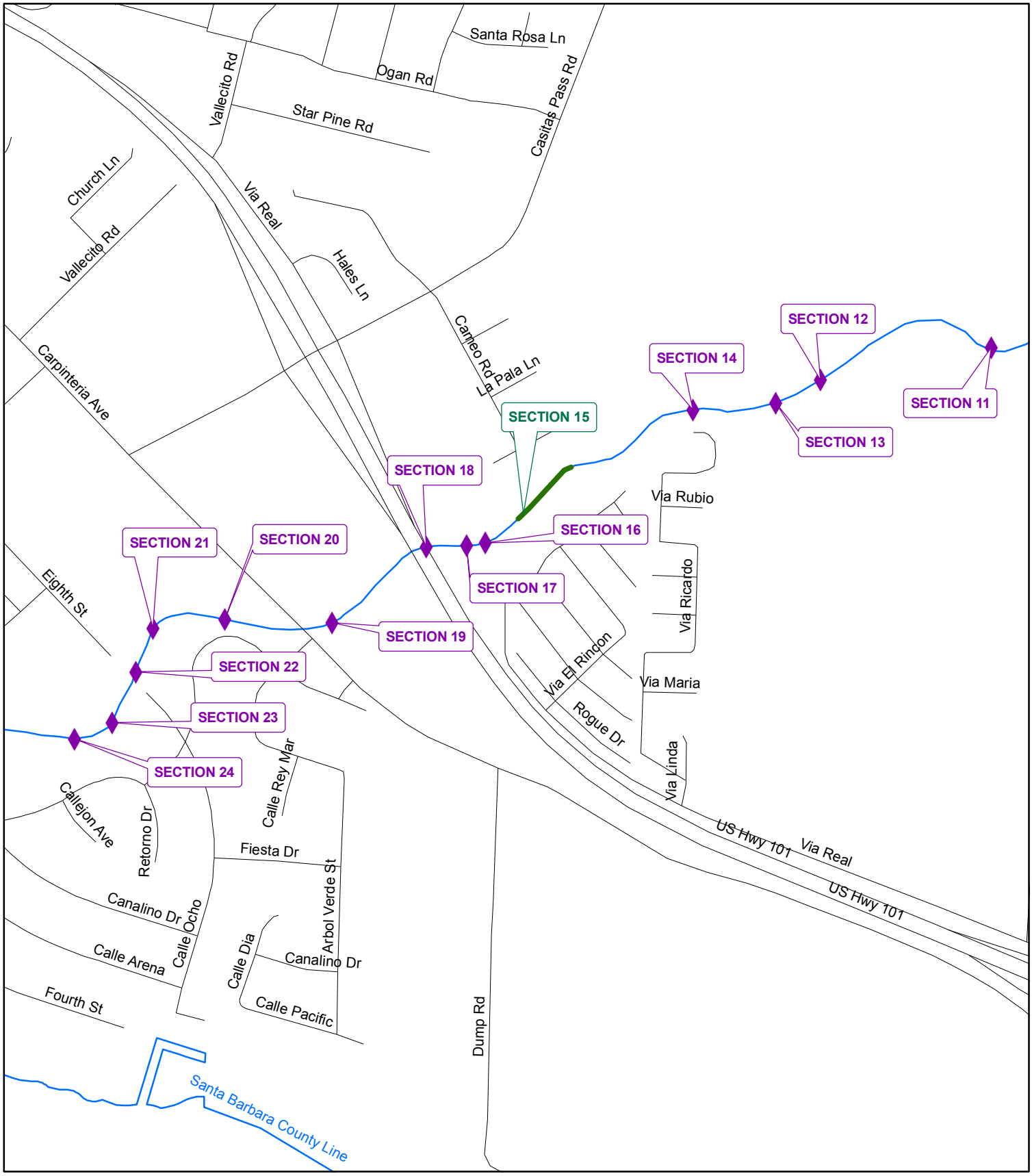
590 295 0 590 Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Carpinteria Creek-B

Legend

- Sites
- Lengths

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

550 275 0 550

Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Carpinteria Creek

Section 4

Section 7

Carpinteria Creek

Section 8

Section 18

VASCULAR PLANT LIST
CARPINTERIA CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia var. braunii	Giant Horsetail	N
Equisetum laevigatum	Smooth Scouringrush	N
Equisetum hyemale var. affine	Giant Scouringrush	N
ANACARDIACEAE		
Rhus integrifolia	Lemonade Berry	N
Schinus molle	California Pepper Tree	I
Schinus terebinthofolius	Brazilian Pepper	I
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia calfornica	California Sagebrush	N
Artemisia douglasiana	Mugwortt	N
Baccharis pilularis	Coyote Bush	N
Baccharis salicifolia	Mulefat	N
Conyza bonoariensis	Horseweed	I
Gnaphalium palustee	Marsh Cudweed	N
Gnaphalium bicolor	Bicolored Cudweed	N
Picris echioides	Pricky Ox Tongue	I
Senecio mikanioides	German Ivy	I
Senecio vulgare	Common Groundsel	I
Sonchus asper	Prickly Sow-thistle	I
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativa	Wild Radish	I
Rorippa nasturtium-aquaricum	Watercress	I

CACTACEAE		
Opuntia oricola	Prickly Pear	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
CYPERACEAE		
Cyperus eragrostis	Nut-Sedge	I
Scirpus microcarpus	Small-fruited Bulrush	N
Scirpus robustus	Prairie Bulrush	N
EUPHORBIACEAE		
Euphorbia lathyrus	Gopher Plant	I
Ricinus communis	Castor Bean	I
FABACEAE		
Medicago sativa	Alfafa	I
Melilotus indicus	Yellow Sweet Clover	I
Vicia sativa	Spring Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
HYDROPHYLLACEAE		
Phacelia ramosissima var. austrolitoralis	Phacelia	N
JUGLANDECEAE		
Juglans californica	So.California Black Walnut	N
JUNACEAE		
Juncus xiphioides	Iris-leaved Rush	N
LAMIACEAE		
Salvia mellifera	Black Sage	N
MALVACEAE		
Malacothamnus fasciculatus var. nuttallii	Nuttall’s Bush Mallow	N
MORACEAVE		
Ficus carius	Cultivated Fig	I
MYRTACEAE		
Eucalyptus globulus	Blue Gum	I

ONAGRACEAE		
Epilobium ciliatum	Willowherb	N
Oenethera hookeri ssp.hookeri	Hooker's Evening Primrose	N
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
Plantago major	Common Plantain	I
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Arundo donax	Giant Reed	I
Cortaderia jubata	Pampas Grass	I
Lolium multiflorum	Italian Ryegrass	I
Paspalum dilatatum	Dallis Grass	I
POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	N
Rumex crispus	Curly Dock	I
Rumex conglomeratus	Green Dock	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Heteromeles arbutifolia	Toyon	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus fremontii	Freemont Cottonwood	N
Populus balsamifera	Black Cottonwood	N
Salix exigua	Sandbar Willow	N
Salix laevigata	Red Willow	N
Salix lucida	Yellow Willow	N
Salix lasiolepis	Arroyo Willow	N
SCROPHULARIACEAE		
Mimulus guttatus var. guttatus	Monkey Flower	N
TROPAEOLACEAE		
Tropaelom majus	Garden Nasturtium	I

TYPHACEAE		
Typha angustifolia	Narrowleaf Cattail	N
Typha latifolia	Common Cattail	N
URTICEAE		
Urtica holosericeo	Stinging Nettle	N

* I = Introduced
  N = Native

EL ENCANTO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins at Phelps Road and continues downstream to the Ocean Meadows Golf Course.

Setting:
Inspected on March 16, 2016.

El Encanto Channel is a mostly channelized tributary to Devereux Creek. A major improvement project at Ocean Meadows Golf Course in 2003 removed sediment from Devereux Creek and allowed El Encanto Channel to drain more effectively from the suburban housing area surrounding the creek. El Encanto contains a small amount of water through the entire length, however the system may dry up during the summer months. The substrate is silty mud, supporting a dense stand of sedges, cattails, rushes, and weedy species such as castor bean, wild radish, mustard, and annual grasses along the banks. The west bank has been revegetated by the District with successful establishment of a narrow willow riparian canopy along an existing access road. The east bank is weedier, with several patches of riparian restoration and recent colonization by native riparian trees and shrubs. Where the riparian canopy is lacking, sunlight reaches the channel invert, resulting and dense patches of cattail and bulrush.

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 2010/2011 Annual Routine Maintenance Plan addenda to more easily display and track the District's restoration efforts.

El Encanto Channel				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2002/2003	2,000	2,000	2,000	0
2004/2005	2,000	2,000	2,000	0
2010/2011	0	0	0	0
2016/2017	300	TBD	TBD	TBD

Wildlife Survey:
In 2007, tidewater gobies were detected in El Encanto Creek and downstream in Devereux Creek. Biomonitoring and relocation as part of maintenance in 2009 and 2010 also detected tidewater gobies at Ocean Meadows Golf Course and in El Encanto Channel. Based on these previous surveys, the District assumes that tidewater gobies could be present throughout the project reach, while the project area is not critical habitat.

The District consulted with the US Fish and Wildlife Service through the Army Corps of Engineers to utilize the programmatic Biological Opinion for tidewater gobies in this drainage.

The District has previously consulted with US Fish and Wildlife Service to utilize a programmatic Biological Opinion for tidewater goby at El Encanto Channel. The District will coordinate in advance with the Fish and Wildlife Service and a permitted biologist to ensure that the protective measures and biomonitoring are implemented as necessary to prevent significant impact to the tidewater goby.

The District will retain a permitted TWG biologist to finalize and perform the TWG relocation effort. Protective measures from the Biological Opinion to be implemented include: The project will occur in fall, after the breeding period. The work area will be isolated with block nets and turbidity-control barriers. The excavation sites will be surveyed and seined to temporarily relocate gobies and other aquatic organisms. Based on previous projects at this same location and consulting with TWG experts, project site will not be dewatered (dewatering in the small, high-organic channel resulted in low DO, high turbidity, and negatively impacted TWG relocation during a previous project in 2009. Performing the survey and relocation in a wetted channel allows water quality to remain suitable for TWG during operations).

Southwestern pond turtles, a state species of concern, have also been detected downstream of the project area in lower Devereux Creek. Pond turtles could potential disperse into El Encanto Channel. Survey and protective measures for tidewater goby will also protect pond turtles, should they be present.

Impacts to the tidewater goby, southwestern pond turtle, and other wildlife species address in the Program EIR are expected to be minor and temporary. With the implementation of monitoring, mitigation measures, and special conditions from the Biological Opinion from the US Fish and Wildlife Service, the proposed maintenance would have no significant impact on sensitive biological resources.

Engineering Analysis:

El Encanto Channel is a tributary to Devereux Creek. Devereux Creek on the Ocean Meadows Golf Course is annually maintained to maintain the channel capacity that was re-established in 2003 that had been lost to past sedimentation. El Encanto Channel has not needed maintenance for several years and sediment has been deposited over the last several years. Vegetation has colonized the instream sediment as well. The sediment and associated obstructive vegetation needs to be removed to restore the channel capacity.

Additionally, willow limbs from willows growing on the banks are projecting into the active channel and can obstruct flows raising water surface elevations or become dislodged creating debris plugs or plugging bridges. Debris plugs or plugged facilities can also lead to increased water elevations and bank erosion.

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 5' wide by 50' long by 2' deep island with cattails growing on it in the active channel that will be desilted. A seine net will be pulled through the work area to move any tidewater gobies and a block net will be placed upstream and downstream of the work area. A gradall working from the top of bank will scoop out the sediment and cattails and place them along the access road to dewater. The sediment will be trucked to an upland disposal site. This will result in 250 square feet of mitigation.

Section 2:
There is a 5' wide by 10' long by 2' deep island with cattails growing on it in the active channel that will be desilted. A seine net will be pulled through the work area to move any tidewater gobies and a block net will be placed upstream and downstream of the work area. A gradall working from the top of bank will scoop out the sediment and cattails and place them along the access road to dewater. The sediment will be trucked to an upland disposal site. This will result in 50 square feet of mitigation.

Section 3:
In this length of approximately 500' there are patches of willow branches that 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

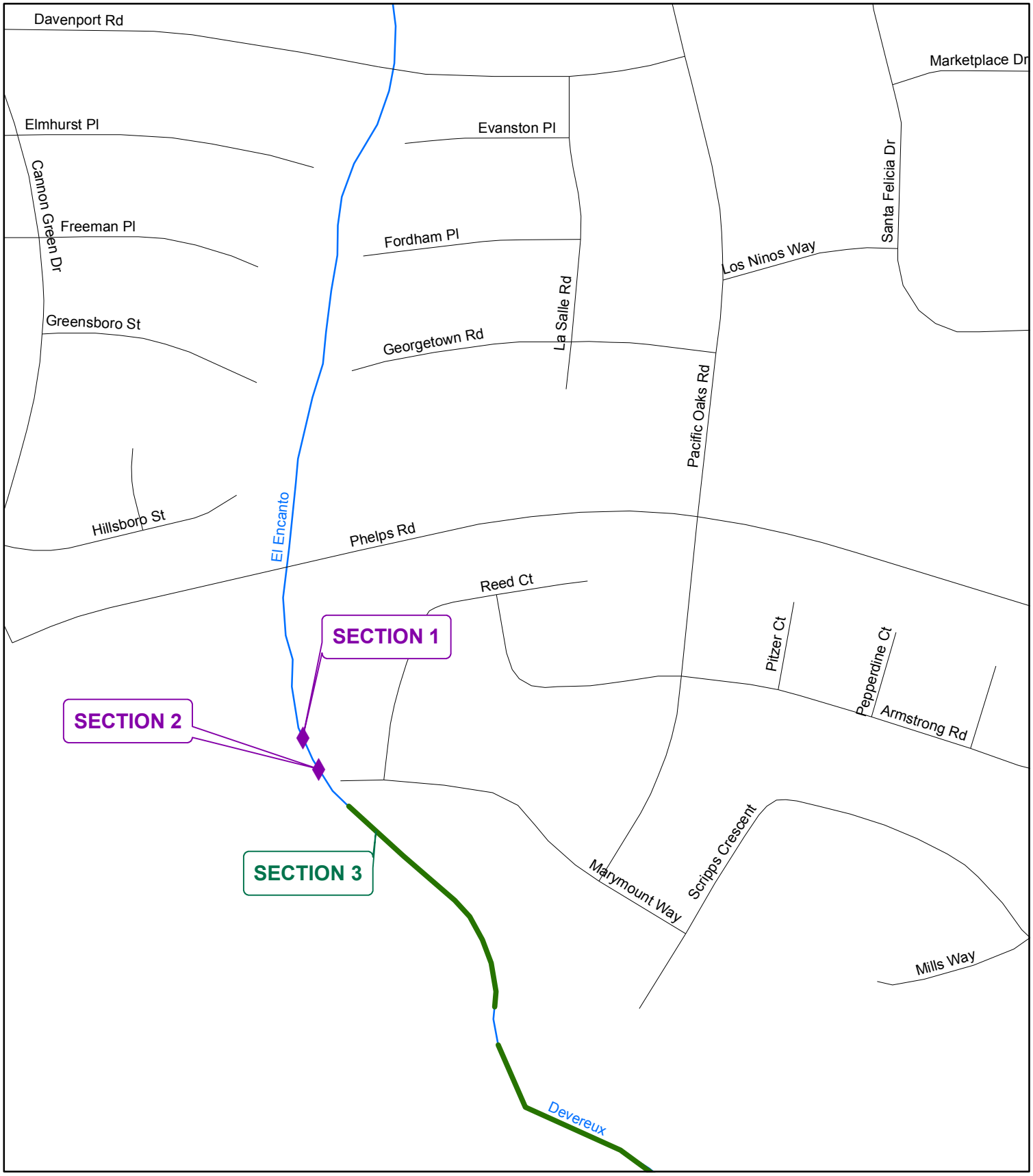
"Impacts and Mitigation Measures" for definitions of the specific impacts and mitigation measures.

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-E	H-1, H-2, H-3, B-7,
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C, WQ-D	H-1, B-2, B-7, W-1, W-2, W-4, W-5, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-C,	B-1, B-2, B-3, H-8,
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-E, FAW-F, FAW-I, FAW-J	B-1, B-2, B-3, B-5, B-6, H-1, W-1, W-2, W-4, W-5
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A, AQ-B	A-1, A-2
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1

Project Specifics:
This project will take 2 days to complete.



Department of Public Works County of Santa Barbara

El Encanto

Legend

- Sites
- Lengths

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

280 140 0 280

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.

El Encanto Creek

Section 2

Section 3

EL ENCANTO DRAIN
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN *
APIACEAE		
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Ageratina adenophora	Ironweed	I
Artemisia douglasiana	Mugwort	N
Baccharis glutinosa	Mulefat	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Picris ecioides	Ox Tongue	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Mexican Elderberry	N
CONVOLVULACEAE		
Calystegia macrostegia ssp.cyclostegia	Morning –Glory	I
CYPERACEAE		
Cyperus eragrostis	Sedge	N
Scirpus californicus	California Bulrush	N
Scirpus robustus	Prairie Bulrush	N
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Melilotus sp.	Sweet Clover	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
GERANEACEAE		
Geranium dissectum	Cutleaf Geranium	I
GROSSULAREACEAE		
Ribes amarum	Gooseberry	N

IRIDACEAE		
Sisyrinchium bellum	Blue-eyed Grass	N
POACEAE		
Avena fatua	Wild Oats	I
Avena barbata	Slender Wild Oats	I
Cortaderia atacamensis	Pampas Grass	I
Hordeum glaucum	Glaurus Barley	I
Lolium perenne	Italian Ryegrass	I
Paspalum diliatum	Dallas Grass	I
Phalaris stenopiera	Harding Grass	I
Polypogon interruptus	Beard Grass	I
PLATANACEAE		
Platanus racemosa	Sycamore	N
POLYGONACEAE		
Rumex crispus	Curly Dock	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
ROSACEAE		
Rosa californica	California Wild Rose	N
Rubus ursinus	Blackberry	N
SALICACEAE		
Polulus fremontii	Fremont Cottonwood	N
Populus trichocarpa	Black Cottonwood	N
Salix hindisana	Sandbar Willow	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
TYPHACEAE		
Typha sp.	Cattail	N

* I = Introduced
N = Native

HOT SPRINGS CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins in Hot Springs Canyon just south of East Mountain Drive and terminates at Hot Springs Road.

Setting:

Inspected April 5, 2016.

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 Mountain Drive downstream where it enters Montecito Creek. Hot Springs Creek is incised and has steep banks at the upstream end. It enters Riven Rock Estates where it is concrete-lined for the most part. Surrounding land uses are large residential, trails, and landscapes areas. The riparian corridor is mostly intact upstream with large specimen sycamores, bays, alder, willow, and ash trees. Landscape trees and shrubs have also colonized many portions of the creek from the adjacent residences. Understory includes blackberry, poison oak, mugwort, leather root, ironweed, and other exotic 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.

Hot Springs Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2016/2017	0	0	0	0

Engineering Analysis:
Several small bridges throughout Riven Rock Subdivision are susceptible to plugging and causing flooding of the adjacent areas. Debris could also be carried into Montecito Creek and cause obstructions within the channel or on bridges. 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.

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 are 7 nonnative myoporum and acacia saplings growing in the active channel that will be brushed.

Section 2:
Nonnative acacia and ironweed are growing in the active channel and 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 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

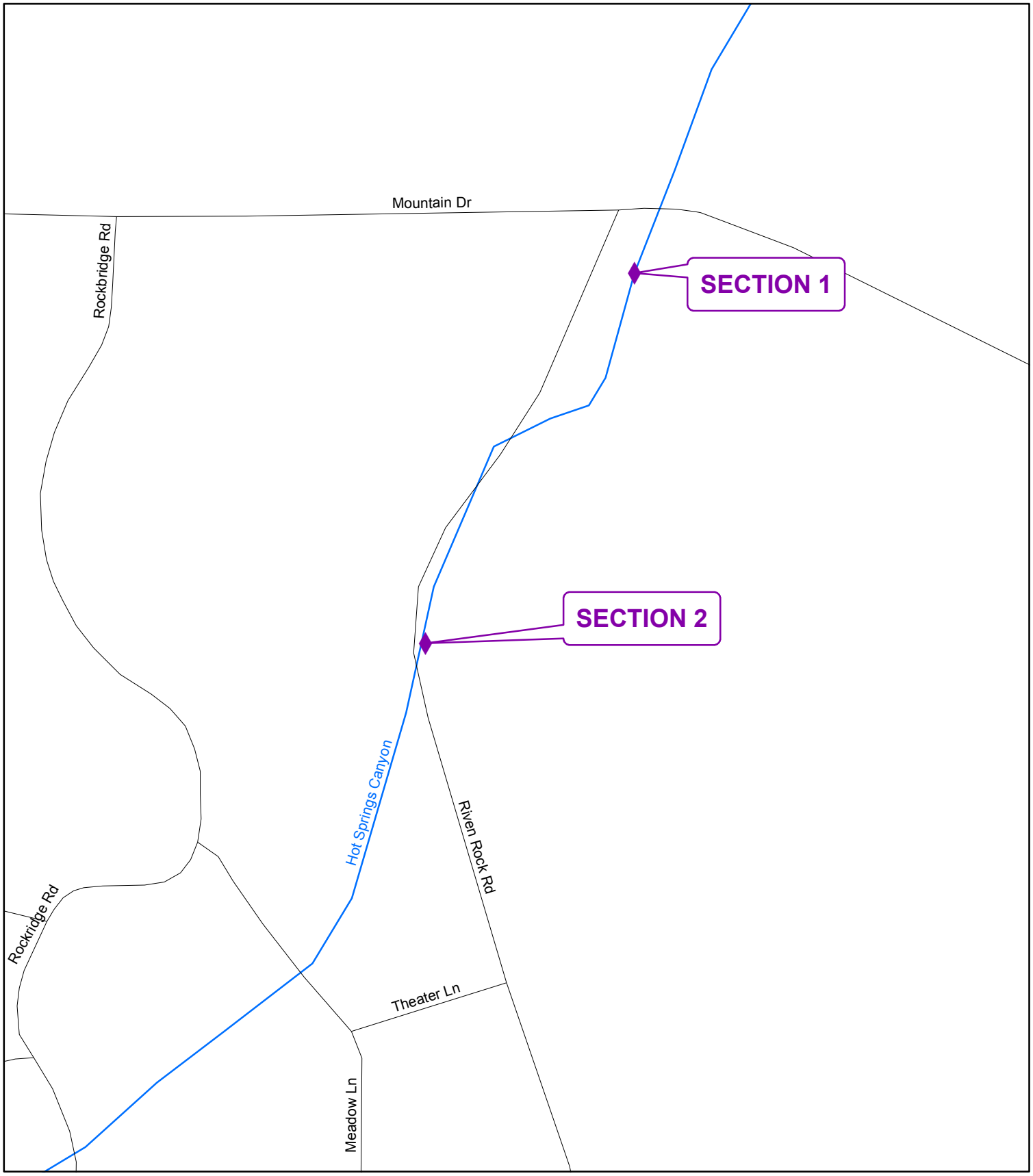
scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

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.

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

*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.



Department of Public Works County of Santa Barbara

Hot Springs Creek

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

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N W E S

Feet

150 75 0 150

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Hot Springs Creek

Section 1

VASCULAR PLANT LIST
MONTECITO CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
ANACARDIACEAE		
Rhus integrefolia	Lemonadesberry	N
Rhus laurina	Laurel Sumac	N
Schinus molle	PepperTree	I
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Ageratina adenophora	Ironweed	I
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis glutinosa	Mulefat	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Cardus pyncnocephalus	Italian Thistle	I
Cirsium vulgare	Bull Thistle	I
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Milk Thistle	I
Sonchus arvensis	Prickly Sow Thistle	I
Taraxcum officinale	Common Dandelion	I
Venegasia carpesioides	Canyon Sunflower	N
BRASSICACEAE		
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N

CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I
CONVULVULACEAE		
Calystegia macrostegia	Morning-Glory	N
EUPHORBIACEAE		
Ricinus Communis	Castor Bean	I
FABACEAE		
Vicia sativa	Spring Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
HYDROPHYLLACEAE		
Phacelia ramossissima	Branching Phacelia	N
JUGLANDACEAE		
Juglans regia	English Walnut	I
LAMIACEAE		
Mentha citrata	Bergamont Mint	N
Mentha Spicata	Spearmint	N
Stachys bullata	Wood Mint	N
MYOPORUM		
Myoporum laetum	Myoporum	I
MYRTACEAE		
Eucalyptus gloubulus	Blue Gum	I
ONAGRACEAE		
Epilobium adenocaulon	Willow-Herb	N
PITTOSPORACEAE		
Pittosporum undulatum	Pittosporum	I
PLANTAGINACEAE		
Plantago Major	Common Plantain	I
PLANTANACEAE		
Plantanus racemosa	Western Sycamore	N

POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	N
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Heteromeles arbitufolia	Toyon	N
Pyracantha sp.	Pyracantha	I
Rubus ursinus	California Blackberry	N
SALICACEAE		
Salix lasiolepis	Arroyo Willow	N
SCROPHULARIACEAE		
Mimulus guttatus	Marsh Monkeyflower	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
URTICACEAE		
Urtica holosericea	Giant Nettle	I

* N - Native
I - Introduced

LAGUNITAS CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins 100 feet upstream of Via Real and continues approximately 300 feet downstream of Carpinteria Avenue.

Setting:
Inspected on March 15, 2016.

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.

Lagunitas Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2003/2004	0	0	0	0
2008/2009	100	500	0*	0
2011/2012	0	0	0	0
2016/2017	0	0	0	0

* 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 ft^2 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 has branches projecting into the active channel that will be limbed.

Section 2:
In this length of approximately 300' there are several willow branches projecting into the active channel that 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

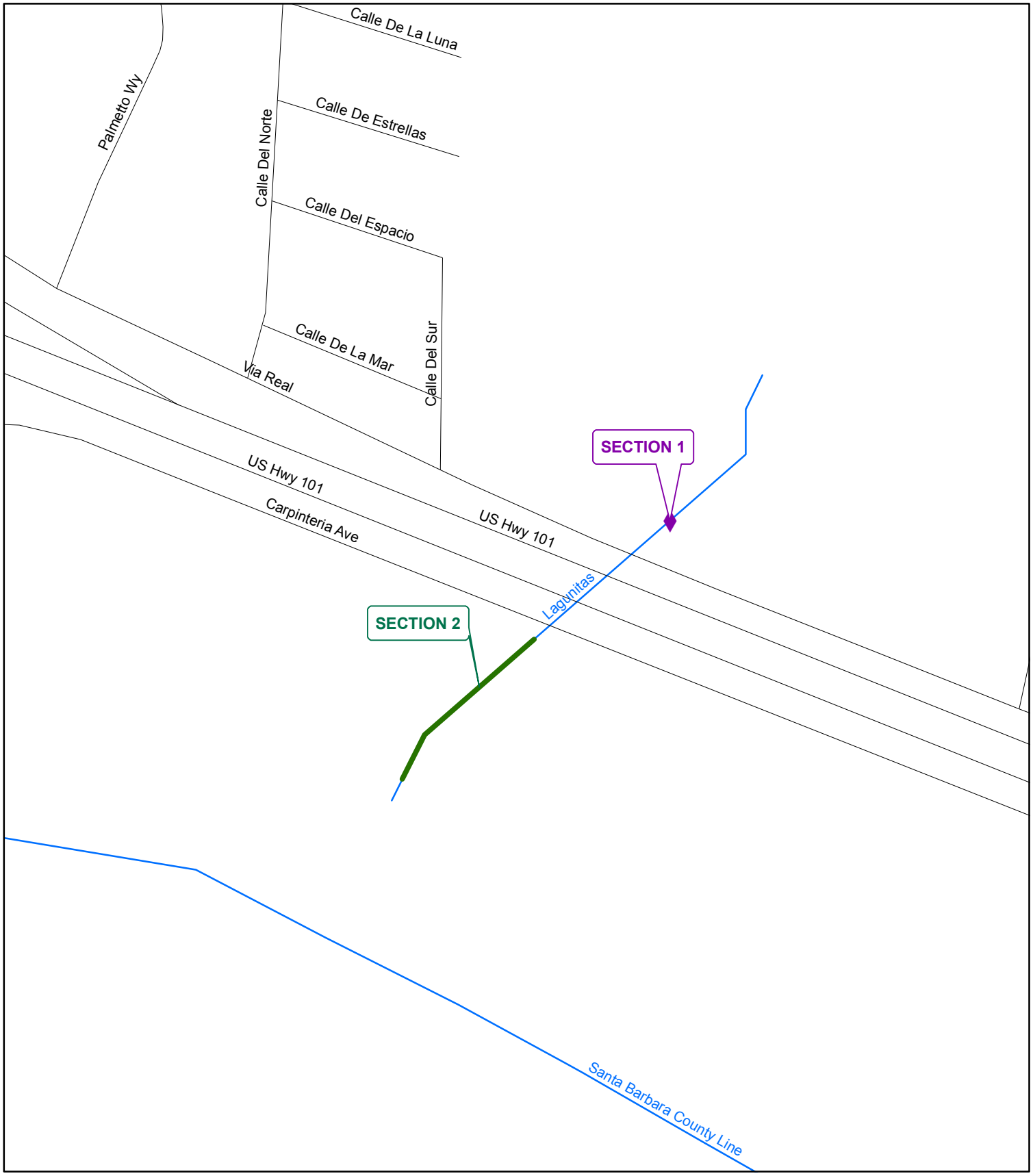
measures.

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-E	H-1, B-7
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B	H-1, B-2, W-2, W-5, W-6, W-7, W-8
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-F, FAW-H, FAW-I,	B-1, B-2, B-3, H-1, W-1, W-2, W-5

Project Specifics:
The project will take 1 day to complete.



Department of Public Works County of Santa Barbara

Lagunitas Creek

Legend

- Sites
- Lengths

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

210 105 0 210

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Lagunitas Creek

Section 1

LAGUNITAS CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	***COMMON NAME***	***ORIGIN***
APIACEAE		
Conium maculatum	Poison Hemlock	
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Carpobrotus edulis	Iceplant	I
Picris echioides	Ox Tongue	I
Xanthium strumarium	Cocklebur	I
BRASSICACEAE		
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Scirpus californicus	California Bulrush	N
FABACEAE		
Melilotus albus	White Sweet Clover	I
PAPAVERACEAE		
Eschscholzia callifornica	California Poppy	N
PINACEAE		
Pinus sp.	Pine Tree	N
POACEAE		
Cortaderia atacamensis	Pampas Grass	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
SALICACEAE		
Salix lasiolepis	Arroyo Willow	N

SCIENTIFIC NAME	***COMMON NAME***	***ORIGIN***
SOLANACEAE		
Solanum douglasii	Douglas Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N

* I = Introduced
  N= Native

LOWER DEVEREUX CREEK ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins where El Encanto Drain enters Ocean Meadows Golf Course and continues downstream to just upstream of the Devereux Slough at Venoco Road.

Setting:
Inspected on March 16, 2016.

Devereux Creek originates in the foothills of the Santa Ynez Mountains and drains a 2,369 acre watershed capable of producing 3,100 cfs during a 100 year return period precipitation event. Devereux Creek receives flow from several drainages that begin above Highway 101 between Glenn Annie Road and Winchester Canyon Road. These drainages ultimately converge on Ocean Meadows Golf Course and drain into Devereux Slough.

The maintenance area begins on Ocean Meadows Golf Course near Marymount Way and Scripps Crescent Drive, where El Encanto Channel meets the Golf Course property. The maintenance reach extends from the golf course foot bridge 2,500 feet downstream to a check structure on the access road just upstream of Devereux Slough on UCSB property.

The banks have several small willow thickets in the upper reaches and then the vegetation transitions into high salt marsh species such as coyote bush, coast goldenbush, saltbush, frankenia, and pickleweed. The channel invert has been colonized with mostly bulrush but also contains occasional clumps of cattails. This vegetation is quite dense in some locations and reduces flow capacity as well as trapping sediment. Because the District is not allowed to use any sort of herbicide in this area, yearly mowing is required in order to maintain creek capacity.

The District has been implementing an extensive restoration project along the entire length of the channel proposed for maintenance which was initially only moderately successful, but is becoming stronger in recent years. In particular, the high salt marsh habitat has done very well along the lower 300 feet of both banks, while the willow woodland has not been as successful. In 2008 through 2010, portions of the willow woodland components of the restoration were planted with more salt tolerant species and shrubs found in the high salt marsh habitat. Performance criteria is now being met in these reaches.

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.

Lower Devereux Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation	Proposed Restoration	Restoration Implemented	Surplus Restoration
2003	*	*	3.05 acres*	0
2007/2008	0	0	0	0
2008/2009	0	0	0	0
2009/2010	0	0	0	0
2010/2011	0	0	0	0
2011/2012	0	0	0	0
2012/2013	0	0	0	0
2013/2014	0	0	0	0
2014/2015	0	0	0	0
2015/2016	0	0	0	0
2016/2017	0	0	0	0

*Impacts and associated restoration for the Lower Devereux Creek Project were originally identified and mitigated for in 2003 under separate permits to complete the project and all restoration requirements. Since 2007 the District has included the maintenance of this project area within the Annual Routine Maintenance Plan. This project does not require any additional restoration square footage. Maintenance and monitoring of the existing restoration area is ongoing.

Wildlife Survey:

In 2007, tidewater gobies were in Devereux Creek and upstream of the maintenance area. Biomonitoring and relocation as part of maintenance in 2009 also detected tidewater gobies in the sediment basin at Ocean Meadows Golf Course. Based on these previous surveys, the District assumes that tidewater gobies are present throughout the project reach. The District consulted with the US Fish and Wildlife Service through the Army Corps of Engineers to utilize the programmatic Biological Opinion for tidewater gobies in this drainage.

Southwestern pond turtles, a state species of concern, have also been detected in lower Devereux Creek. Maintenance proposed does not involve heavy equipment or active disturbance in the creek channel. Mowing will be performed from the tops of the adjacent banks, as is routinely performed by experienced District staff. Mowing will occur only above the water level. The USFWS has determined that this type of maintenance is not expected to impact the gobies.

Impacts to the tidewater goby, southwestern pond turtle, and other wildlife species address in the Program EIR are expected to be minimal. Disturbance during the maintenance operations would be minor and temporary. With the implementation of monitoring, mitigation measures, and special conditions from the Biological Opinion from the US Fish and Wildlife Service, the proposed maintenance would have no significant impact on sensitive biological resources.

Engineering Analysis:

Obstructive vegetation growing in the active channel traps sediment, thus reducing channel capacity and can also become mobilized during flood flows, raising the water surface elevation as well as plugging bridges and culverts located downstream. Higher

water surface elevations within this drainage preclude storm drains from nearby developments from draining which leads to property flooding. Additionally, since 2003, the Coastal Commission permit precludes the use of herbicide within the channel. Without herbicide, the mowed bulrush and cattails readily regrow each year and must be re-mowed every maintenance season to regain channel capacity and to prevent the channel from filling in with sediment which would require a very extensive and highly impactful desilting operation. Several years ago when the District renewed the Coastal Development permit with the Ca. Coastal Commission, the District requested permission to use herbicide on the mowed vegetation to reduce the need for chronic maintenance at this site, however the use of herbicide was not approved and the channel must be mowed annually. This site is part of the North County Open Space Project proposed by UCSB that will reconfigure the channel throughout this area. Once that project is implemented, the District will no longer need to provide maintenance through this reach of Lower Devereux Creek.

Adjacent homes were flooded and many others threatened by flooding over the years due to the proximity of the development. Ongoing maintenance of previous clearing efforts is needed to ensure these homes are not threatened.

Project Description:

Section 1:
From the area where Lower Devereux Creek enters Ocean Meadows Golf Course, to the area immediately upstream of the entrance to Devereux Slough, bulrush and cattails are colonizing the invert, decreasing the channel capacity, and blocking flows. Using a Gradall with a mower attachment, working from the top of the bank, obstructive vegetation will be cut from the center of the channel. A band of vegetation approximately 8' wide will be left on each side of the mowed area. The channel, along with associated expanded wetlands within several portions of the project length, is wide enough that cattail/bulrush habitat is retained along the channel to provide wildlife habitat for the length of the project. Although unlikely but possible, in the event that the Gradall cannot reach far enough into the channel to mow some vegetation, small areas may be cut by one or two people walking in the channel using weed eaters. Impacts associated with this maintenance have already been mitigated with the implementation of 3.05 acres of restoration along Lower Devereux Creek beginning in 2003.

The restoration sites along both sides of the creek channel had areas replanted and expanded in 2009/2010, with special considerations for providing access for the Gradall mower. Certain patches were left without large shrubs and trees to allow the equipment to reach the channel with the mowing arm. The mowing operation will use the designated mowing stations to reach into the channel, avoiding the restoration plantings as much as feasible.

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.

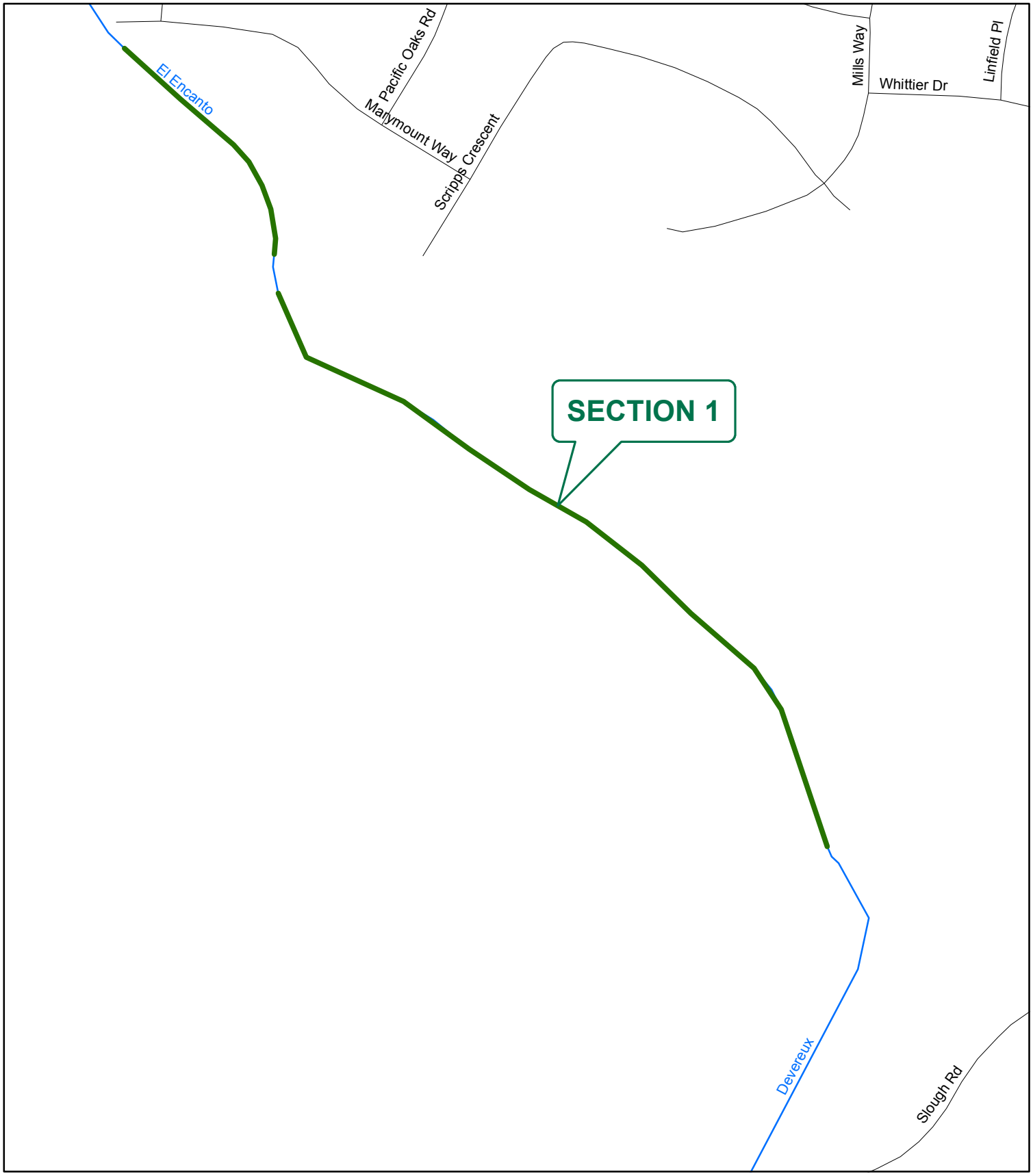
Impacts:

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C	H-1, B-2, W-2, W-4, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-F	B-1, B-2, B-3, H-1, W-2, W-5
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A, AQ-B	A-1, A-2
Noise EIR sections 5.6.2, 5.6.3	N-A	N-1
Visual EIR sections 5.9.2, 5.9.3	V-A	V-1

Project Specifics:
This project will take 4 days to complete.



Department of Public Works County of Santa Barbara

Devereux Creek

Legend

Lengths

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

270 135 0 270

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Lower Devereux Creek

Section 1

VASCULAR PLANT LIST
LOWER DEVEREUX CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN
ASTERACEAE		
Artemesia californica	Ca. Sage	N
Baccharis pilularis	Coyote bush	N
Cotula coronopifolia	Brass Buttons	I
Encelia californica	Bush Sunflower	N
Isocoma menziesii	Golden Bush	N
BRASSICACEAE		
Rorippa nasturtium -aquaticum	Watercress	I
CHENOPODIACEAE		
Atriplex lentiformis lentiformis	Quailbush	N
Atriplex semibaccata	Australian Saltbush	I
Atriplex trangularis	Spearscale	I
Salacornia virginica	Pickleweed	N
Suaeda tacifolia	Wooly Seablite	N
CYPERACEAE		
Scirpus californicus	California Bulrush	N
Cyperus eragrostis	Nutsedge	N
FRANKENIACEAE		
Frankenia salina	Alkali Heath	N
MALVACEAE		
Malva prviflora	Cheeseweed	I
PLANTANACEAE		
Platanus racemosa	Western Sycamore	N
PLANTAGINACEAE		
Plantago coronopus	Cut-leaved Plantain	I
Plantago lanceolata	English Plantain	I
Plantago major	Common Plantain	I
POLYGONACEAE		
Eriogonum parvifolium	Seacliff Buckwheat	N

POACEAE		
Distichlis spicata	Saltgrass	N
Hordeum brachyantherum	Ca. Barley	N
Leymus tritcoides	Alkali Rye	N
Loleum multiflorum	Italian Ryegrass	I
Nassella pulchra	Purple Needlegrass	N
Pennisetum clandestinum	Kikuyu Grass	I
Phalaris aquatica	Harding Grass	I
POLYGONACEAE		
Rumex crispus	Curly Dock	I
ROSACEAE		
Rosa californica	California Wild Rose	N
Rubus discolor	Himalayan Blackberry	I
SALICACEAE		
Populus trichocarpa	Black Cottonwood	N
Salix lasiolepis	Arroyo Willow	N
TYPHACEAE		
Typha latafolia	Cattail	N
URTICACEAE		
Urtica dioica	Stinging Nettle	N
VERBENACEAE		
Verbena lasiostachys	Western Vervain	N

* = Introduced
= Native

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 23, 2016.

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 drainages 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 dry through the majority of the maintenance areas during the assessment. The lower portions of the creek often remain wet year round from urban runoff and high groundwater.

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.

Mission Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2002/2003	3,425	7,500	0	-3,425
2005/2006	4,917	1,000	0	-8,342
2006/2007	0	0	0	-8,342
2008/2009	1,060	17,625	12,000+3000*	2,598
2009/2010	1,080	2,625**	0	1,518
2012/2013	1710	0	0	-192
2013/2014	1520	0	LCMB 652	-1060
2014/2015	480	0	LCMB 480	-1060
2015/2016	1400	0	LCMB 2460	0
2016/2017	105+ One 8" willow	250 +10 willows	TBD	TBD

*12,000 square feet of restoration was implemented by the District and 3,000 square feet of restoration was implemented by the City of Santa Barbara, therefore the District only claims mitigation credit for 12,000 square feet.

**This 2,625 square feet of restoration was implemented by the City of Santa Barbara, therefore the District will not claim this area as mitigation.

Wildlife Survey:

Maintenance at Sections 3 and 16 requires heavy equipment operating in the creek channel. Section 3 is dry and will remain dry during maintenance. District environmental staff will inspect and monitor the rock placement to minimize disturbance to wildlife and habitat. No sensitive species will be affected. Section 16 will likely have a trickle of flow during maintenance. The work area will be surveyed prior to operations to determine the presence or likelihood of any sensitive species. Steelhead trout and tidewater goby are known to occur in other reaches of Mission Creek; however the project area shallow with a concrete lined floor, therefore these species are unlikely to be present. BMPs and protective measures will be deployed per the terms of the District's Biological Opinions with USFWS and NMFS if sensitive species are detected. Water diversion and turbidity control measures will be installed as part of the District's standard practices.

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:
An alder sapling (<1" DBH) will be brushed on the right side of the channel. Multiple native trees have been left on the left side of the channel and any branches growing lower than 4' from the channel bottom will be limbed to lessen the chance of catching debris during storm flows. This section was mitigated for under the 15/16 AP.

Section 2:
Nonnative ironweed is growing in the active channel and will be brushed and a cottonwood branch will be limbed on the left side of the channel.

Section 3:
A rock and sediment outcropping on the left side of the channel is forcing flows to the right bank and causing bank erosion. There is a structure within 25 feet of the top of bank which could become threatened. An excavator will access the channel approximately 100' downstream at an existing access point and walk upstream. The rock and sediment outcropping will be moved from the left side to the right side where the erosion is occurring to direct flows away from the sheer bank. Willows growing on the outcropping will be limbed and cuttings placed on the right bank and allowed to grow to provide further bank protection.

Section 4:
A 5" dia. by 25' long sycamore branch will be removed from the active channel.

Section 5:
Ironweed will be brushed from the active channel.

Section 6:
Nonnative umbrella sedge will be brushed.

Section 7:
A willow seedling growing in the active channel will be brushed resulting in 5 square feet of mitigation.

Section 8:
Willow branches projecting into the active channel will be limbed.

Section 9:
Willow branches projecting into the active channel will be limbed.

Section 10:
Nonnative eucalyptus saplings will be brushed from the active channel.

Section 11:
A down tree branch will be removed from the concrete channel.

Section 12:
The District is partnering with the City of Santa Barbara Creeks Division to remove invasive vegetation at the Valerio Bridge. Just upstream of the bridge on the southwest side of the creek, a stand of non-native tree-of-heaven has become established and is spreading. A few tree-of-heaven sprouts have emerged on the floor of the channel and the northeast bank as well. The District will work with the City to hire a tree-maintenance contractor to cut and remove the non-native species. A spot-spray of herbicide may be applied to the cut stumps. After the invasive vegetation is removed, the left bank will be prepared for native revegetation.

Section 13:
200 square feet of willow seedlings and cattail are growing in the active channel and will be brushed. 100 square feet of mitigation was completed in this section under the 14/15 AP so this section will result in 100 square feet of mitigation.

Section 14:
A willow with 5 trunks is growing on the very edge of the channel which has a concrete wall. Only the 8" trunk nearest the channel center will be removed, the other 4 will be left in place to provide shading. Mitigation will consist of planting 10 new willow trees.

Section 15:
50 square feet of willow seedlings and cattail will be brushed from the active channel as well as nonnative castor bean. This section was mitigated for under the 14/15 AP.

Section 16:
A dense stand of willows is overhanging and projecting into the active channel for a length of 200'. Only the branches projecting into the active channel will be limbed.

Section 17:
The channel is concrete lined in this section and has a 15' wide by 500' long area of accumulated sediment with mostly nonnative vegetation and 500 square feet of native vegetation growing. Using a piece of equipment working from within the channel, the concrete channel will be excavated and material taken to an upland disposal site. If any flowing water is present at the time of work it will be piped around the site and discharged downstream with a gravity fed system. Haybales wrapped in filter fabric will be placed at the upstream and downstream work limits to filter out any turbid water from the site. This section was mitigated for under 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

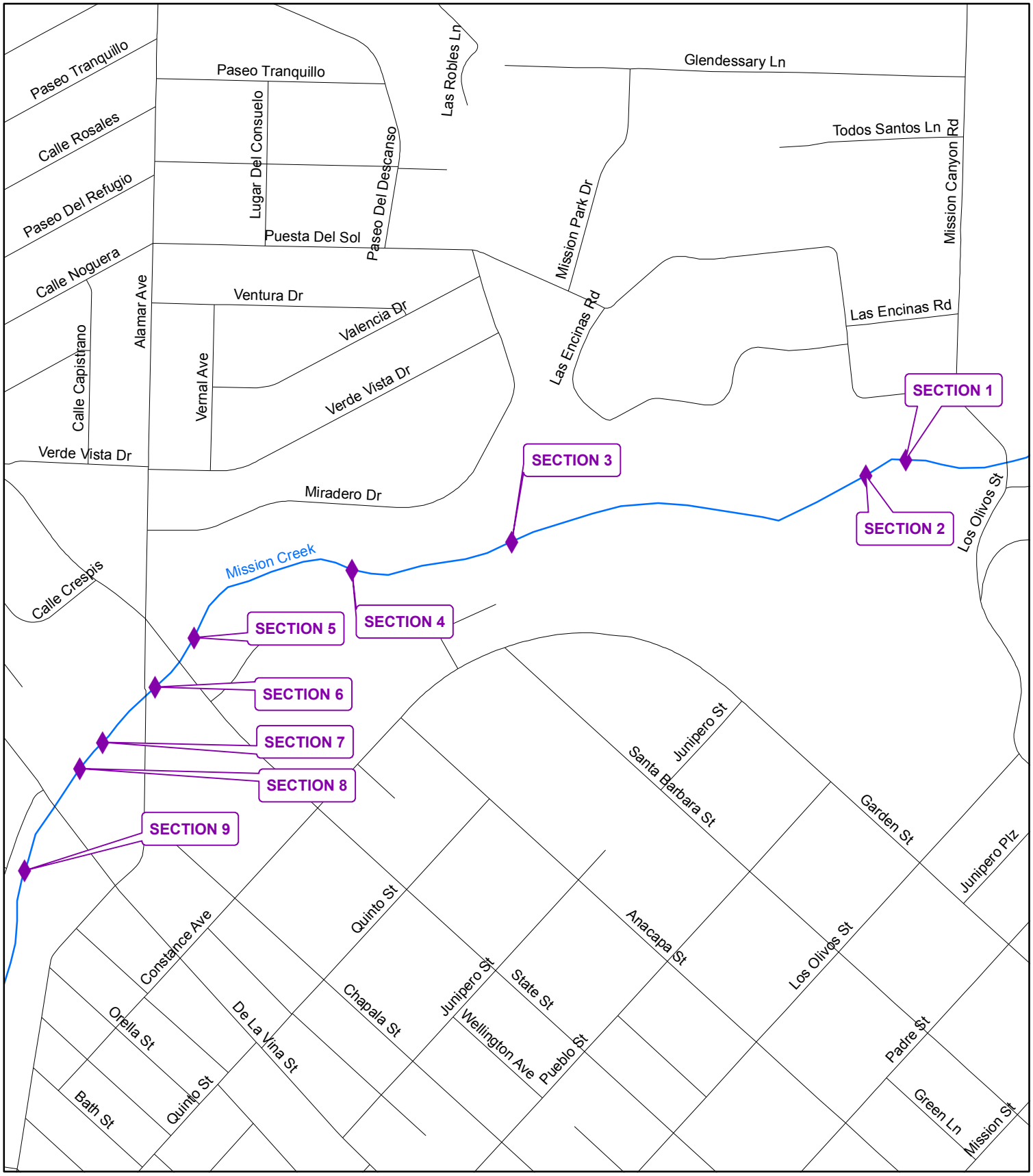
would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C	H-1, B-2, W-2, W-4, W-6, W-7, W-8,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I	B-1, B-2, B-3, B-5, W-1, W-2,
Public Health EIR section 5.10	PH-A	W-2

*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.



Department of Public Works County of Santa Barbara

Mission Creek-A

Legend

- Sites

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

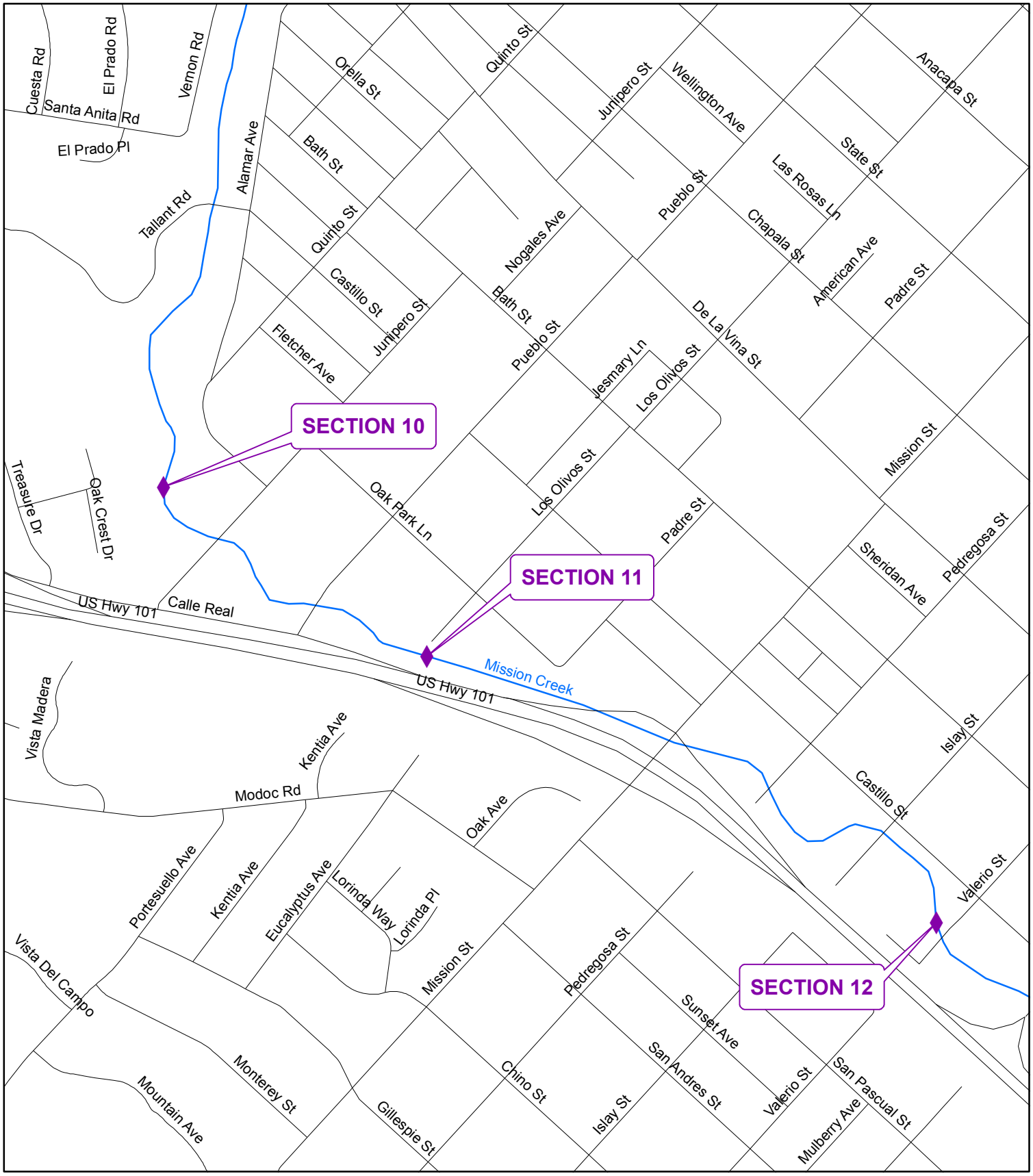
460 230 0 460

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Legend

- Sites
- Lengths

Mission Creek - B

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

470 235 0 470

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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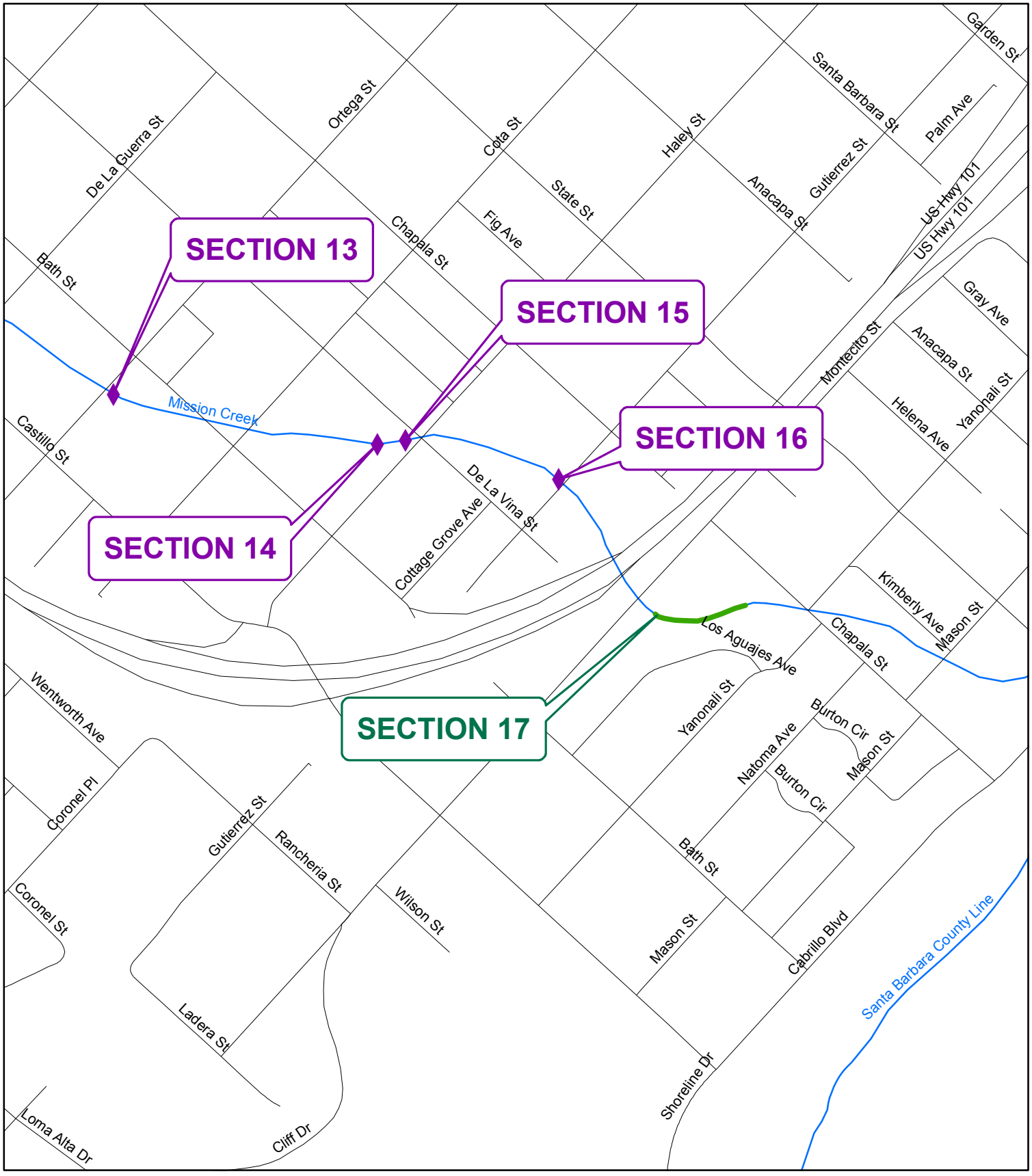


Department of Public Works County of Santa Barbara

Legend

- Sites
- Lengths

Mission Creek - C

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet 400 200 0 400

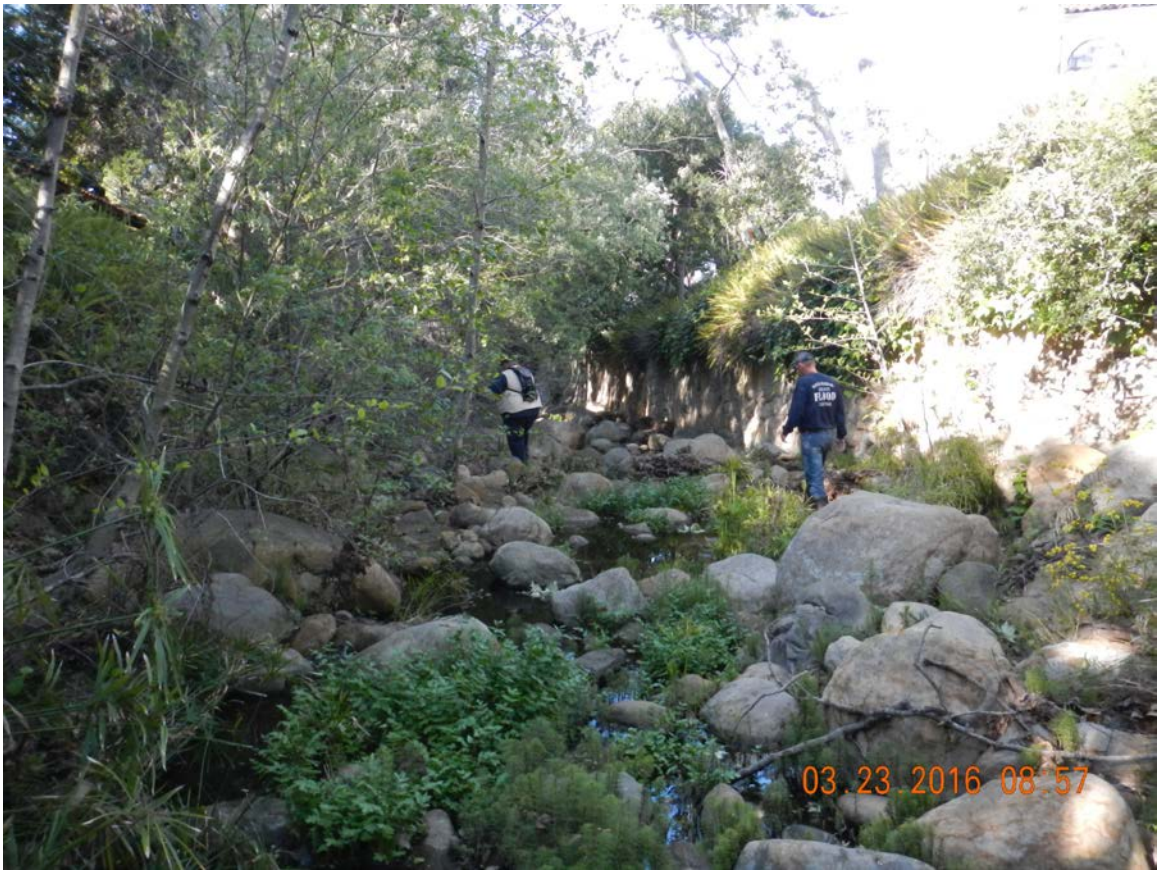
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Mission Creek



Section 1

Section 3

Mission Creek

Section 11

Section 12

Mission Creek

Section 14

Section 17

VASCULAR PLANT LIST
MISSION CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telemateia	Giant Horsetail	N
APIACEAE		
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Ageratina adenophora	Ironweed	I
Aremisia douglasiana	Mugwort	N
Sonchus arvensis	Prickly Sow Thistle	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Melilotus indicus	Yellow Sweet Clover	I
Vicia benghalensis	Vetch	I
PLANAGINACEAE		
Plantago lanceolate	English Plantain	I
Plantago major	Common Plantain	I
PLATANCEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Arundo donax	Giant Reed	I
Oryzopsis miliacea	Rice Grass	I
Polypogon monspeliensis	Rabbitsfoot	I
SOLANACEAE		

Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N

* I = Introduced
N = Native

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 at Hot Springs Road.

Setting:
Inspected March 21, 2016.

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. Montecito Creek through this region is relatively steep, with large boulders and step-pools. Surrounding land uses are large residential, trails, and landscapes areas. The riparian corridor is mostly intact, with large specimen sycamores, bays, alder, willow, and ash trees. Landscape trees and shrubs have also colonized many portions of the creek from the adjacent residences. Understory includes blackberry, poison oak, mugwort, leather root, ironweed, and other exotic species.

The creek invert is populated with willow and alder sprouts and saplings growing among the boulders of the creek bed. 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 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.

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.

Montecito Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	2,400	2,400	2,400	0
2005/2006	0	0	0	0
2007/2008	575	2,500	0	-575
2009/2010	775	2,500*	0	-1,350
2013/2014	925	0	LCMB 2,275	0
2014/2015	665	0	LCMB 660	0
2015/2016	700	0	LCMB 700	0
2016/2017	10	0	TBD	TBD

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:
There is an 8" DBH x 25' long down alder with root wad intact. All exterior branches will be removed from the alder leaving the trunk and root wad in place as KWD.

Section 2:
There is a 5" DBH x 35' long alder with intact root wad down in the active channel. The root wad will be pulled to the bank and trunk placed at a 45 degree angle pointing downstream and left as KWD.

Section 3:
An alder (7"DBH x 25') has fallen and it resting somewhat upright against another alder. The alder will be removed from the active channel. Due to its positioning, it is too dangerous for the crew to try cut up into LWD or reposition as KWD.

Section 4:
There is a down willow that is still growing with lower branches projecting into the active channel. The lower branch will be cut where the trunk forks and trunk left in place to continue to grow. The rest of the tree will be removed.

Section 5:
There is a down 5" DBH x 25' L alder. A 6' section will be left in the active channel as LWD and the rest of the tree will be removed from the channel.

Section 6:
A 7" DBH x 35' L alder is down in the active channel. An 8' length will be left in the channel as LWD and the rest of the tree will be removed.

Section 7:
In this section there is an island (15'W x 75'L) that has been left for many years. The island has mostly nonnative vegetation growing on it with a few scattered native trees. All of the nonnative vegetation will be brushed and all native species will be left in place.

Section 8:
There are two 1" DBH alders growing right next to each other in the active channel. The smaller alder will be brushed and the larger alder left in place as a single trunked tree. This will result in 5 square feet of mitigation.

Section 9:
There is a down alder in the active channel that will be removed.

Section 10:
A down branch in the active channel will be removed.

Section 11:
A nonnative fig tree and ironweed will be brushed from the active channel.

Section 12:
A 9" DBH x 15' L nonnative acacia tree is down in the active channel. The tree will be cut into a 10' length and secured on the right bank as LWD.

Section 13:
2 (8" DBH x 30') alders are down and leaning on wires spanning the creek. The alders will be removed from the creek. Due to the position of the trees it is too dangerous for the crew to attempt to maintain them as LWD or KWD.

Section 14:
A 1" DBH willow will be brushed resulting in 10 square feet of mitigation.

Section 15:
This section is the beginning of the concrete lined section. There are 5 down cedars spanning the active channel that will be removed. If possible, some will be transported offsite and kept for possible LWD/KWD.

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.

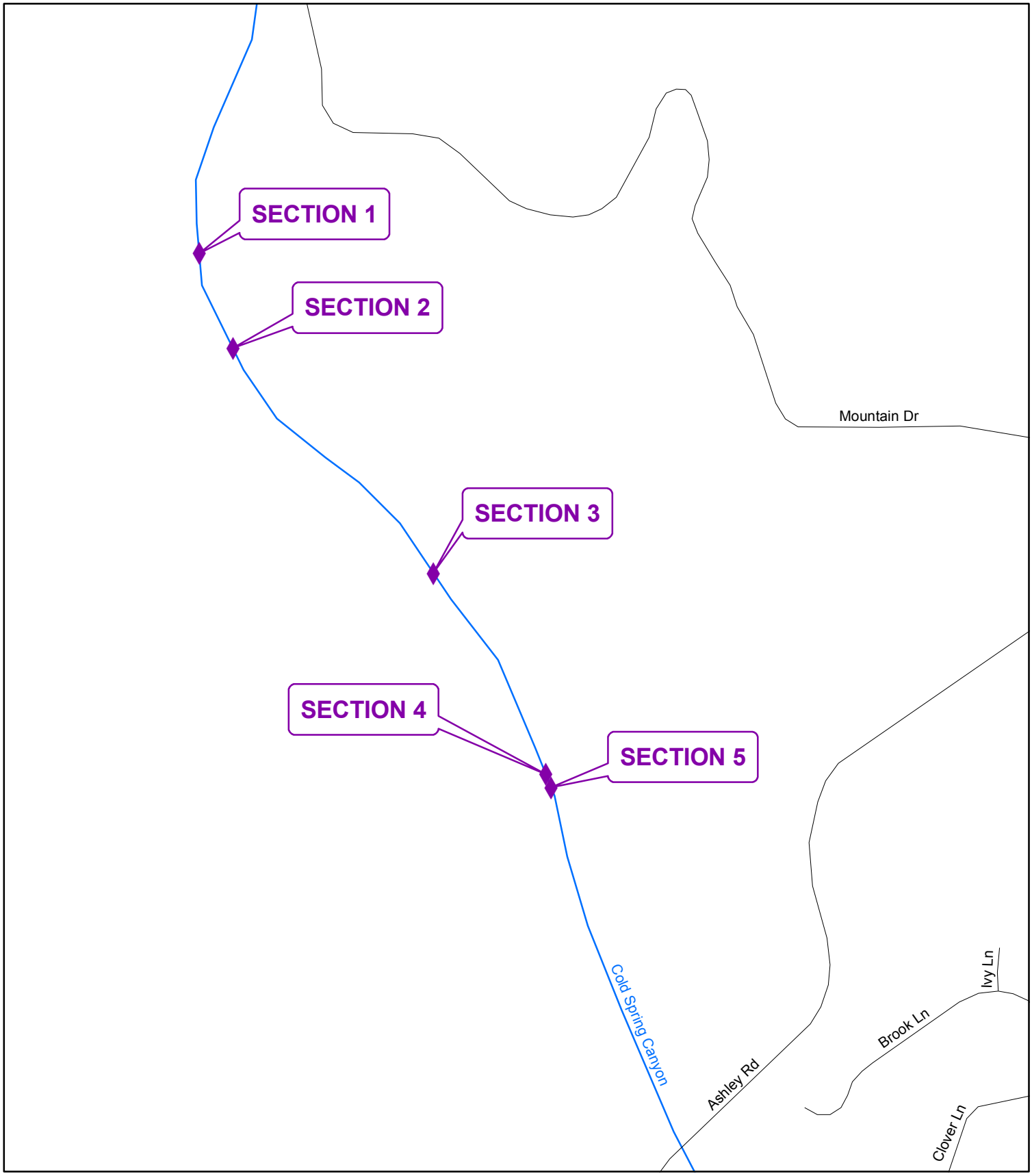
Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below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

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

*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 days to complete.



Department of Public Works County of Santa Barbara

Montecito Creek-A

Legend

♦ Sites

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N W E S

Feet

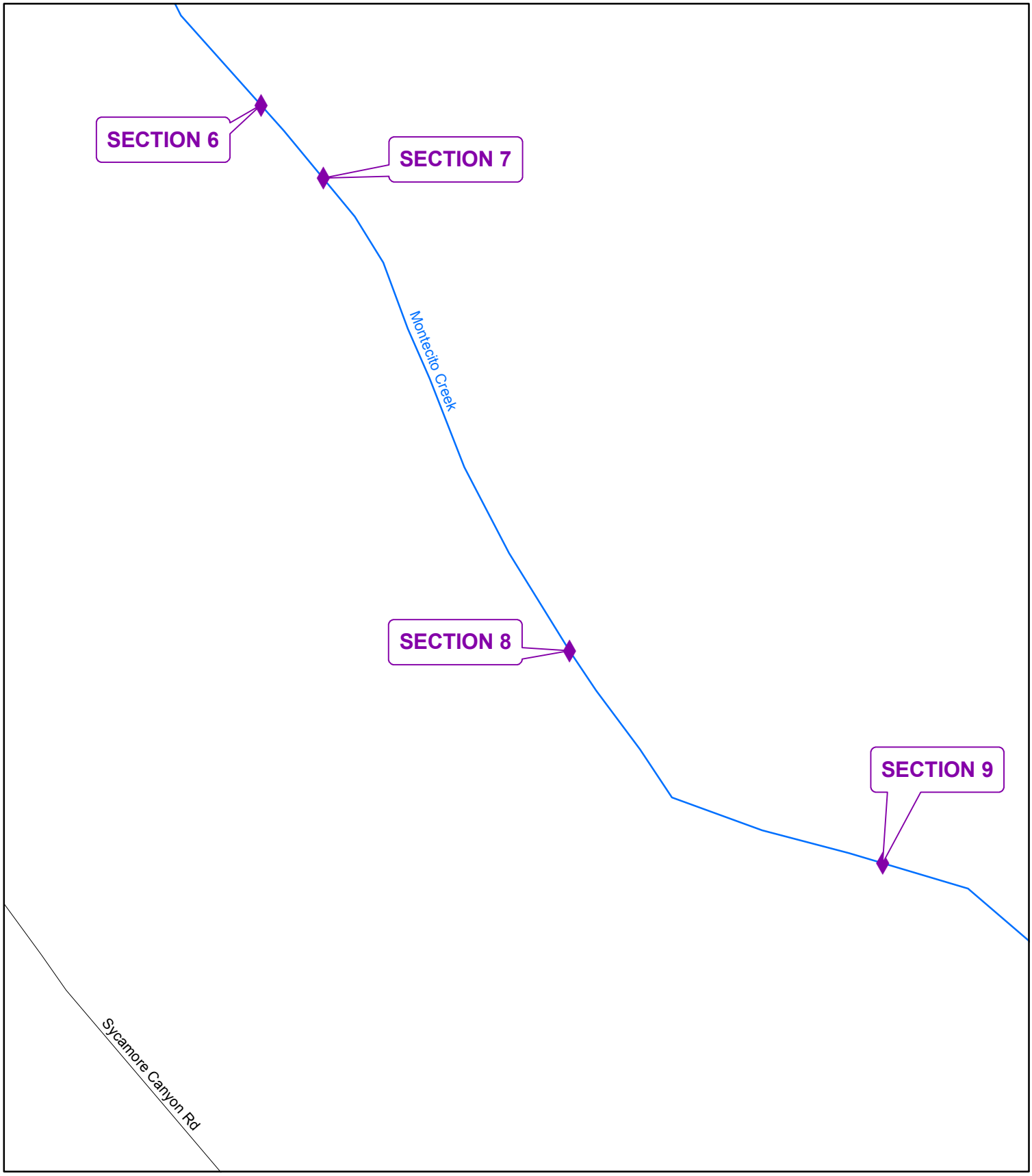
170 85 0 170

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Montecito Creek-B

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

150 75 0 150

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
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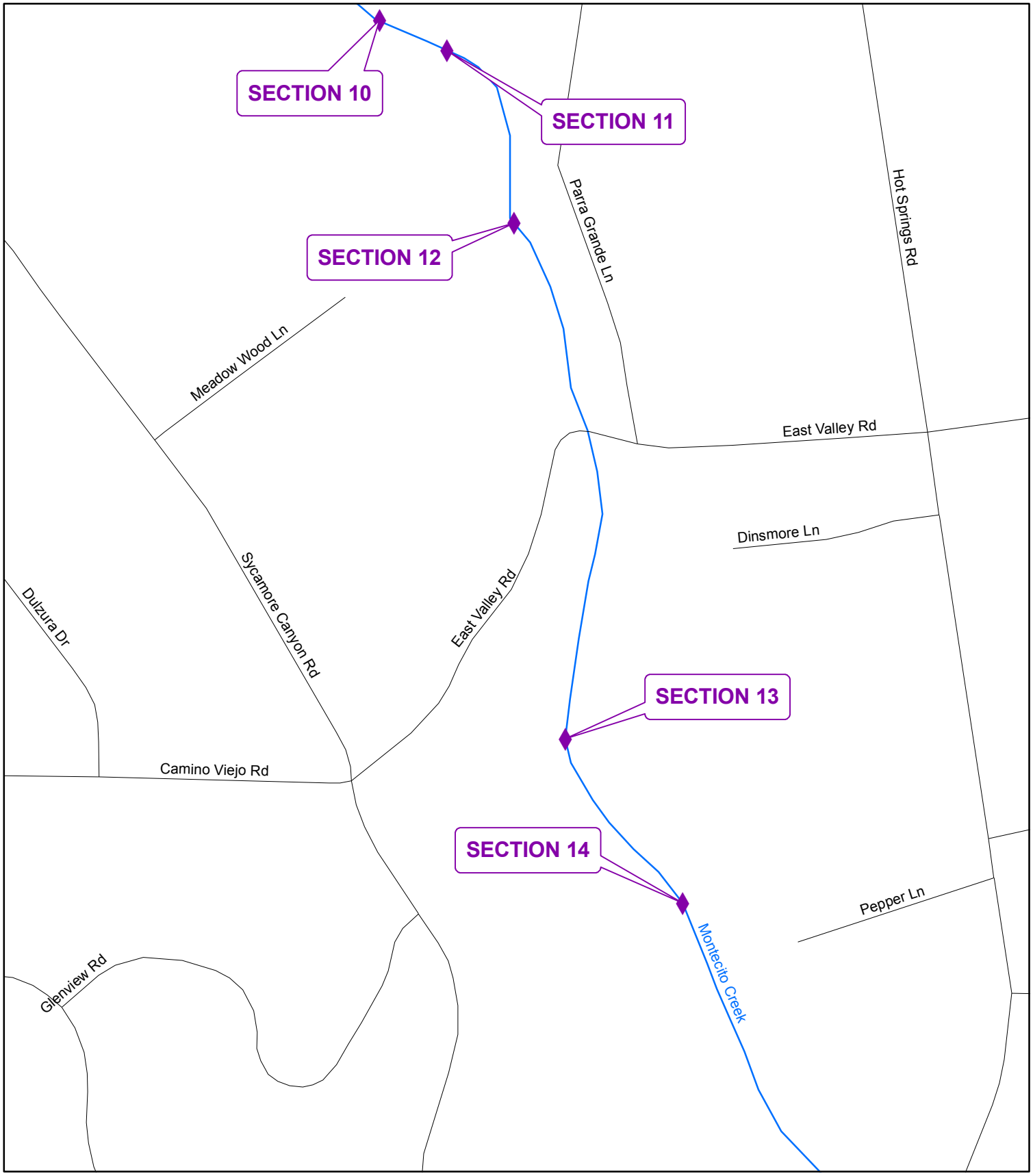

Department of Public Works County of Santa Barbara

Montecito Creek-C

Legend

♦ Sites

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N W E S

Feet

260 130 0 260

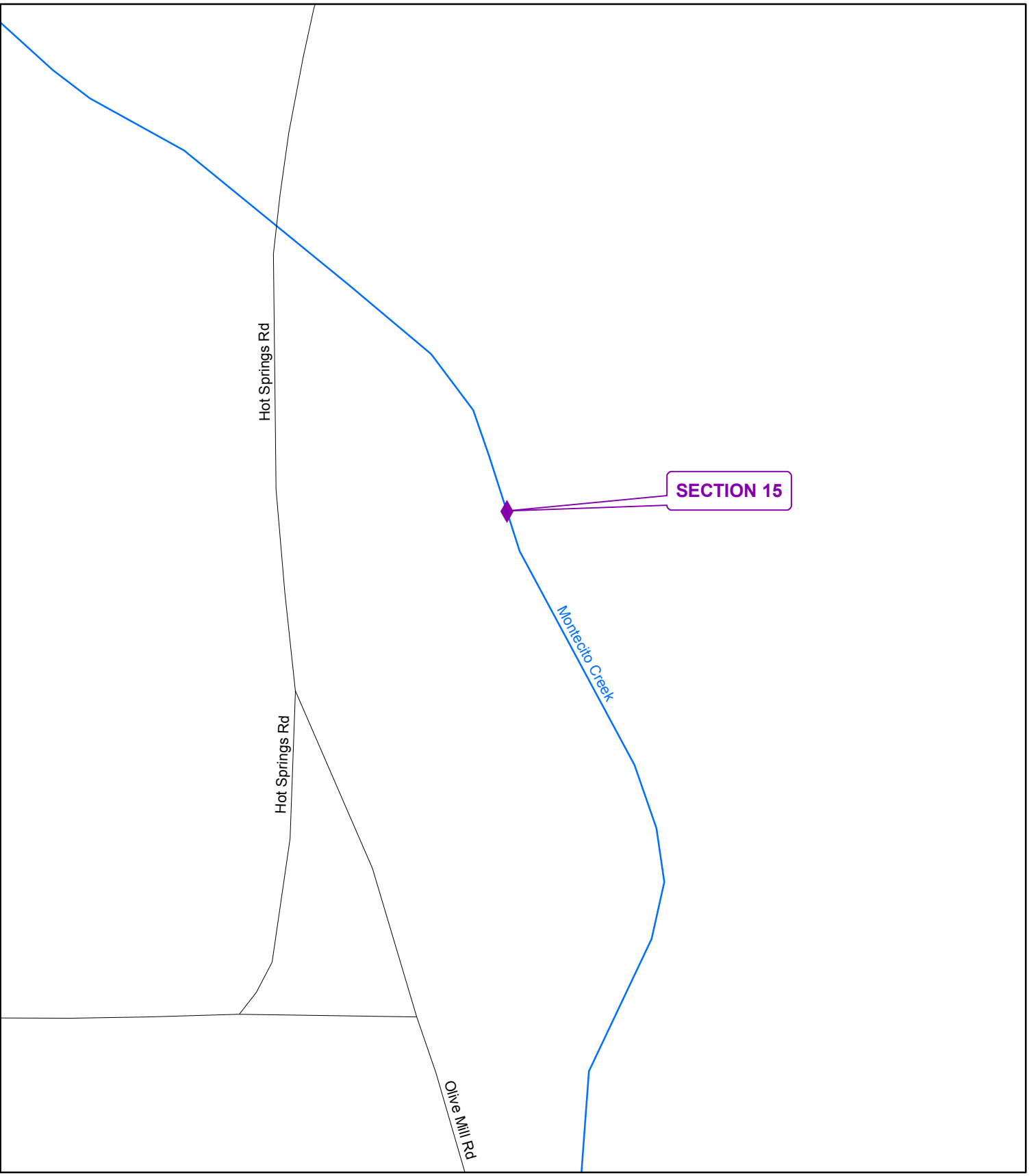
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Montecito Creek-D

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

90 45 0 90

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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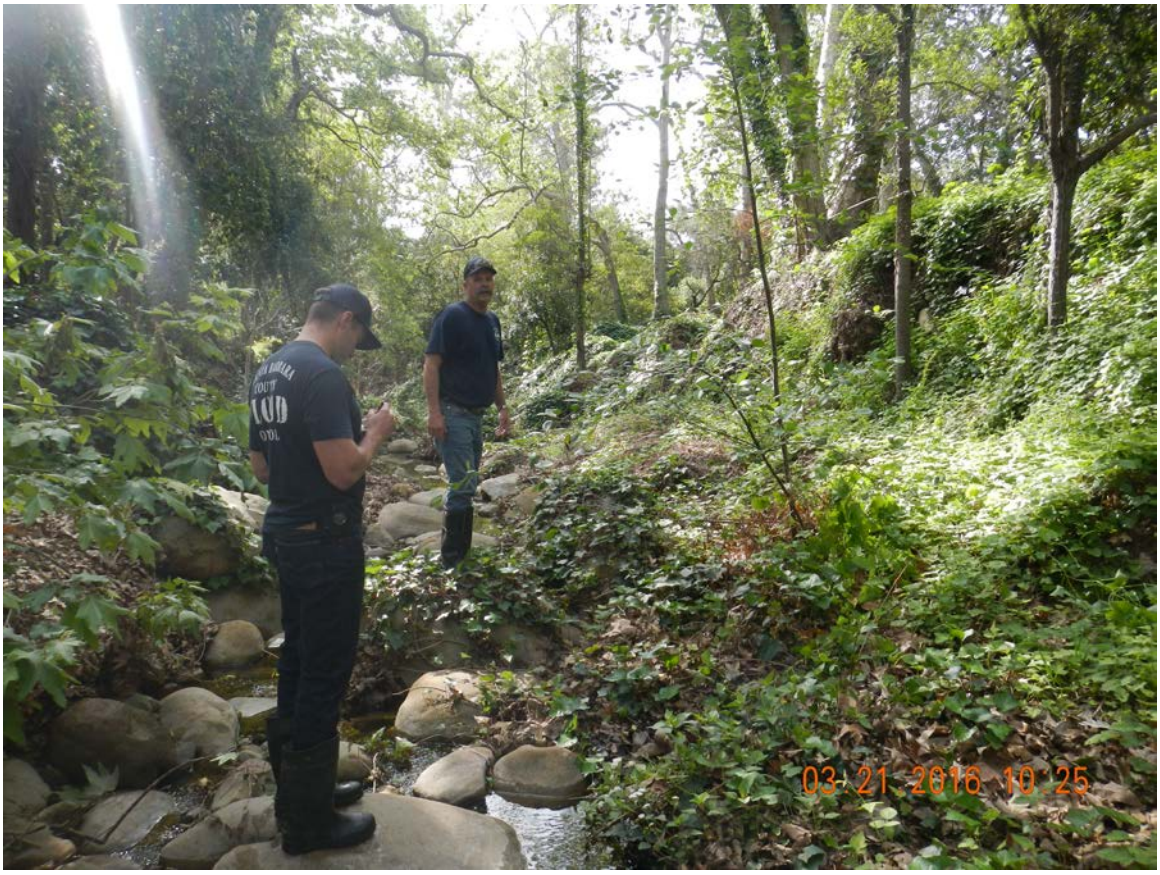
Montecito Creek

Section 3

Section 7

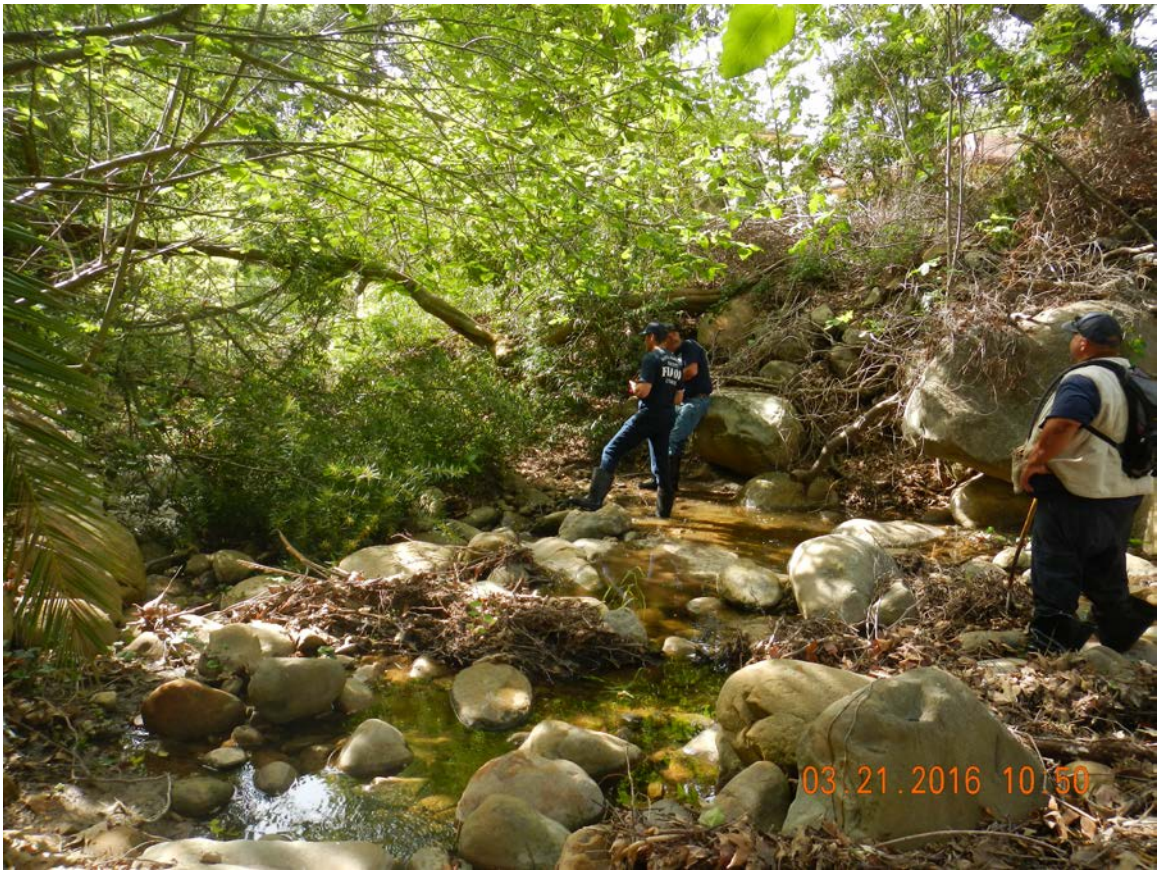
Montecito Creek



Section 8

Section 10

Montecito Creek



Section 12

Section 15

VASCULAR PLANT LIST
MONTECITO CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
ANACARDIACEAE		
Rhus integrefolia	Lemonadesberry	N
Rhus laurina	Laurel Sumac	N
Schinus molle	PepperTree	I
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Ageratina adenophora	Ironweed	I
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis glutinosa	Mulefat	N
Baccharis pilularis ssp. Consanguinea	Coyote Bush	N
Cardus pyncnocephalus	Italian Thistle	I
Cirsium vulgare	Bull Thistle	I
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Milk Thistle	I
Sonchus arvensis	Prickly Sow Thistle	I
Taraxcum officinale	Common Dandelion	I
Venegasia carpesioides	Canyon Sunflower	N
BRASSICACEAE		
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		

Chenopodium ambrosioides	Mexican Tea	I
CONVULVULACEAE		
Calystegia macrostegia	Morning Glory	I
EUPHORBIACEAE		
Ricinus Communis	Castor Bean	I
FABACEAE		
Vicia sativa	Spring Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
HYDROPHYLLACEAE		
Phacelia ramossissima	Branching Phacelia	N
JUGLANDACEAE		
Juglans regia	English Walnut	I
LAMIACEAE		
Mentha citrata	Bergamont Mint	N
Mentha Spicata	Spearmint	N
Stachys bullata	Wood Mint	N
MYOPORACEAE		
Myoporum laetum	Myoporum	I
MYRTACEAE		
Eucalyptus gloubulus	Blue Gum	I
ONAGRACEAE		
Epilobium adenocaulon	Willow-Herb	N
PITTOSPORACEAE		
Pittosporum undulatum	Pittosporum	I
PLANTAGINACEAE		
Plantago Major	Common Plantain	I
PLATANACEAE		
Plantanus racemosa	Western Sycamore	N
POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	N

Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Heteromeles arbitufolia	Toyon	N
Pyracantha sp.	Pyracantha	I
Rubus discolor	Himalayan Blackberry	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Salix lasiolepis	Arroyo Willow	N
SCROPHULARIACEAE		
Mimulus guttatus	Marsh Monkey - Flower	N
Scrophularia californica	Figwort	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
URTICACEAE		
Urtica holosericea	Giant Nettle	I

* N - Native
I - Introduced

ROMERO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins downstream of the intersection of Birnam Woods Drive and Sheffield Drive and terminates approximately 200 feet upstream of Highway 101.

Setting:
Inspected on April 4, 2016.

Romero Creek originates in the foothills of the Santa Ynez Mountains and drains a 3,301 acre watershed capable of producing 4,900 cfs during a 100 year return period precipitation event. The maintenance area of Romero Creek runs along the east side of Sheffield Drive and downstream to Highway 101 in Montecito. The creek channel is incised with steep banks along many sections along Sheffield Drive. Riparian vegetation is a mix of native sycamore, willow, alder, bays, and non-native landscape specimens, nasturtium, ironweed, and watercress.

The maintenance area is within the lower watershed, which typically carries water year round. Riffles and step pools are common along this length. Large cobbles and boulders along the creek invert are populated with islands of young willow sprouts. Adjacent land use is predominantly low density suburban with large lots and encroaching landscape species mixed with the native riparian community.

Romero 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.

Romero 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. Romero has a

small, shallow, narrow urban creek corridor and culvert at Highway 101 that is prone to plugging.

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.

Romero Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2007/2008	10	10	10	0
2009/2010	40	0	0	-40
2010/2011	0	0	0	-40
2011/2012	0	0	0	-40
2013/2014	170	0	LCMB 210	0
2014/2015	280	0	LCMB 280	0
2015/2016	25	0	LCMB 25	0
2016/2017	0	TBD	TBD	TBD

Engineering Analysis:
Obstructive vegetation, woody debris and downed trees require removal from Romero Creek in order to protect adjacent homes, private property and access roads. The obstructive vegetation restricts the creek's ability to convey flood flows and increases the flood hazard to adjacent development. In addition, the downed trees and woody debris can be mobilized in future storm events posing a significant plugging threat to downstream public and private bridge structures. The bankfull width as determined by field indicators is approximately 15'. 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:

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 down willow branch in the active channel will be removed.

Section 2:
There is a down 12" DBH by 20' sycamore that will be removed from the active channel.

Section 3:
A down willow branch in the active channel will be removed.

Section 4:
A down willow branch in the active channel will be removed.

Section 5:
A down willow branch in the active channel will be removed.

Section 6:
A down willow branch in the active channel will be removed.

Section 7:
There are 2 down willow branches in the active channel that will be removed.

Section 8:
There is a tree branch down in the active channel and a debris pile that will be broken up.

Section 9:
There is a down branch in the channel that will be placed behind the adjacent pipe and wire to provide erosion protection.

Section 10:
Nonnative pittosporum, eucalyptus, and sycamore seedling will be brushed from the channel. All other native vegetation will be left. A dead willow will also be removed. This will result in 5 square feet of mitigation.

Section 11:

A down oak tree will be removed from the channel.

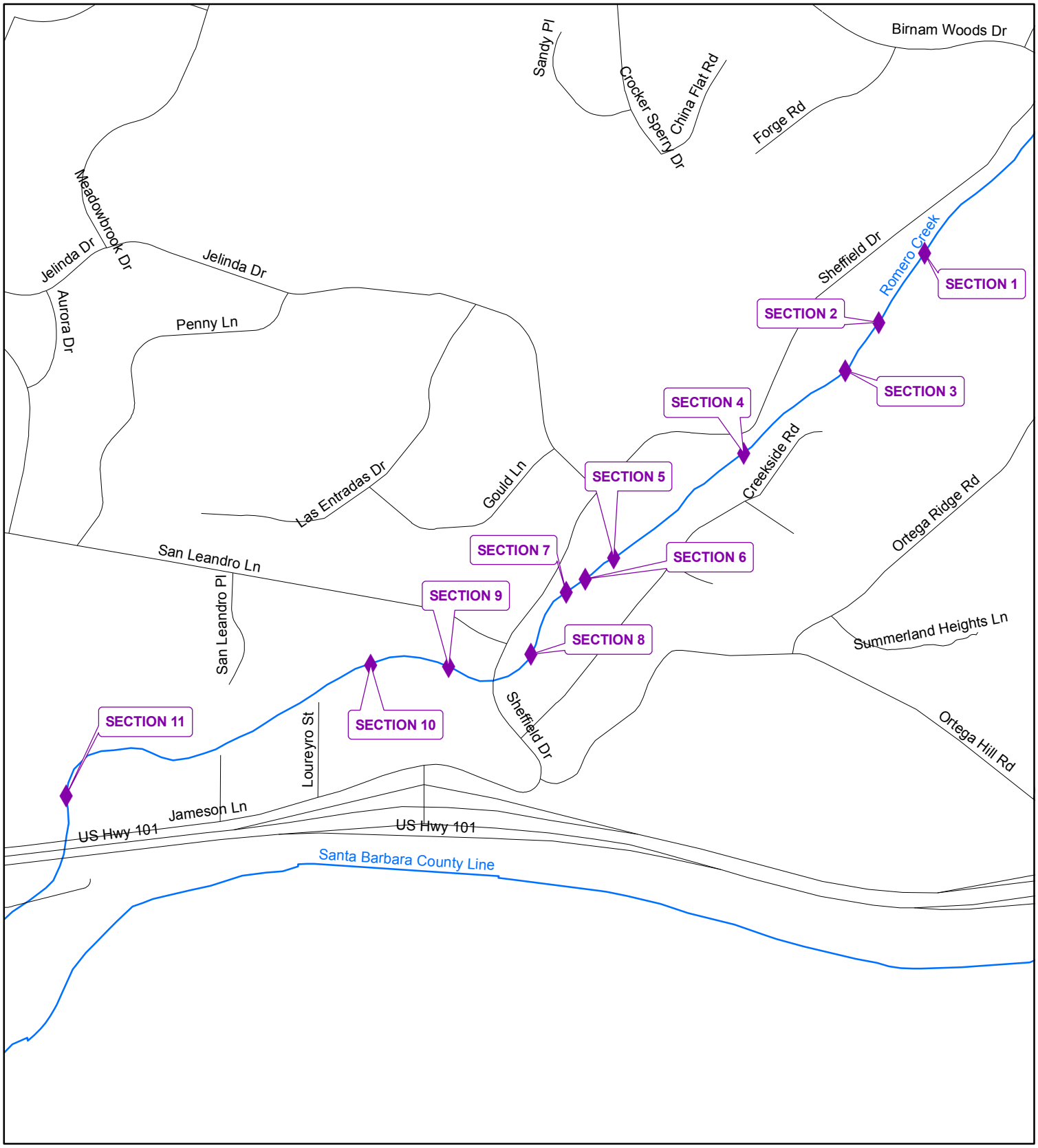
Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled "Impacts and Mitigation Measures" for definitions of the specific impacts and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

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

Project Specifics:
This project will take 3 days to complete.



Department of Public Works County of Santa Barbara

Romero Creek

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

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N W E S

Feet

500 250 0 500

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.

Romero Creek

Section 2

Section 8

VASCULAR PLANT LIST
ROMERO CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
ACERACEAE		
Acer sp.	Ormamental Maple	I
AGAVACEAE		
Agave sp.	Ornamental Agave	I
ANACARDIACEAE		
Rhus integrefolia	Lemonadesberry	N
Rhus laurina	Laurel Sumac	N
Schinus molle	PepperTree	I
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARACEAE		
Zantedeschia aethiopica	Calla-Lily	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Ageratina adenophora	Ironweed	I
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Carduus pycnocephalus	Italian Thistle	I
Cirsium vulgare	Bull Thistle	I
Picris echioides	Ox Tonuge	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Milk Thistle	I
Sonchus arvensis	Prickly Sow Thistle	I
Taraxcum carpesioides	Canyon Sunflower	N
Xanthium strumarium	Cocklebur	I

BRASSICACEAE		
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
CAPRIFOLIACEAE		
Sambucus meicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	N
CONVULVULACEAE		
Calystegia macrostegia	Morning-Glory	I
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Vicia sativa	Spring Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
GROSSULARIACEAE		
Ribes amarum var. hoffmannii	Bitter Gooseberry	N
Ribes malvaceum	Chapparral Currant	N
Ribes speciosum	Fuschia-Flowered Ribes	N
HYDROPHYLLACEAE		
Phacelia ramossissima	Branching Phacelia	N
JUGLANDACEAE		
Juglans regia	English Walnut	I
LAMIACEAE		
Mentha citrata	Bergamont Mint	N
Mentha spicata	Spearmint	N
Stachys bullata	Wood Mint	N
MYOPORACEAE		
Myoporum laetum	Myoporum	I
MYRTACEAE		
Eucalyptus globulus	Blue Gum	I

ONAGRACEAE		
Epilobium adenocaulon	Willow- Herb	N
PITTOSPORACEAE		
Pittosporum undulatum	Pittosporum	I
PLANTAGINACEAE		
Plantago major	Common Plantain	I
PLANTANACEAE		
Plantanus racemosa	Western Sycamore	N
POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	N
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Heteromeles arbutifolia	Toyon	N
Pyrancantha	Pyrancantha	I
Rosa californica	Wild Rose	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus trichocarpa	Black Cottonwood	N
Salix lasiolepis	Arroyo Willow	N
SCROPHULARIACEAE		
Mimulus guttatus	Marsh Monkey Flower	N
SOLANACEAE		
Nicotiana glauca	Tobacco tree	I
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	N
URTICACEAE		
Urtica holosericea	Giant Nettle	I

* N - Native
I - Introduced

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 7, 2016.

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. The creek experienced high sedimentation in the years following the 2008 Gap Fire. The watershed is nearly recovered with most of the sediment moved through the system. 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.

San Jose Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2002/2003	1,380	12,600	12,600	11,220
2003/2004	2,650	6,200	6,200	14,950
2006/2007	0	0	0	14,950
2008/2009	1,525	0	0	13,425
2010/2011	1,000	1,000	500	13,425
2011/2012	0	0	0	13,425
2013/2014	1,145	0	0	12,100
2014/2015	200	0	0	11,900
2015/2016	135	0	4600	16,365
2016/2017	85	0	0	TBD

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 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 down tree will be removed from the active channel.

Section 2:
Branches projecting into the active channel will be limbed and 10 square feet of cottonwood sprouts will be brushed resulting in 10 square feet of mitigation.

Section 3:
500 square feet of nonnative arundo will be brushed on the right bank.

Section 4:
Cottonwood sprouts are growing in the active channel and will be brushed resulting in 5 square feet of mitigation.

Section 5:
Cattails will be brushed from the active channel resulting in 10 square feet of mitigation.

Section 6:

A down tree branch will be removed from the active channel.

Section 7:
There are 2 down trees in the active channel that will be removed and 30 square feet of cottonwood sprouts that will be brushed. This area was mitigated for under the 14/15 AP.

Section 8:
50 square feet of cottonwood and willow sprouts are resprouting and will be brushed. This work was mitigated for under the 13/14 AP.

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

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

Section 11:
Arundo is projecting into the active channel and will be limbed.

Section 12:
A down cottonwood branch will be removed from the active channel.

Section 13:
100 square feet of cottonwood are resprouting in the channel and will be brushed. This was mitigated under the 13/14 AP.

Section 14:
50 square feet of cottonwood seedlings that were brushed under the 14/15 AP are resprouting and will be brushed again. This was mitigated for in the 14/15 AP.

Section 15:
There are 2 down willow trees (4" and 7" DBH) that will be cut to 10' lengths and partially buried on the left toe of bank and allowed to resprout as LWD.

Section 16:
A down tree limb will be removed from the channel and nonnative ash tree will be brushed.

Section 17:
There is a down 4" DBH by 15' willow. A 4" by 8' section will be cut and left on the left side of the channel. The rest will be removed.

Section 18:
There are 2 down trees, a 5" DBH tree from the left bank and a 3" DBH from the right bank. The tree from the right bank will be removed from the channel because it does not meet the LWD/KWD requirement and the tree from the left will be cut into LWD and left.

Section 19:
25 square feet of cottonwood sprouts are growing in the active channel and will be brushed. This was mitigated under Section 13 of the 15/16 AP.

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

Section 21:
A down tree will be removed from the active channel.

Section 22:
A down tree and down limbs will be removed from the channel.

Section 23:
Nonnative arundo will be brushed from the left bank and a bay tree projecting into the active channel will be limbed.

Section 24:
Nonnative arundo is projecting into the active channel and will be limbed.

Section 25:
Willow, ash limbs, and arundo are projecting into the active channel and will be limbed.

Section 26:
30 square feet of willow sprouts are growing in the active channel and will be brushed. This section was mitigated for under Section 22 of the 15/16 AP.

Section 27:
A down tree will be removed from the active channel.

Section 28:
Arundo is projecting into the active channel and will be limbed.

Section 29:
The creeks bends sharply to the left in this section and erosion has occurred on the right bank behind pipe and wire that lines this section. Sediment (50' L x 6' W x 2-3' D) has accumulated on the inside bend, further forcing flows to the outside bank. There are also two pieces of LWD at the site, a 10" DBH by 12' sycamore branch and 5" DBH by 23' long cottonwood branch.

The LWD will be placed on the right side of the pipe and wire in the channel and the accumulated sediment on the left side will be pushed to the right side of the channel by an excavator in order to move the channel away from the eroding bank. The LWD will be partially buried by the sediment placement. Willow waddles and/or poles will be buried in the sediment and allowed to grow to provide bank protection and restoration.

Access will be taken from an existing Flood Control ramp off of Somerset Dr. directly upstream of the project site. The creek was dry during inspection and will be dry during the project. There will be no impact to native vegetation and the square footage of restoration from willow planting will be calculated in the field.

Section 30:
A down tree in the channel will be cut into 6' lengths and placed behind the adjacent pipe and wire.

Section 31:
40 square feet of willow seedlings will be brushed from the active channel, resulting in 40 square feet of mitigation.

Section 32:
A down tree will be removed from the channel and accumulated debris will be broken up.

Section 33:
A down willow limb will be removed from the channel.

Section 34:
A willow will be brushed from the active channel resulting in 20 square feet of mitigation.

Section 35:
A down willow will be removed from the channel.

Section 36:
Arundo will be brushed from the active channel.

Section 37:
A down willow limb will be removed from the channel.

Section 38:
Arundo is falling into the active channel and will be limbed.

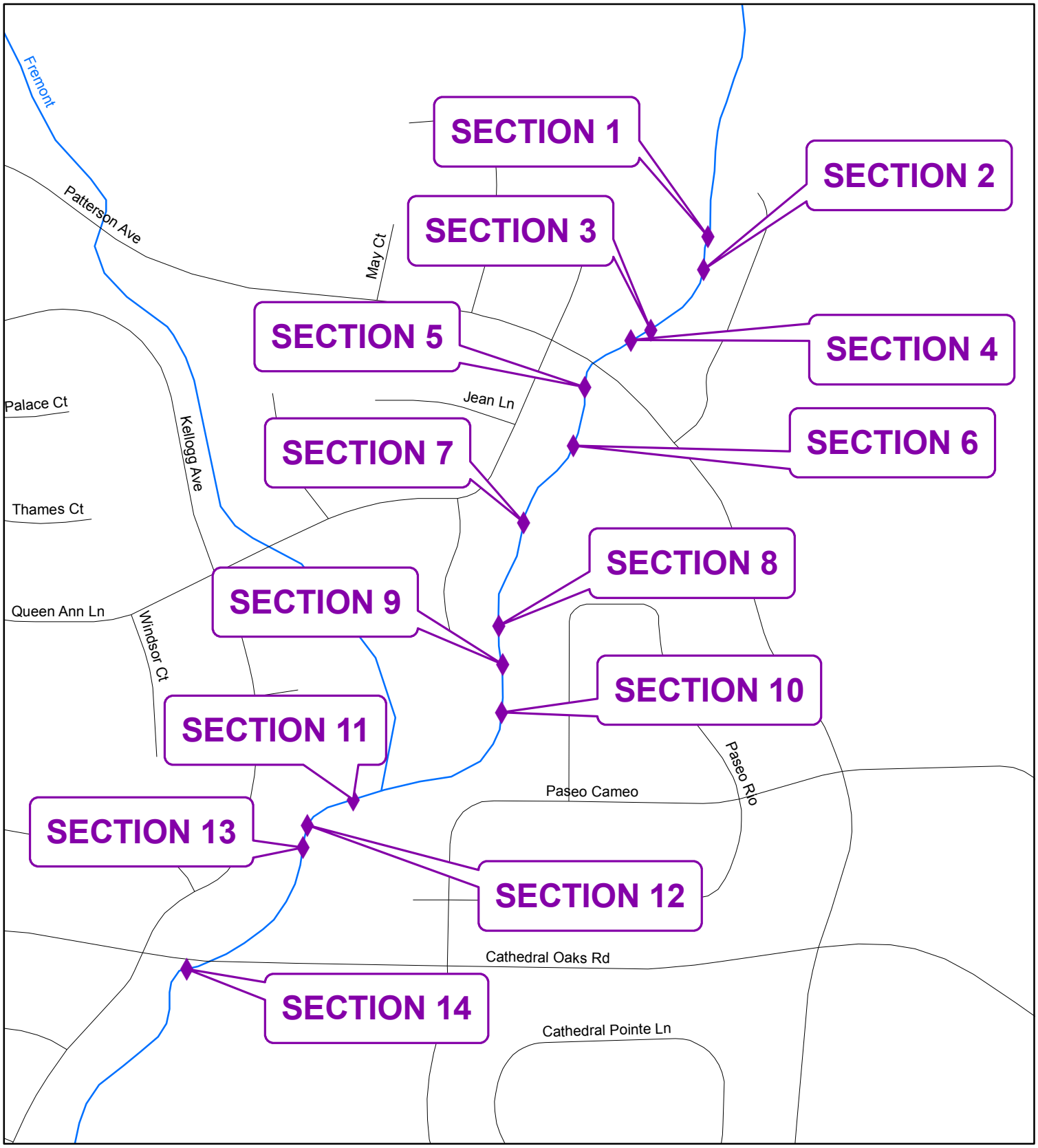
Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR. See the Section entitled "Impacts and Mitigation Measures" for definitions of the specific impacts and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

Resource	Impacts	Mitigation Measures*
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B	H-1, B-2, W-2, W-6, W-7, W-8, W-4
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-I, FAW-J	B-1, B-2, B-3, H-1, W-2, W-1, W-4

Project Specifics:
This project will take 4 days to complete.



Department of Public Works County of Santa Barbara

San Jose Creek-A

Legend

- Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

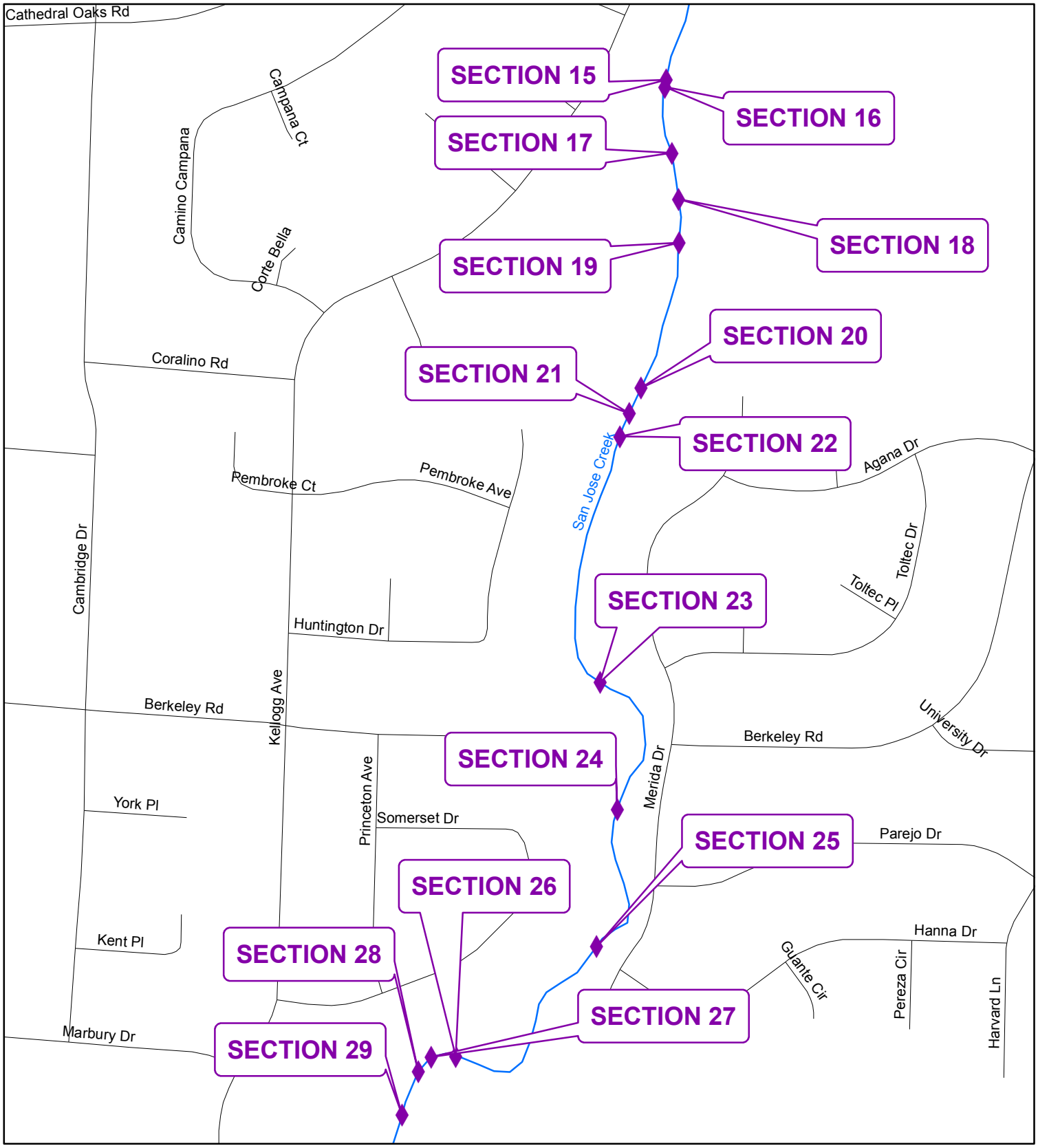
300 150 0 300

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

San Jose Creek-B

Legend

Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

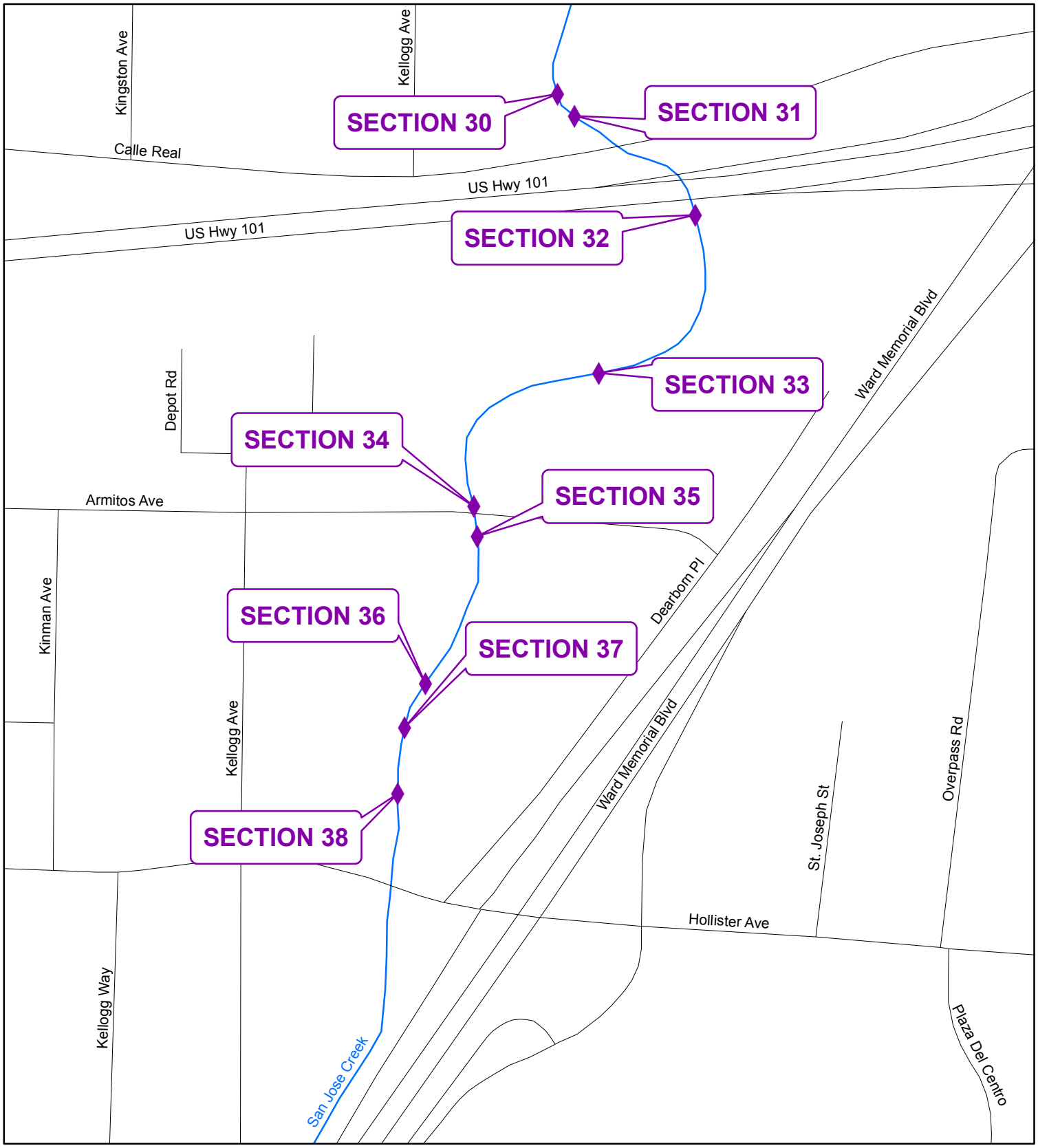
300 150 0 300

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

San Jose Creek-C

Legend

♦ Sites

N W E S

Feet

300 150 0 300

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

San Jose Creek

Section 7

Section 29

VASCULAR PLANT LIST
SAN JOSE CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
AIZOACAE		
Carpobrotus edulis	Hottentot Fig	I
ANACARDIACEAE		
Toxicoclendron diversilobum	Poison Oak	N
Schinus molle	Pepper Tree	I
Schinus terebenthifolius	Pepper Tree	I
APIACEAE		
Apium graveolens	Wild Celery	I
Conium maculatum	Poison Hemlock	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera canariensis	Algerian Ivy	I
ASTERACEAE		
Ambrosia psilostachya var. california	Western Ragweed	N
Amaranthus albus	Tumbleweed	I
Artemesia biennis	Marsh Sagebrush	N
Artemesia californica	CA. Sagebrush	N
Artemesia douglasiana	Muswort	N
Baccharis pilularis	Coyotebrush	N
Baccharis salicifolia	Mulejat	N
Carduus pyenocephalus	Italian Thistle	I
Conyza canadensis	Horseweed	I
Gnaphalium bicolor	Bicolored Everlasting	N
Gnaphalium californicum	Green Everlasting	N
Gnaphalium luteo-album	Cudweed Everlasting	I
Isocoma veneta	Coast Golden Bush	N
Lactuca serriola	Prickly Lettuce	I
Picris echioides	Ox tongue	I
Senecio micanioides	German Ivy	I
Senecio vulgaris	Common Groundsel	I
Sylibum marianum	Milk Thistle	I
Venegasia carpesioides	Canyon Sunflower	N
Xanthium strumarium	Cocklebur	I

BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Brassica geniculata	Summer Mustard	I
Brassica nigra	Black Mustard	I
Lobularia maritime	Sweet Alyssum	I
Raphanus sativus	Wild Raddish	I
Rorippa Nasturtium-aquaticum	Watercress	I
CACTACEAE		
Opuntia ficus-indica	Indian Fig	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CARYOPHYLLACEAE		
Sagina occiclentalis	Western Pearlwort	N
Stellaria media	Common Chickweed	I
CHENOPODIACEAE		
Atriplex patula ssp. hastate	Spear-leaved Saltbush	N
Chenopodium ambrosioides	Mexican Tea	I
Chenopodium berlanclieri	Berlander's Goosefoot	N
Chenopodium murale	Nettle-leaved Goosefoot	I
Salsola australis	Russian Thistle	I
CUCURBITACEAE		
Marah herbaceous	Wild Cucumber	N
CYPERACEAE		
Carex sp.	Sedge	
Cyperus alternifolius	African Umbrella Sedge	I
Cyperus eragrostis	Tall Umbrella Sedge	N
Eragrostis sp.		
EQUISETACEAE		
Equisetum telmateia var. braunii	Giant Horsetail	N
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
Euphorbia Peplus	Petty Spurge	I
FABACEAE		
Acacia sp.		I
Lotus salsuginosus	Coastal Hosackia	N
Melilotus alba	White Sweetclover	I

FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
GROSSULARIACEAE		
Ribes amarum	Gooseberry	N
GERANIACEAE		
Erodium cicutarium	Redstem Filaree	I
HYDROPHYLLACEAE		
Phacelia viscida	Sticky phacelia	N
Phacelia ramosissima	Branching phacelia	I
JUGLANDACEAE		
Juglans californica	So. CA. Black Walnut	N
Juglans regia	English Walnut	I
JUNCACEAE		
Juncus bufonius	Toad Rush	N
LAMIACEAE		
Salvia mellifera	Black Sage	N
Mentha sp.	Mint	I
LAURACEAE		
Umbellularia californica	CA. Bay	N
LYTHRACEAE		
Lythrum hyssopifolia	Hyssop-leaved Loosestrfe	N
MALVACEAE		
Lavatera cretica	Annual Lavatera	I
Malva nicaeensis	Mallow	I
Malva parvifolia	Cheeseweed	I
MYOPORACEAE		
Myoporum laetum	Myoporum	I
MYRTACEAE		
Eucalyptus globulus	Blue Gum	I
Eucalyptus camaldulensis	Murray Red Gum	I
Eucalyptus citriodora	Lemon-scented Gum	I
Eucalyptus lehmannii	Lehmann’s Gum	I
OLEACEAE		
Fraxinus uhdei	Shamel Ash	I

PINACEAE		
Pinus radiata	Monterey Pine	I
PLATAGINACEAE		
Plantago major	Common Plantain	I
Plantago lanceolata	Plantain	I
PLANTANACEAE		
Platanus racemosa	Ca. Sycamore	N
POECEAE		
Agrostis semiverticellata	Water Bent	I
Arundo donax	Giant Reed	I
Avena fatua	Wild Oat	I
Bromus diandrus	Ripgut Grass	I
Bromus mollis	Soft Chess	I
Cortadena jubata	Pampas Grass	I
Cynodon dactylon	Bermuda Grass	I
Echinochloa crusgalli	Barnyard Millet	I
Elymus condensatus	Giant Rye	I
Hordeum murinum	Foxtail	I
Lolium multiflorum	Italian Ryegrass	I
Lolium miliacea	Rice Grass	
Pennisetum clandestinum	Kikuyu Grass	I
Polypogon interruptus		
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Polygonum arenastrum	Common Knotweed	I
Polygonum lapathifolium	Willow Smartweed	I
Polygonum punctatum	Dotted Water Smartweed	N
Rumex crispus	Curly Dock	I
PTERIDACEAE		
Pteridium aquilinum var. pubescens	Western Bracken	N
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Contoneaster lacteus	Cotoneaster	I
Heteromeles arbutifolia	Toyon	N
Malosma laurina	Sumac	N
Prunus illicifolia	Holly-leaved Cherry	N
Pyracantha sp.	Fire Thorn	I
Rosa californica	CA. Rose	N
Rubus procerus	Himalya Berry	I
Rubus ursinus	CA. Blackberry	N

SALICACEAE		
Populus balsamifera	Black Cottonwood	N
Salix exigua	Sandbar Willow	N
Salix lasiolepsis	Arroyo Willow	N
Salix laevigata	Red Willow	N
Salix lucida	Yellow Willow	N
SCROPHULARIACEAE		
Scrophularia californica	CA. Figwort	N
Veronica anagallis-aquatica	Water Speedwell	I
SOLANACEAE		
Datura wrightii	Jimson Weed	N
Nicotiana glauca	Tree Tobacco	I
Solanum doughasii	Douglas Nightshade	N
Solanum nigrum	Black Nightshade	I
Solanum xanti	Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Nasturium	I
TYPACEAE		
Typha domingensis	Narrow-leaved Cattail	N
Typha latifolia	Broad-leaved Cattail	N
ULMACEAE		
Ulmus sp.	Elm	I
Ulmus parviflorus	Chinese Elm	I
VISCACEAE		
Phoradendron tomentosum	Bigleaf Mistletoe	N

* N = Native
I = Introduced

SAN PEDRO CREEK ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

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 7, 2016.

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 2014 creek inspections the sedimentation was substantially the same as 2013, likely due to low rainfall and the recovering watershed.

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.

San Pedro Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2002/2003	6,680	8,620	8,620	1,940
2003/2004	100	0	0	1,840
2004/2005	320	2,400	2,400	3,920
2005/2006	350	1,600	1,600	5,170
2006/2007	0	0	0	5,170
2007/2008	120	0	0	5,050
2008/2009	225	0	0	4,825
2009/2010	200	1,000	1000	5,625
2010/2011	0	320	320	5,945
2011/2012	0	0	0	5,945
2012/2013	600	0	0	5,345
2013/2014	100	0	0	5,245
2014/2015	0	0	0	5,245
2015/2016	320	0	0	4,925
2016/2017	100	0	0	4,825

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:
Willow limbs are projecting into the active channel and will be limbed.

Section 2:
40 square feet of cottonwood sprouts will be brushed from the active channel. This was mitigated for under Section 1 of the 13/14 AP.

Section 3:
Limbs from a pepper tree are projecting into the active channel and will be limbed.

Section 4:
200 square feet of cottonwood seedlings are growing in the active channel and will be brushed. This was mitigated for under Section 8 of the 13/14 AP.

Section 5:
20 square feet of cottonwood seedlings are growing in the active channel and will be brushed. This section has been mitigated for under Section 4 of the 15/16 AP.
I
Section 6:
50 square feet of cottonwood seedlings are regrowing in the active channel and will be brushed. This section was mitigated for under Section 2 of the 12/13 AP.

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

Section 8:
A large willow tree is down in the active channel and will be removed. The creek corridor is too narrow in this location to support LWD.

Section 9:
There is a 5' by 80' island in this section with 100 square feet of native vegetation and the rest nonnative growing on it. The island will be brushed so the sediment can be mobilized during storm flows. This will result in 100 square feet of mitigation.

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

Section 11:
During the fall of 2015 and associated with the Las Vegas/San Pedro Creeks Capacity Improvement Project a loose rock structure was constructed within San Pedro Creek a short distance downstream from the Union Pacific Railroad Bridge. This structure, referred to as a "Water Feature" was designed and constructed to create approximately 3" of backwater affect upstream of the rocks. Water is not effectively pooling with the rocks so the District needs to modify the site without removing the rocks. In order to create ponding, a trench will be dug, with an excavator or backhoe, immediately upstream of the rocks approximately ¾ of the width of the channel and large logs (12"+ diameter) will be recessed into the trench so that approximately 3.5 inches of the log protrudes above the channel floor. The channel floor will also be graded to very slightly pitch the low flows behind the logs as the channel slope and deposition naturally want to favor the east three-quarters of the channel. Because of the small bridge downstream at Hollister Avenue, the logs will be partially cut through so if they happen to become dislodged (which is very unlikely) they will break if they hit the bridge and not cause a debris dam. Access for this work will occur downstream at an existing access ramp. This channel bed was seeded with a native wetland mix in April 2016 and disturbed areas will be re-seeded once the work is complete and after the winter rains and associated flows have occurred. This site may be dry during the late summer months, however, if it isn't then water will be diverted around the work site.

Section 12:
This Section is a recurring project that is performed nearly every year as part of routine maintenance. The length begins downstream of the UPRR Bridge and continuing downstream to Matthews Street. The channel bed is usually disced to loosen accumulated rocks and sediment, but due to the unusually dry winter discing is only needed downstream of Hollister Ave. The low flow channel that was established as part of the 12/13 AP discing needs to be reestablished downstream of Hollister Ave.

The maintenance reach upstream of Hollister Ave. will be spot sprayed as needed. 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, as well. The channel is usually dry during the summer except for minimal urban runoff that is contained in the 4-foot wide defined channel down the centerline. No herbicide will be applied in this channel. 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.

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 40' just downstream of Hollister Ave. and then slowly tapers down to 20' approaching 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 the low flow trench down the center of the channel to contain any water before discing begins. Haybales, geotextile fabris 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.

This area was worked in the 12/13 AP and the impacts have previously been accounted for, therefore no new impacts are 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.

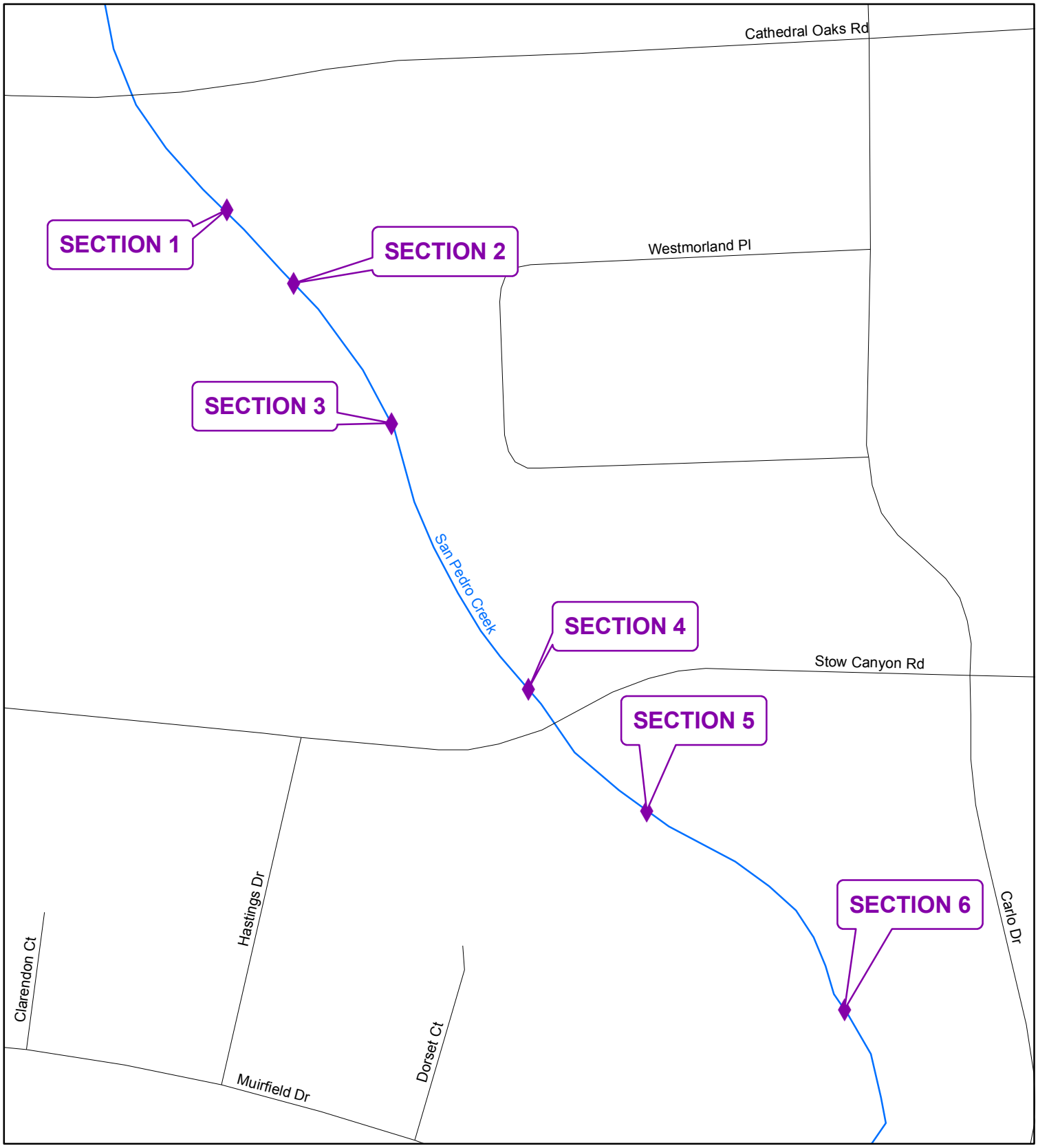
Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below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

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

*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.



Department of Public Works County of Santa Barbara

San Pedro Creek-A

Legend

♦ Sites

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop 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. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

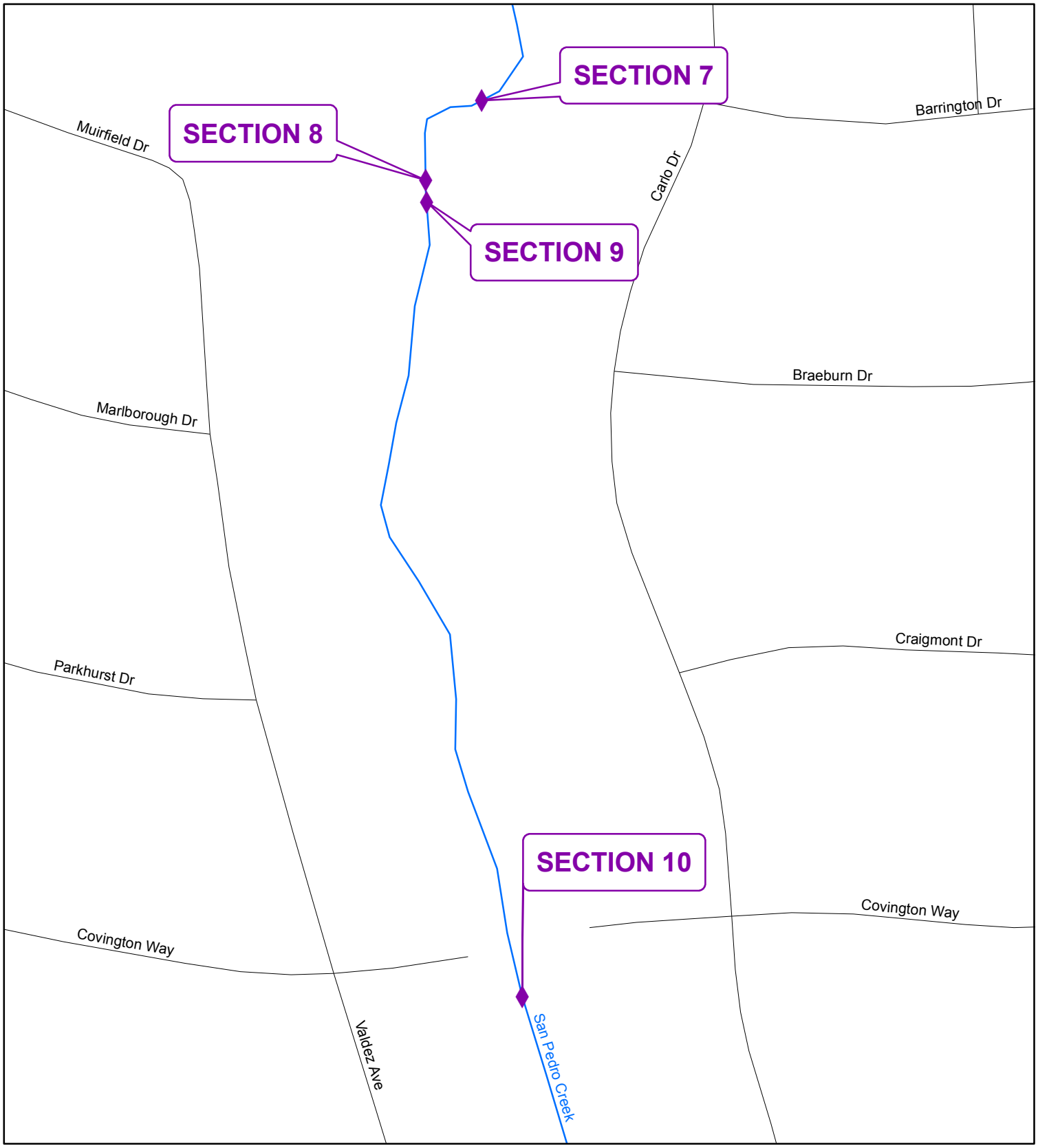
140 70 0 140

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

San Pedro Creek-B

Legend

♦ Sites

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N W E S

Feet

110 55 0 110

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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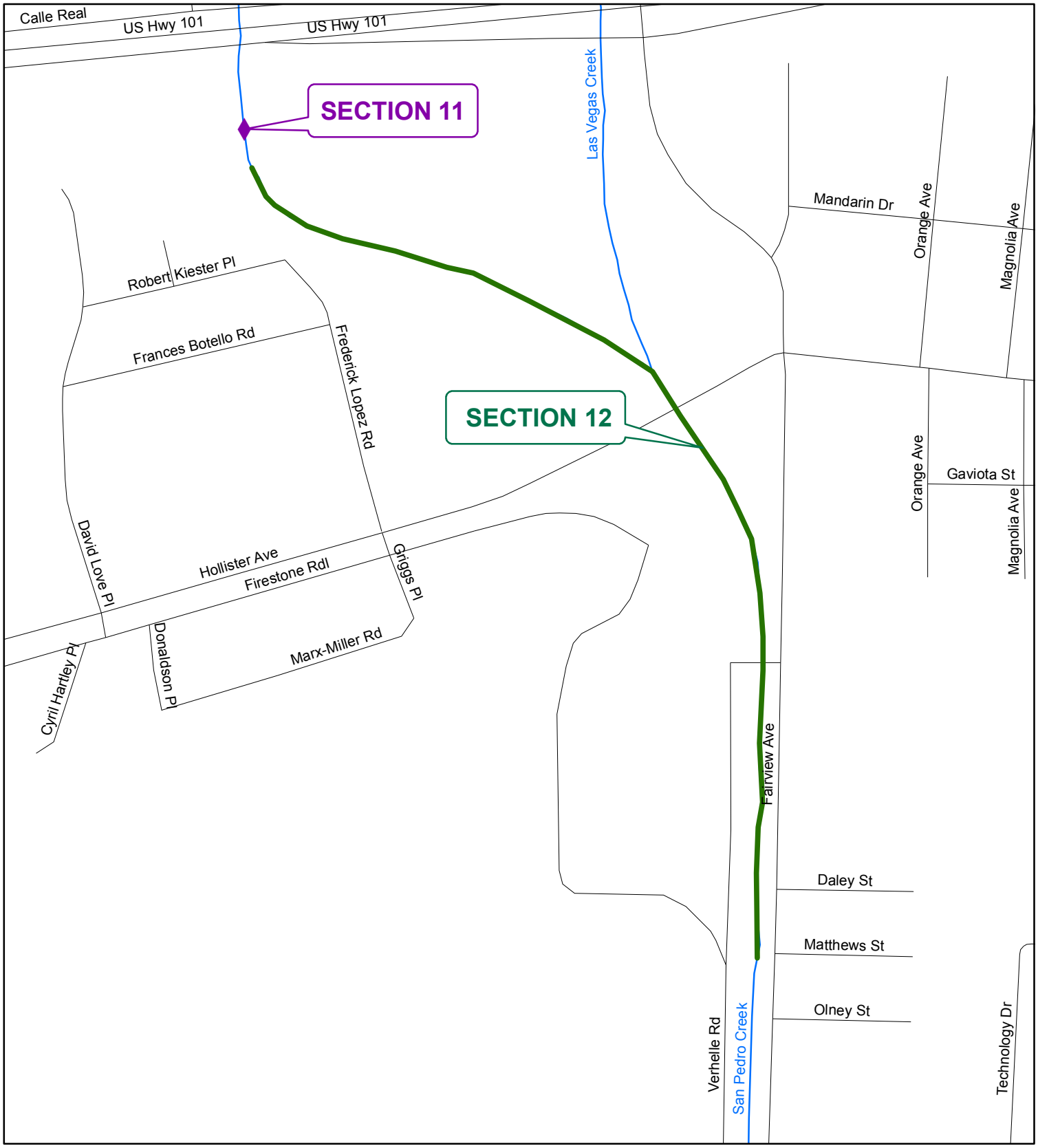


Department of Public Works County of Santa Barbara

San Pedro Creek-C

Legend

- Sites
- Lengths

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

390 195 0 390

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

San Pedro Creek

Section 4

Section 11

SAN PEDRO CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum laevigatum	Smooth Scouring Rush	N
ANACARDIACEAE		
Malosma laurina	Laurel Sumac	N
Schinus molle	Pepper Tree	I
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Foeniculum	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyote Bush	N
Centaurea melitensis	Yellow Star Thistle	I
Lactuca serriola	Prickly Lettuce	I
Matricaria marricarioides	Pineapple Weed	I
Senecio mikanioides	German Ivy	I
Senecio vulgare	Common Groundsel	I
Sonchus asper	Sow Thistle	I
Sonchus oleraceus	Sow Thistle	I
Xanthium strumarium	Cocklebur	I
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		

Brassica nigra	Black Mustard	I
Brassica rapa sylvestris	Field Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium-aquaticum	Watercress	I
CACTACEAE		
Opuntia ficus-indica	Indian Fig	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium album	Lamb's Quarters	I
Salsola iberica	Russian Thistle	I
CONVOLVULACEAE		
Calystegia macrostegia	Morning Glory	I
CUCURBITACEAE		
Marah macrocarpus	Wild Cucumber	N
CYPERACEAE		
Cyperus esculentus	Yellow Nutgrass	I
Scirpus microcarpus	Small-fruited Bulrush	N
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
Euphorbia lathyris	Gopher purge	I
FABACEAE		
Acacia baileyana	Bailey Acacia	I
Lotus Scoparus	Deerweed	N
Melilotus albus	White Sweet Clover	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
Quercus dumosa	Scrub Oak	N
GERANIACEAE		
Erodium cicutarium	Redstem filaree	I
Erodium moschatum	Whitestem filaree	I
Pelargonum hortorum	Garden Geranium	I

HYDROPHYLLACEAE		
Phacelia ramossissima	Branching Phacelia	N
Phacelia cicutaria	Caterpillar Phacelia	N
LAMIACEAE		
Mentha spicata	Spearmint	I
LAURACEAE		
Umbellularia California	California bay	N
LEGUMINOSAE		
Astragalus sp.	Locoweed	I
OXALIDACEAE		
Oxalis pes-caprae	Sour Grass	N
PAPAVERACEAE		
Eschscholzia californica	California Poppy	N
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Agrostis stolonifera	Redtop	I
Arundo donax	Giant Reed	I
Avena barbata	Slender Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Bromus rubens	Foxtail	I
Bromus tectorum	Cheatgrass Brome	I
Cortaderia atacamensis	Pampas Grass	I
Cynodon dactylon	Bermuda Grass	I
Elymus condensatus	Giant Rye	N
Elymus glaucus	Blue Wild Rye	I
Hordeum sp.	Foxtail Rye Grass	I
Piptatherum miliacea	Rice Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Rumex crispus	Curly Dock	I
PORTULACACEAE		
Claytonia perfoliata	Miner’s Lettuce	N
ROSACEAE		
Heteromeles arbutifolia	Toyon	N

Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus fremontii Fremont Cottonwood	N	
Salix lasiolepis Arroyo Willow	N	
SIMARUBACEAE		
Ailanthus altissima of Heaven		Tree I
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha latifolia	Cattail	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N

* I = Introduced
N = Native

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 28, 2016.

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.

San Roque Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	1700	2,000	2,000	300
2007/2008	300	1000	1000	1000
2010/2011	0	0	2000*	1000
2011/2012	0	0	0	1000
2012/2013	100	500	0	900
2013/2014	150	0	0	750
2015/2016	0	0	0	750
2016/2017	90	0	0	660

*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:
There are 3 sycamore and 1 willow tree (all 2" DBH) that are growing in the active channel and will be brushed, resulting in 50 square feet of mitigation.

Section 2:
50 square feet of nonnative vegetation growing in the channel will be brushed.

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

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

Section 5:
This section is at a road crossing culvert and there are down sycamore limbs upstream and downstream of the culvert that will be removed from the active channel.

Section 6:
3 1" DBH willows will be brushed from the active channel, resulting in 40 square feet of mitigation.

Section 7:
Accumulated debris in the active channel will be broken up.

Section 8:
There are multiple down willow and eucalyptus branches in the active channel that will be removed.

Section 9:
A 5" DBH by 20' willow will be removed from the active channel.

Section 10:
There is a down 12" DBH by 50' alder down in the active channel directly upstream of the Hope Ave. culvert that 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 Program EIR.

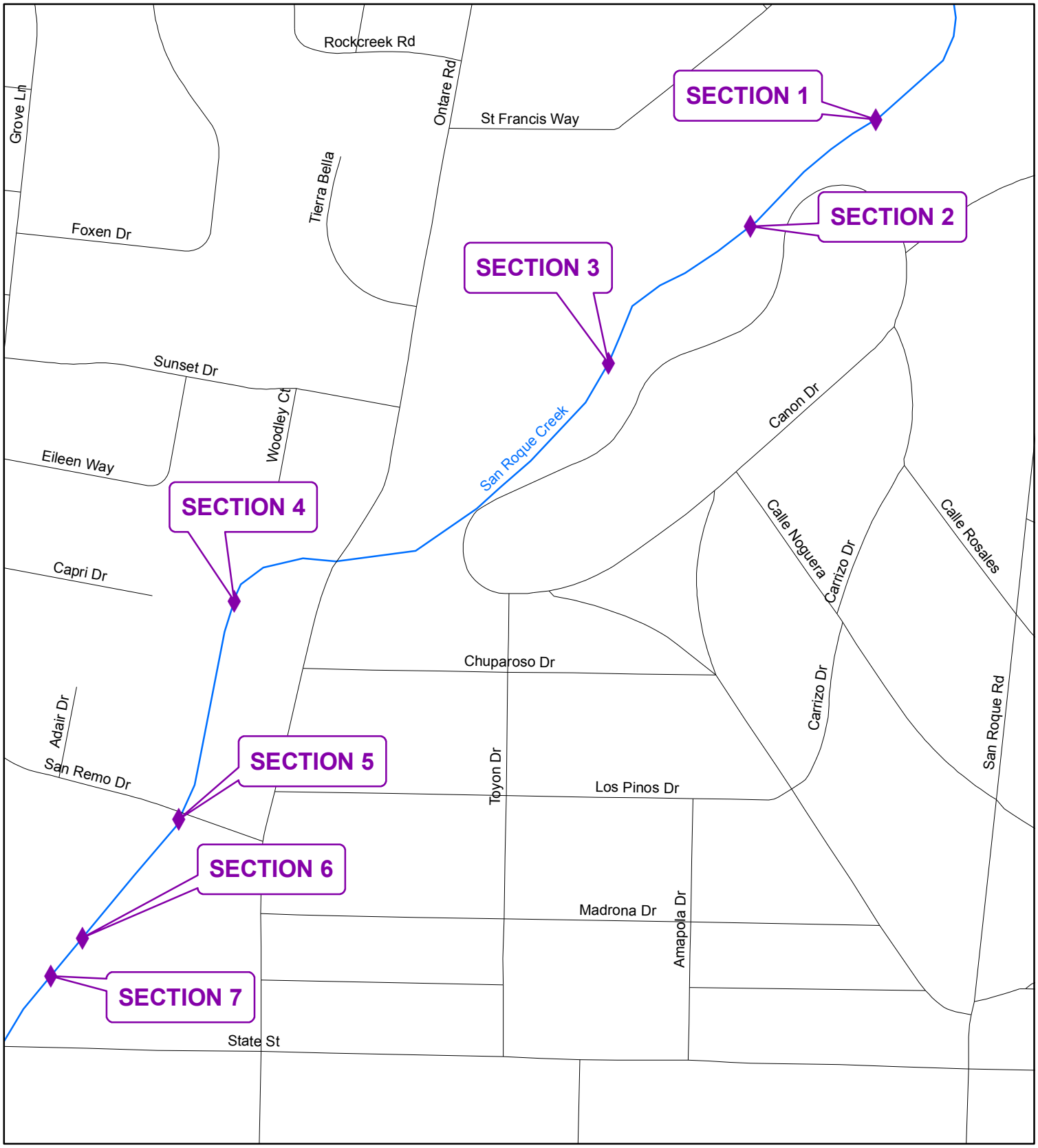
Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below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

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

*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.



Department of Public Works County of Santa Barbara

San Roque Creek-A

Legend

♦ Sites

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N W E S

Feet

270 135 0 270

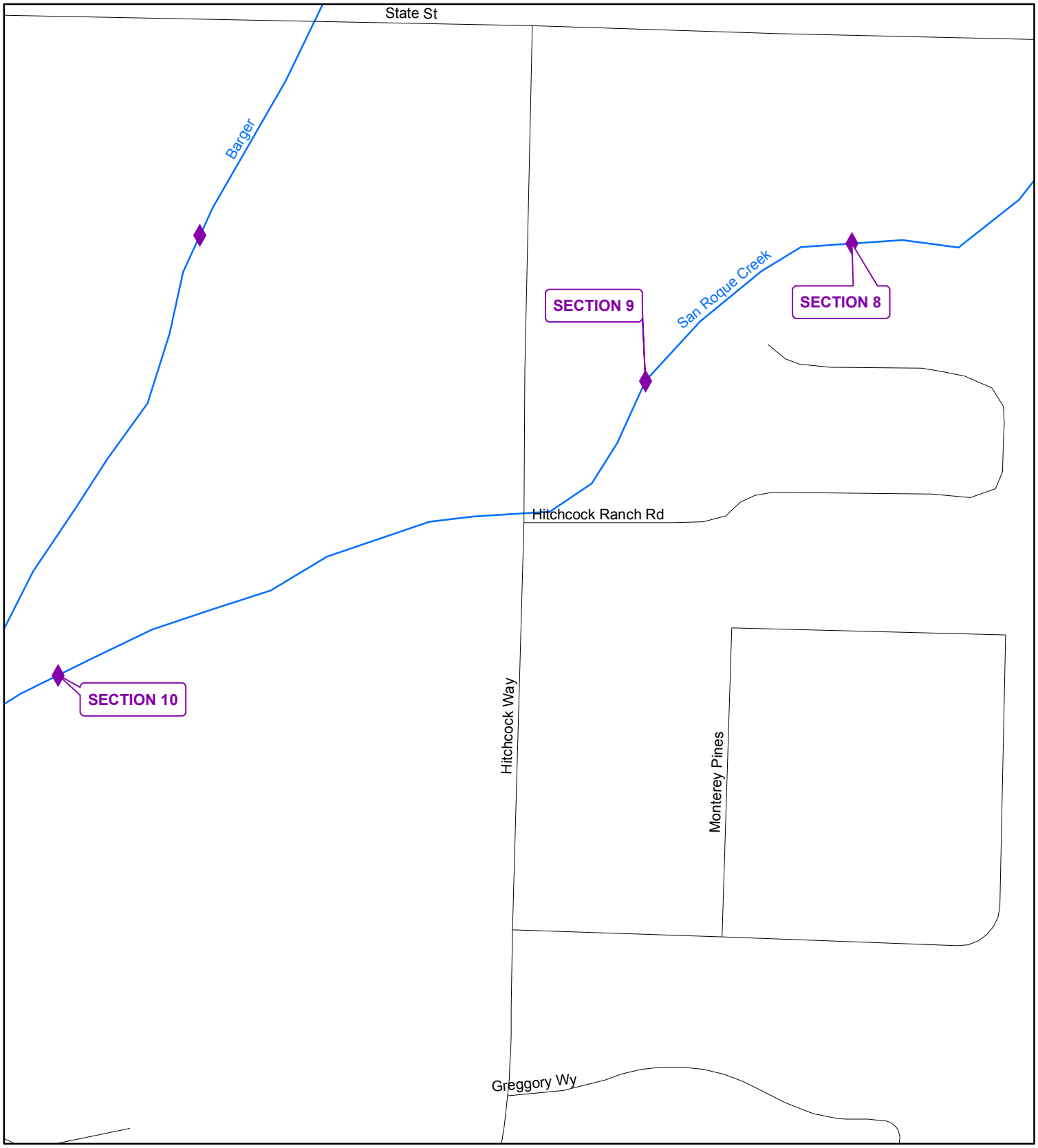
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

San Roque Creek-B

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

N W E S

Feet

125 62.5 0 125

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

San Roque Creek

Section 1

Section 9

San Roque Creek

Section 10

VASCULAR PLANT LSIT
SAN ROQUE CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telemateia	Giant Horsetail	N
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Cirsium vulgare	Bull Thistle	I
Picris echioides	Ox Tongue	I
CYPERACEAE		
Cyperus esculentus	Yellow Nutgrass	I
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
MALVACEAE		
Malva parvifolia	Cheeseweed	I
MYRTACEAE		
Eucalyptus globulus	Blue Gum	I

PITTOSPORACEAE		
Pittosporum undulatum	Pittosporum	I
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
Plantago major	Common Plantain	I
PLANTANACEAE		
Plantanus racemosa	Western Sycamore	N
POACEAE		
Arundo donza	Giant Reed	I
Avena fatua	Wild Oats	I
Bromus mollis	Soft Chess	I
Bromus rubens	Foxtail	I
Cortaderia acacamensis	Pampas Grass	I
Lolium perenne	Italian Rye	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
ROSACEAE		
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus balsamifera	Black Cottonwood	N
Salix lasiolepis	Arroyo Willow	N
TROPAELACEAE		
Tropaeolum majus	Garden Nasturtium	I

* I - Introduced

N - Native

SAN YSIDRO CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins at East Valley Road and terminates upstream of North Jameson Lane.

Setting:
Inspected on March 30, 2016.

San Ysidro Creek originates in the foothills of the Santa Ynez Mountains and drains a 2,621 acre watershed capable of producing 3,500 cfs during a 100 year return period precipitation event.

At the time of the field visit, flowing water was present through the entire maintenance area of the creek. It is expected that the most of the maintenance area will dry up during the summer months. The channel bottom vegetation consists mainly of herbaceous species such as monkey flower, nasturtium, English ivy, and watercress with the most abundant species present being ironweed, an extremely invasive weed seen commonly in the Montecito area creeks. Small willows and sycamore saplings are also growing in portions of the invert.

The substrate consists of small to moderate sized boulders mixed with sand and silt. The channel banks are typical alluvium of rocky soil and support species such as coyote brush, poison oak, elderberry, canyon sunflower and sage brush. There are willows, sycamore, big leaf maples, alders and oaks that form a well developed canopy. Exotic/landscape species are common, many of which have encroached into the riparian understory. The land surrounding the project reach is slightly disturbed open space, agriculture fields that are part of the Ennisbrook subdivision and other light density development. In many cases, the overbank area provides excellent oak/sycamore riparian corridor habitat with a diverse understory.

San Ysidro 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 Ysidro Creek, downstream of San Leandro Lane, 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.

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 to more easily display and track the District's restoration efforts.

San Ysidro Creek				
Annual Plan Year	Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2004/2005	4,200	4,200	4,200	0
2008/2009	490	1,000	0	-490
2010/2011	100	1000	1000	410
2011/2012	0	1000	1000	410
2012/2013	910	0	LCMB 400	-100
2014/2015	135	0	LCMB 235	0
2016/2017	40	0	TBD	TBD

Engineering Analysis:

Several culverts on San Ysidro Creek are susceptible to plugging causing significant flooding of the adjacent areas as well as 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. The bankfull discharge* for San Ysidro Creek downstream of the Glenn Oaks subdivision (downstream of Each Valley Road) is approximately 258 cfs. With a velocity of approximately 6 fps and a typical depth of 2.5', 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. 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 an 8'W by 30'L area 150 square feet of sycamore and willows are growing in the active channel and will be brushed along with any nonnative vegetation. 3 1" DBH sycamore trees that are directly adjacent to the left bank stone wall will continue to be left in place and any lateral branches under 6' tall will be limbed to avoid catching debris during storm flows. This work was mitigated for under Section 2 of the 12/13 AP.

Section 2:
A nonnative pride of Madeira will be brushed from the active channel.

Section 3:
Sycamore branches projecting into the active channel from the right bank will be limbed and a sycamore seedling will be brushed on the left side of the channel resulting in 20 square feet of mitigation.

Section 4:
50 square feet of sycamore seedlings are growing in the active channel and will be brushed. This was mitigated for under Section 5 of the 12/13 AP.

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

Section 6:
Nonnative acacia branches are projecting into the active channel and will be limbed.

Section 7:
In this length of 100' there are several branches projecting into the active channel that will be limbed.

Section 8:
Willow branches projecting into the active channel from the left bank will be limbed and a down alder will be removed from the right side of the channel.

Section 9:
A willow is growing horizontally approximately 8' above the creek with branches projecting into the active channel. The main trunk will be left in place and only branches projecting into the active channel will be limbed. There is also a down will downstream of this that will be removed.

Section 10:
There is a down willow here that is only partially in the active channel. Only the branches in the active channel will be limbed, the rest will be left in place.

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

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

Section 13:
20 square feet of willow seedlings are growing in the active channel and will be brushed, resulting in 20 square feet of mitigation.

Section 14:
Willow branches are projecting into the active channel from the right side and will be limbed.

Section 15:
Willow branches are projecting into the active channel from the left bank and just downstream from the right bank and will be limbed.

Section 16:
In a 5'W by 50'L section on the left side mostly nonnative ironweed and pride of Madeira are growing with 20 square feet of willow mixed in. This area will be brushed resulting in 20 square feet of mitigation.

Section 17:
Nonnative ironweed will be brushed from the right side of the channel.

Section 18:
10 square feet of sycamore seedlings will be brushed from the active channel. This work was mitigated for under Section 16 of the 14/15 AP.

Section 19:
A 5' by 50' area of ironweed is growing in the active channel and will be brushed.

Section 20:
2 down willow branches will be removed from the active channel.

Section 21:
Willow branches and nonnative vegetation will be limbed.

Section 22:
A 5" DBH by 20' sycamore branch will be removed from the active channel due to its proximity to the Jameson Lane culvert and amount of LWD that has been left upstream.

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

Section 24:
Nonnative ironweed and fennel will be brushed from the active channel in this length of 300'.

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.

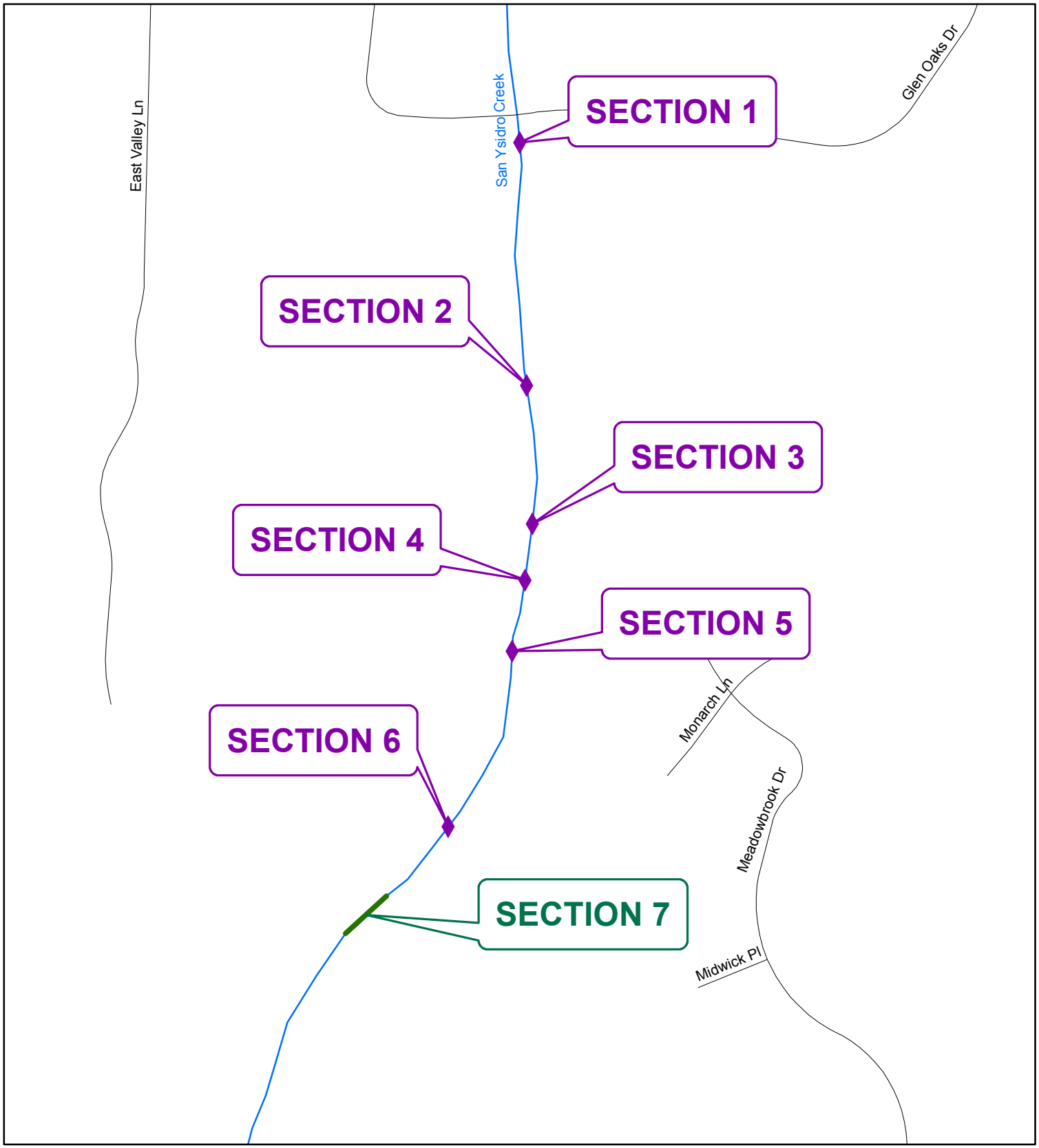
Impacts:
Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below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

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-E	H-1, B-2, W-2, W-7, W-8
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-H, FAW-I,	B-1, B-2, B-3, H-1,

Air Quality EIR sections 5.5.2, 5.5.3	None	
Noise EIR sections 5.6.2, 5.6.3	None	
Visual EIR sections 5.9.2, 5.9.3	None	
Recreation EIR sections 5.8.2, 5.8.3	None	
Public Health EIR sections 5.10	PH-A	W-2

Project Specifics:
This project will take 4 days to complete.



Department of Public Works County of Santa Barbara

San Ysidro Creek-A

Legend

- Sites
- Lengths

N W E S

Feet

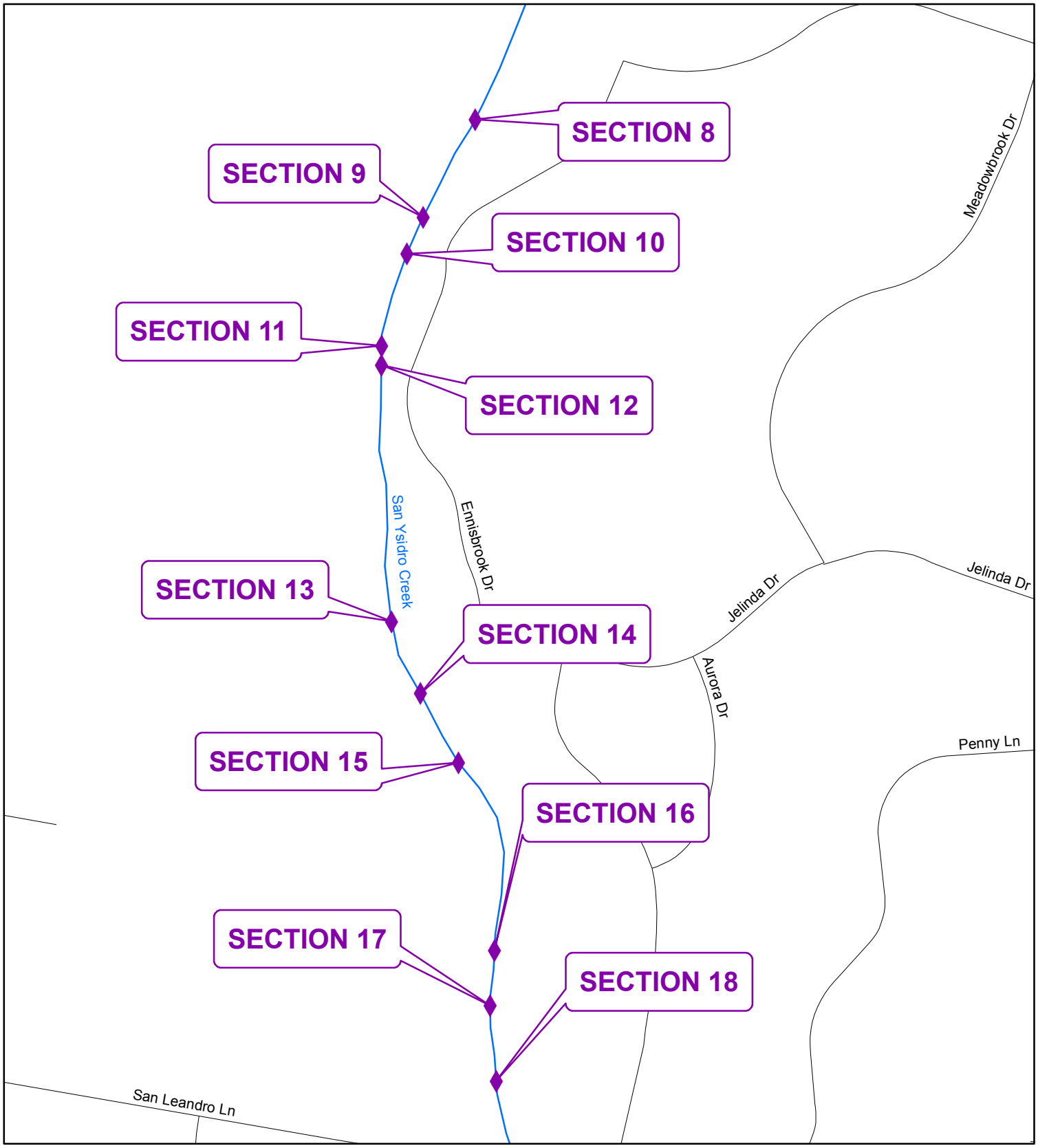
190 95 0 190

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

San Ysidro Creek-B

Legend

Sites

PUBLIC WORKS ENTERPRISE GIS

N W E S

240 120 0 240

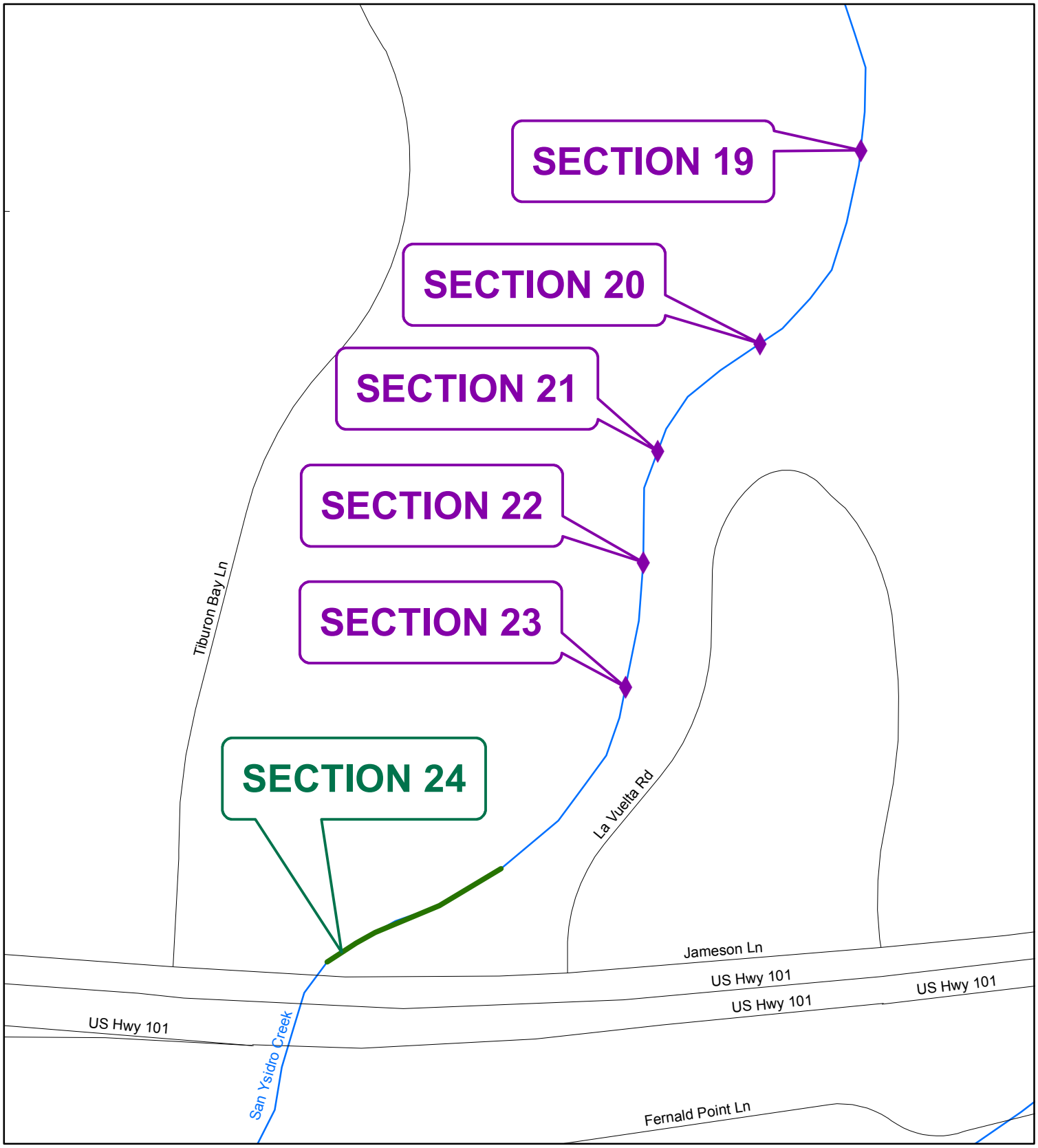
Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

San Ysidro Creek-C

Legend

- Sites
- Lengths

N W E S

Feet

160 80 0 160

Coordinate System: State Plane California Zone V NAD 1983

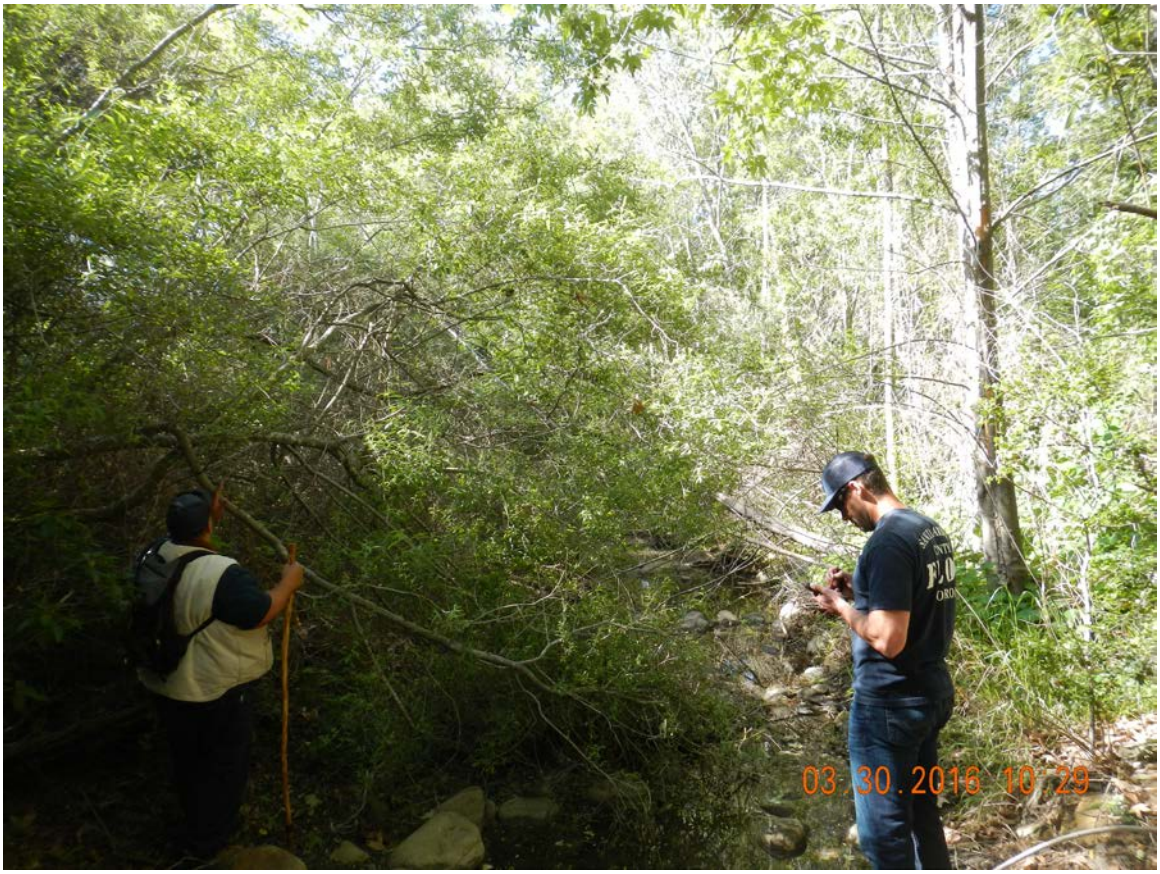
Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

San Ysidro Creek

Section 1



Section 8

San Ysidro Creek

Section 9

Section 13

WINCHESTER CREEK ROUTINE MAINTENANCE
ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project begins in Ellwood Creek at the end of Langlo Ranch Rd. and continues downstream past the confluence with Winchester Canyon Creek to Winchester Canyon Road, approximately 2,300 feet.

Setting:

Inspected on March 14, 2016.

Ellwood and Winchester Canyon Creeks originate in the foothills of the Santa Ynez Mountains. Ellwood Creek drains a 2,486 acre watershed capable of producing 3,300 cfs during a 100 year return period precipitation event. Winchester Canyon Creek drains a 1,125 acre watershed capable of producing 2,000 cfs during a 100 year return period event.

Water was present the entire reach. The channel cobble bottomed is interspersed with silt and cobble areas. The channel banks are well vegetated with both native and non-native species such as hemlock, canyon sunflower, phacelia, blackberry and many specimen oaks and sycamores. The creek bed is vegetated with herbaceous species such as cattail and watercress. Land use adjacent to the creek is residential along the east side of the creek while the remaining area is essentially agriculture and open space.

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.

Winchester				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2003/2004	0	2400	2400	2400
2005/2006	350	0	0	2050
2014/2015	0	0	0	2050
2016/2017	0	0	0	2050

Engineering Analysis:
Maintenance on Winchester Creek is comprised of the removal of obstructive vegetation. Several trees and limbs have fallen into the creek and *Arundo donax* is growing over and into the active channel all of which can obstruct and divert flows. Additionally, downed trees/limbs can become mobilized during flood flows, raising the water sur4face elevation as well as plugging culverts

located downstream. Removal of downed limbs, trees, and overhanging vegetation will help keep the active channel open, maintain channel equilibrium, and reduce channel erosion. The bankfull discharge width based on field indicators is approximately 10 feet wide.

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:
Elderberry branches are projecting into the active channel and will be limbed.

Section 2:
A down elderberry will be removed from the active channel.

Section 3:
Nonnative arundo is projecting into the active channel and will be limbed.

Section 4:
A down elderberry is completely blocking the creek and will be removed.

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

Section 6:
Nonnative arundo will be brushed from the channel.

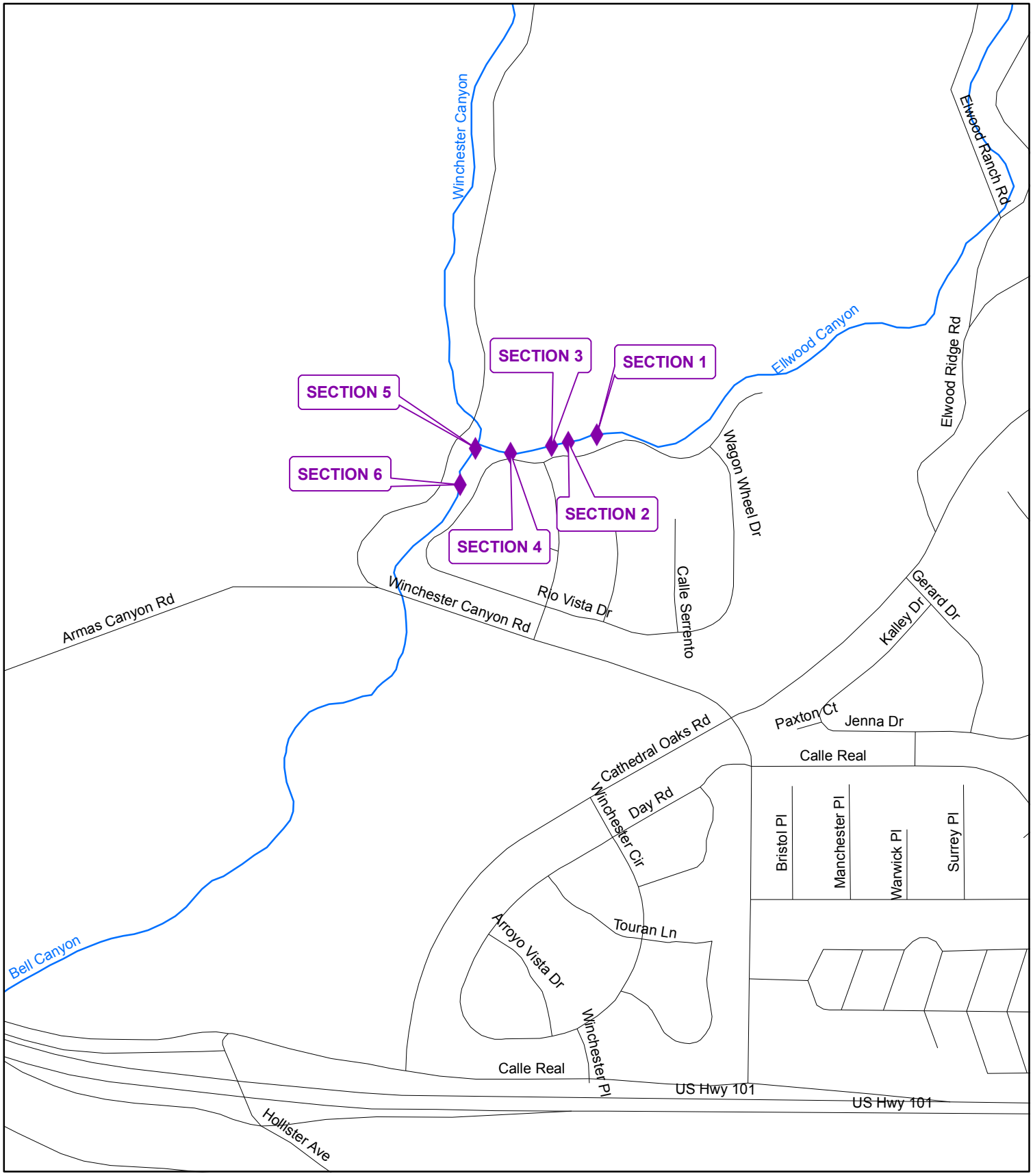
Impact Analysis and Mitigation Measures:
Listed below are the impacts and associated mitigation measures for each of the issue areas impacted by this project as identified in the Updated Program EIR.

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.

Resource	**Impacts**	**Mitigation Measures***
Hydrology EIR sections 5.1.2, 5.1.3	H-A	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-E	H-1, B-2, W-2, W-7, W-8
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-H, FAW-I,	B-1, B-2, B-3, H-1,
Air Quality EIR sections 5.5.2, 5.5.3	None	
Noise EIR sections 5.6.2, 5.6.3	None	
Visual EIR sections 5.9.2, 5.9.3	None	
Recreation EIR sections 5.8.2, 5.8.3	None	
Public Health EIR sections 5.10	PH-A	W-2

Project Specifics:
The project will take 1 day to complete.



Department
of
Public Works
County
of
Santa Barbara

Winchester Creek

Legend

♦ Sites

N
W E
S
Feet
475 237.5 0 475

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2016-2017

Santa Barbara County, California

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
Compiled by the Public Works Enterprise GIS.

Winchester Creek

Section 2

Section 3

VASCULAR PLANT LIST
WINCHESTER CANYON CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
ANACARIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia dogulasiana	Mugwort	N
Baccharis pilularis	Coyote Bush	N
Carduus pycnocephalus	Italian Thistle	I
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Venegasia carpesioides	Canyon Sunflower	N
Xanthium strumarium	Cocklebur	I
BRASSICACEAE		
Brassica nigra	Black Mustard	N
Raphanus sativus	Wild Radish	N
CAPRIFOLICACEAE		
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium murale	Nettle-Leaved Goosefoot	I
CONVOLVULACEAE		
Calystegia macrostegia ssp. cyclostegia	Morning-Glory	I

CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
GROSSULARIACEAE		
Ribes amarum	Bitter Gooseberry	N
HYDROPHYLLACEAE		
Phacelia ramossissima	Branching Phacelia	N
Pholistoma auritum	Fiesta Flower	N
LAURACEAE		
Umbellularia californica	California Bay	N
MYOPORUM		
Myoporum laetum	Myoporum	I
OXALIDACEAE		
Oxalis pes-caprae	Sour Grass	I
PLANTAGINACEAE		
Plantago major	Common Plantain	I
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Arundo donax	Giant Reed	I
POLYGONACEAE		
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Rubus ursinus	California Blackberry	N

SALICACEAE		
Salix laevigata	Red Willow	N
Saliz lasiolepis	Arroyo Willow	N
SCROPHULARIACEAE		
Scrophularia californica	California Figwort	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N

* I = Introduced
N = Native

FINDINGS

1.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) FINDINGS

1.1 CONSIDERATION OF THE ADDENDA AND FULL DISCLOSURE

The Board of Directors has considered the Addenda in the 2016/2017 Annual Routine Maintenance Plan prepared for the Santa Barbara County Flood Control District, together with the previously certified Program EIR (01-EIR-01) prepared for the Santa Barbara County Flood Control's Updated Routine Maintenance Program. The Addenda reflect the independent judgment of the Board of Directors and have been completed in compliance with CEQA. The Addenda, together with the prior PEIR are adequate for this proposal. On the basis of the whole record, including the Addenda, the previously certified CEQA document, and any public comments received, the Board of Directors finds that the projects described in the 2016/2017 Annual Routine Maintenance Plan Addenda will not create any new significant effects or a substantial increase in the severity of previously identified significant effects on the environment. Therefore, since there are no substantial changes proposed in the project which will require major revisions to the Updated Routine Maintenance PEIR, no substantial changes have occurred with respect to the circumstances under which the project is undertaken, and there is no new information of substantial importance, no subsequent environmental review shall be prepared according to CEQA Guidelines Sections 15162 and 15168 (c)(2).

1.2 LOCATION OF DOCUMENTS

The documents and other materials which constitute the record of proceedings upon which this decision is based are in the custody of the Santa Barbara County Flood Control District located at 130 E. Victoria Street, Suite 200, Santa Barbara, CA 93101.

1.3 ENVIRONMENTAL REPORTING AND MONITORING PROGRAM

Public Resources Code Section 21081.6 and CEQA Guidelines Section 15091(d) require the District to adopt a reporting and monitoring program for the project and conditions of the project adopted to mitigate or avoid significant effects on the environment. The approved project descriptions, mitigation measures, with their corresponding permit monitoring requirements, are hereby adopted as the reporting and monitoring program for these projects. The District will provide the monitoring and reporting to ensure compliance during project implementation.

REVEGETATION PLAN FOR
SANTA BARBARA COUNTY FLOOD CONTOL DISTRICT
MAINTENANCE PROGRAM

The purpose of this plan it to outline the Santa Barbara County Flood Control and Water Conservation District's (District) plan for designing, implementing, and monitoring the restoration associated with the Annual Routine Maintenance Plan. The District's maintenance practices often require mitigation in the form of restoration. As a result, the District has gained a great deal of revegetation experience over the past 10 years and has planted more than one hundred restoration sites along creek corridors throughout Santa Barbara County.

This Plan addresses seven phases of the revegetation process: 1) Identification of native plants and potential revegetation sites, 2) Use of bio-technical approaches to bank stabilization, 3) Determination of appropriate plant quantities, 4) Plant collection and propagation, 5) Revegetation of the riparian corridor, 6) Maintenance of restoration sites, and 7) Post-project monitoring.

Identification of Native Plants and Revegetation Sites

During annual creek inspections, District personnel determine maintenance needs and associated restoration opportunities on individual creeks. In general, the District implements restoration in four different situations:

1. Denuded banks
2. Areas containing large amounts of non-native invasive species such as *Arundo donax*, castor bean, mustard or poison hemlock
3. Areas with an established healthy canopy but lacking a well-developed understory, or vice versa, due to the invasion of non-natives
4. Eroded banks that have been stabilized or rebuilt

Each creek addendum included in the Annual Routine Maintenance Plan will identify appropriate restoration that mitigates the impacts of the proposed maintenance project. The identified areas will be at densities recommended in this revegetation guide.

Bio-technical Bank Protection

Bio-technical approaches to bank stabilization use woody, readily sprouting plant species which are inserted into the banks or anchored in various other ways to create structure and stabilization by providing direct protection from erosive flows and quickly developing root systems and above ground growth to further stabilize the bank.

Bio-technical bank stabilization is not appropriate in all circumstances and is most suitable for creek restoration projects where the purpose is to reduce bank erosion, establish native vegetation on the bank, and not protect expensive structures or roads. The District will evaluate the erosion problems and flow conditions at potential revegetation sites to determine whether bio-technical techniques are appropriate and if so, the combination of techniques that would be best suited for the specific site characteristics. Common types of bio-technical bank protection are briefly described below. The District has consulted directly with Ms. Ann Riley for bio-technical design as

well as referring to her book, Restoring Streams in Cities. Some examples of bio-technical techniques are shown in Figures1 through 4.

1. Anchored Cuttings. This technique employs large numbers of cuttings arranged in layers or bundles, which are secured to creek banks and partially buried. They provide direct protection from erosive flows, prevent overbank erosion, promote sediment capture, and quickly develop roots.

2. Live Stakes. This is the simplest form of bio-technical slope protection in which live cuttings of willows, mulefat, or cottonwood trees are tamped into the banks to root, grow and form a thicket of new trees.

3. Live Fascines. Fascines are dormant branch cuttings of willows bound together into long cylindrical bundles that are placed in shallow trenches parallel to the bank and buried. The branches will sprout and create a mass of new woody plants.

4. Brush Mattress. A combination of live willow stakes, fascines and individual branch cuttings are interwoven and pinned to the bank with jute cord or wire held in place with stakes. The "mattress" is then covered with soil to facilitate sprouting of the willows.

5. Tree revetment. A row of downed trees are laid parallel to the base of the bank and anchored together, and to the bank with steel cable. The trees reduce flow velocities along the base of the slope, trap sediment, and provide substrate for plant establishment.

6. Coconut Fiber Roll. Cylindrical structures composed of coconut husk fibers bound together with twine woven from coconut material are placed parallel to the slope to reduce erosion and trap sediment.

7. Reed Rolls. Soil and rootballs of herbaceous plants are placed into burlap rolls and partially buried and staked along the bank.

8. Brush Layers. Cuttings of willow are placed into trenches cut into the bank so that the branches stick outward from the bank. Alternating layers of cuttings and soils are placed up the bank.

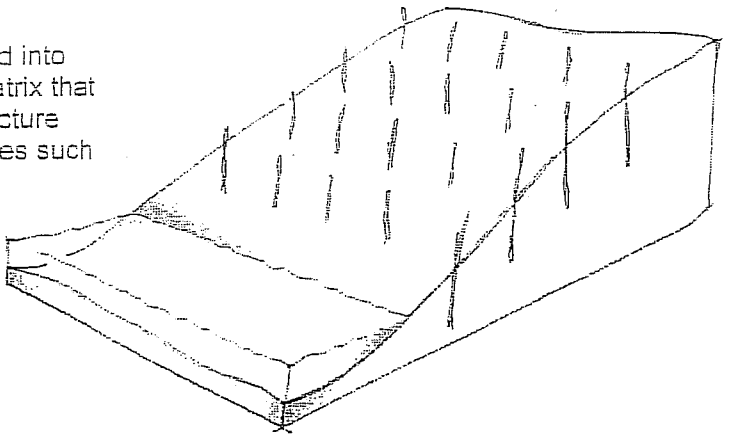
9. Geotextiles consist of plastic or biodegradable materials that hold soils in place to allow plants to become established through the mesh. There are many types of geotextiles available, designed for various flow conditions. For banks in low flow conditions geotextiles are placed across the face of a slope and cuttings or container plants are installed through the mesh. In more erosive conditions, geotextiles are placed between brush layers that are buried in trenches on the bank.

10. Joint Planting. Easily sprouting species such as willow or cottonwood are planted amongst ungrouted rip-rap or "A-jacks" at the base of eroded slopes.

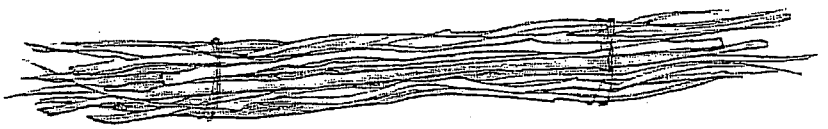
11. Live Cribwalls. Hollow box-like interlocking arrangements of timber are placed at the base of a slope and are filled with alternating layers of soil and live branch

Live Stakes

Live woody cuttings are pushed or tamped into the soil to root, grow and create a root matrix that stabilizes the soil. The above-ground structure that results reduces overland erosive forces such as raindrops or sheet flow across the site.



Willow Wattle (Fascine)



Live Fascines

Branch cuttings bound together in sausage-like bundles and placed in shallow trenches on slopes to reduce erosion and shallow sliding.

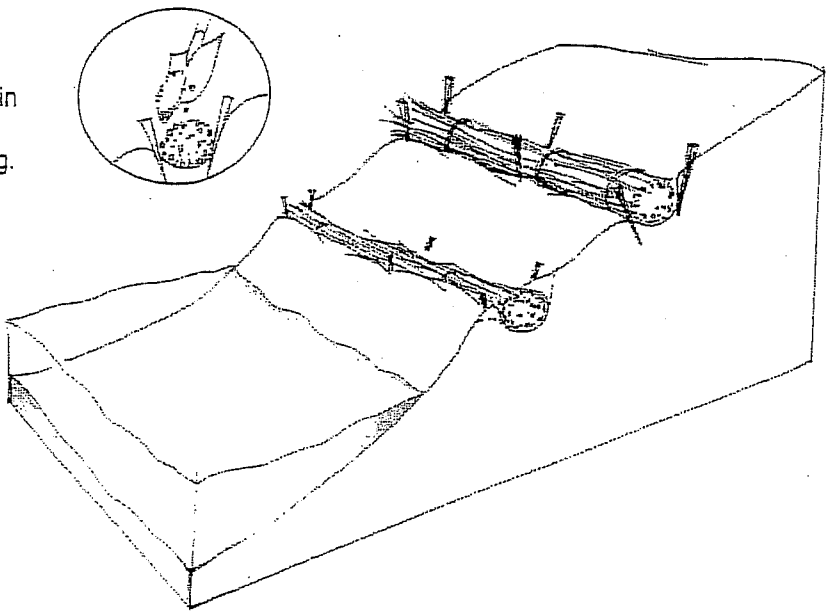
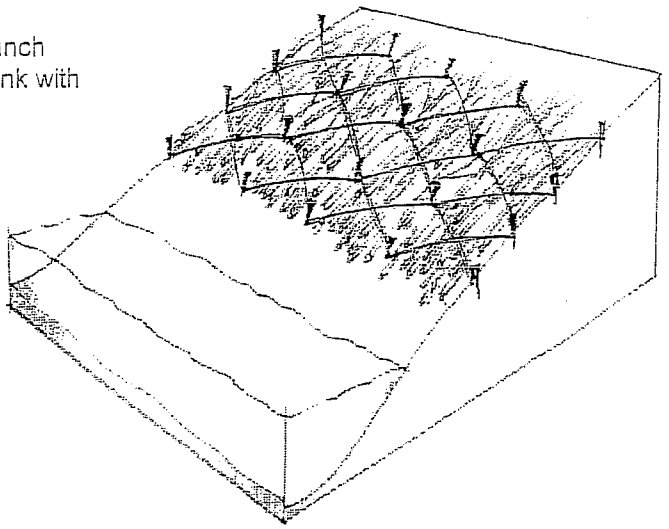


Figure 1. Examples of Bio-technical Techniques

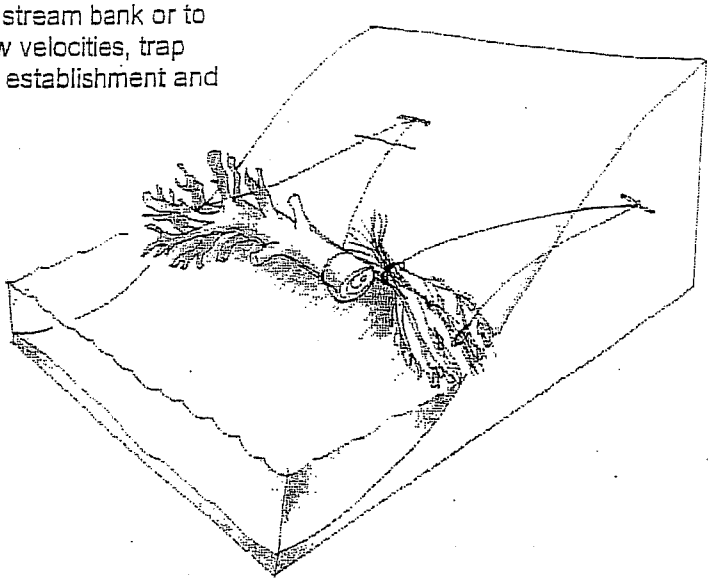
Brush Mattress

Live willow stakes, facines and individual branch cuttings are interwoven and pinned to the bank with jute cord or wire held in place with stakes.



Tree Revetment

A row of live or dead trees attached to the stream bank or to deadmen in the stream bank to reduce flow velocities, trap sediment and provide a substrate for plant establishment and erosion control.



Tree Revetment

A large root wad and stump is anchored within the stream bank to reduce flow velocities and provide structure and hiding places for aquatic species.

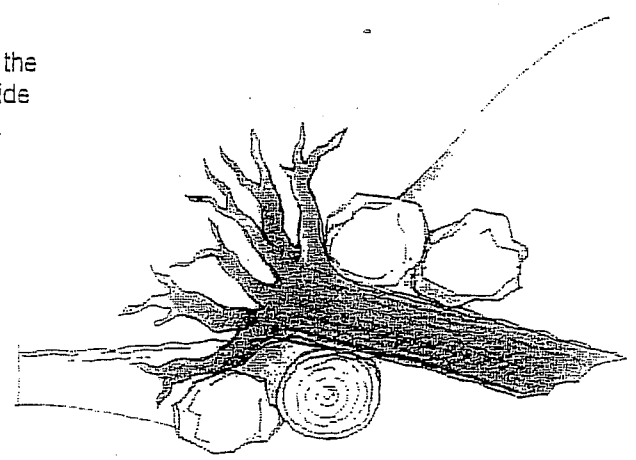
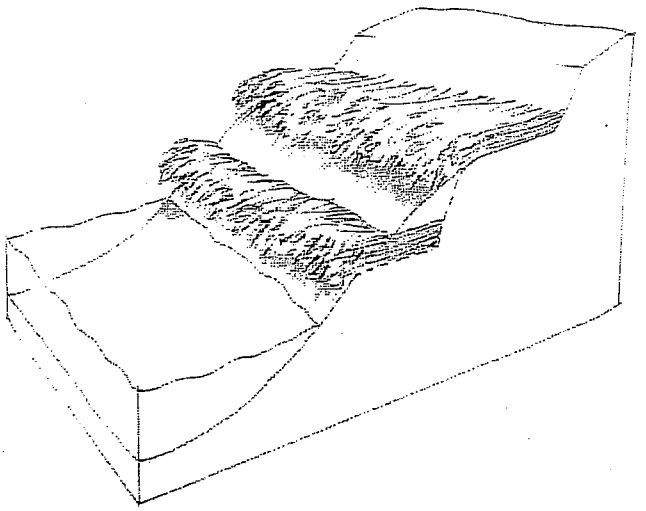


Figure 2. Examples of Bio-technical Techniques

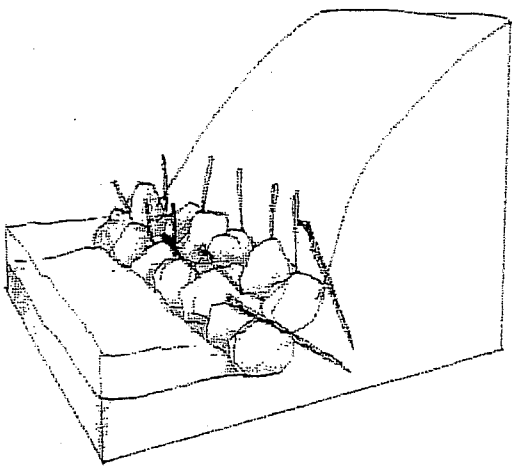
Brush Layering

Live cuttings of willow or cottonwood are placed into trenches cut into the bank so that branches stick outward from the bank. Brush layering provides live material that will root and go along with a structural component to reduce flow velocities along the bank.



Joint Planting Newly Installed

Live cuttings such as willow or cottonwood are planted among ungrouted rip-rap. Cuttings can also be placed horizontally in a trench below the rocks.



Joint Planting Three Years Later

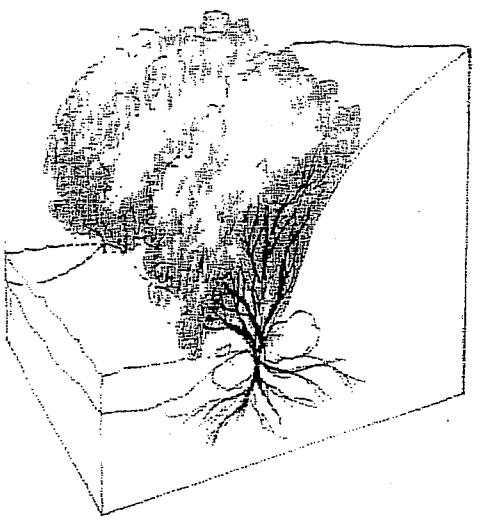
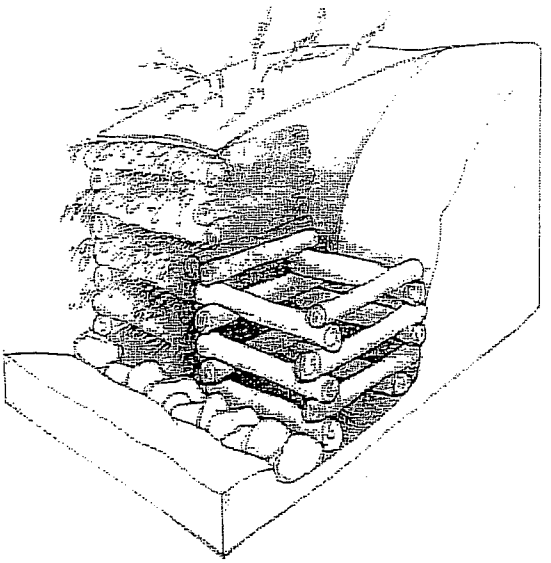


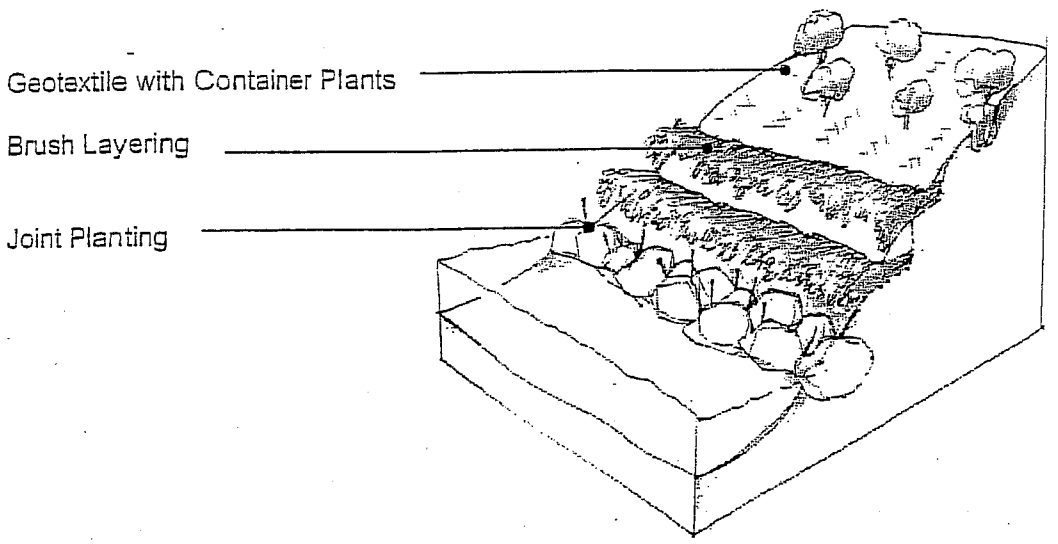
Figure 3. Examples of Bio-technical Techniques

Live Crib Wall

Hollow, box-like interlocking arrangements of logs or timber filled with alternative layers of soil material and live branch cuttings.



Combined Bio-Technical Bank Protection Techniques



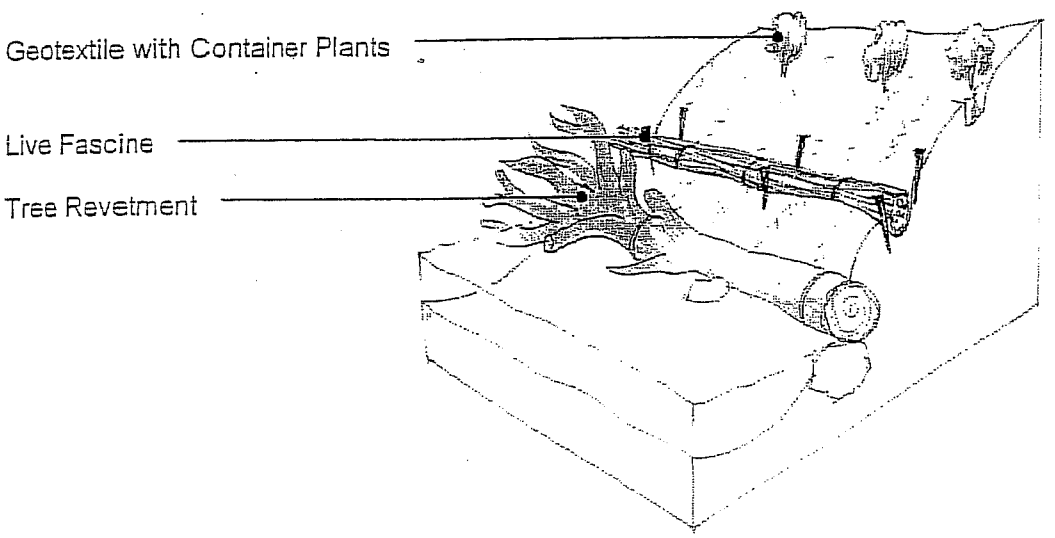


Figure 4. Examples of Bio-technical Techniques

cuttings. Live Cribwalls should be reserved for the particularly difficult projects in urban settings that require a substantial structural solution.

Determination of Appropriate Plant Quantities

After revegetation sites are identified the actual revegetation areas will be calculated. The District does not generally place understory species within three feet of the toe of the bank because even minor flows could remove these plants. Revegetation along the toe of the bank generally consists of willow or cottonwood cuttings or natural colonization.

Planting locations and densities will be determined by the District Biologist using guidance from Martha Blane, a consulting botanist, who provided planting density recommendations that the District has referred to since 1992. Most often, the District Biologist uses Ms. Blane's recommendations as a starting point for figuring plant numbers and then adjusts the numbers as appropriate for each site. It is the District's goal to increase species diversity at each of the revegetation sites as feasible depending upon site characteristics, species occurring in the watershed, and plant availability. Once a plant mix is determined, plant quantities are calculated. The District always includes the possibility of at least 30% plant mortality when calculating final plant numbers for each site. Generally, the District chooses from the following species for restoration projects, although other species are sometimes used depending upon site location:

Salix sp.	Willow
Platanus racemosa	Sycamore
Populus trichocarpa	Black cottonwood
Sambucus mexicana	Elderberry
Quercus agrifolia	Coast live oak
Umbellularia californica	California bay laurel
Baccharis salicifolia	Mulefat
Artemesia douglasiana	Mugwort
Clematis ligusticifolia	Creek Clematis
Elymus condensatus	Giant ryegrass
Hereromeles arbutifolia	Toyon
Lonicera suspicata	Santa Barbara honeysuckle
Rhamnus californica	Coffeeberry
Ribes amarum	Gooseberry
Ribes speciosum	Fushia flowered gooseberry
Rosa californica	California rose
Rubus ursinus	Blackberry

PLANTING DENSITY RECOMMENDATIONS

SPECIES	# PER ACRE	SPACING
Salix sp.	1,000	6' – 7'
Platanus racemosa	50	30'
Quercus agrifolia	50	30'
Populus sp.	70	25'
Alnus rhombifolia	70	25'
Umbellularia californica	70	25'
Sambucus mexicana	200	15'
Baccharis pilularis	200	15'
Rhus sp.	450	10'
Rosa californica	450	10'
Ribes sp.	450	10'
Heteromeles arbutifolia	450	10'
Rhamnus californica	450	10'
Lonicera subspicata	450	10'
Rubus ursinus	1740	5'
Clematis ligusticifolia	1740	5'
Artemesia douglasiana	1740	5'

Plant Collection and Propagation

When feasible, to maintain genetic integrity of the species in each creek, all material (saplings, cuttings and seeds) will be collected as close to the revegetation site as possible. Once the District identifies the creeks needing maintenance for any given year and the associated revegetation requirements, the District biologist will coordinate the plant material collecting and propagation of the species and quantities needed to fulfill the mitigation requirements for that year. Seeds will be collected year round depending upon the species. Many species of trees, shrubs and vines can also be grown from cuttings. In many cases cuttings can be collected year round and grown in a nursery setting to produce a 1-gallon size plant that is ready to be planted by the winter or early spring. The District will work with a nursery to propagate the needed plants for each given maintenance year. For the past several years, the District has used the Tree of Life Nursery, in San Juan Capistrano, to grow plants for several District projects. The District also uses local plant growers as feasible. The District most often uses 1-gallon size plants but occasionally will use 5-gallon size plants. Occasionally, the District will use willow cuttings planted directly at the revegetation site depending upon water availability and site conditions. The District has had the greatest success with container plants as opposed to cuttings planted directly at the site.

Revegetation of the Riparian Corridor

Beginning in the winter and continuing into spring, the District Biologist will coordinate the installation of the plants at the revegetation sites identified in the Annual Routine Maintenance Plan. The District hires a landscaping company with experience in native plant restoration to plant, water and maintain most ofl the revegetation sites.

The District Biologist identifies the species and plant numbers for each revegetation site (allowing for a 30% mortality) and places the color-coded flags to identify where each plant will be installed. The plants are planted at irregular intervals or appropriate groupings to simulate the appearance of a natural creek. Only as many plants that can be planted and watered in one day are delivered to the site.

Actual plantings will follow the digging of holes as rapidly as possible so that the excavated hole does not dry out. The excavated soil will be used as the backfill and will be tamped firmly to eliminate all voids and obtain contact between the root systems and native soils. Excess soil will be used to form a basin around the plant to hold either rainwater or watered delivered to the plant by a drip or hand watering system. The District will often include a slow release fertilizer tablet and some soil amendment in the planting hole at the time of plant installation, depending upon site conditions.

The District will sometimes use unrooted cuttings of easy to root natives such as Salix sp. or Populus sp. In particular, bio-technical techniques utilize cuttings in several planting methods. Standard live stakes are generally from ¾" to 1 ½ " in diameter, approximately 2 to 3 feet long and generally straight. Cuttings are prepared the day they are to be planted although a one to two day delay can be tolerated if the cuttings are kept wet. When the cuttings are prepared, the top of each cutting is cut square with a leaf bud and the base of each cutting is cut below a leaf bud at an approximate 45-degree angle. All the leaves and branches are trimmed off flush with the stem. The cuttings are either pushed into ground that is soft or into holes that have been excavated and backfilled with loose soil that is tamped firmly against the stem to eliminate any air pockets.

Maintenance of Restoration Sites

All newly planted plants are watered immediately. In most cases, the District hand-waters the revegetation sites using a water truck fitted with a hose. Occasionally, a site will be near a water source and a drip system can be installed. In yet other instances, a large site will have a drip system installed and will be watered from the water truck. In all cases, newly installed plants are watered with 5 gallons of water once a week for approximately the first year after installation, which usually takes the site into the next rainy season. If the rainy season is particularly dry or the storms are far apart, watering continues uninterrupted. The sites are evaluated the following spring and the watering schedule is adjusted to meet the plant needs. Most commonly, the sites are watered every other week for the second year. Watering amounts differ at each site depending upon the plant needs. Occasionally, instead of a bi-weekly watering scheme, the District Biologist will direct the contractor to deep water certain plants on a monthly basis to promote deep root growth. Ultimately, the goal is to have each revegetation site self-sustaining once the second rainy season is met.

In addition to watering the restoration sites, the revegetation contractor is responsible for weeding the sites. Each site is unique; however, all sites have a 3-foot diameter weed free zone maintained around each plant for at least the first year following installation. This eliminates the competition for water and sunlight. Beyond the 3-foot weed free zone, the site is allowed to have some weeds such as grasses or other low growing herbaceous species that help reduce erosion. The more noxious weeds such as castor bean, giant reed, poison hemlock, fennel, wild radish, and mustard are removed from the

site repeatedly until the restoration plants are established and will not be out competed by the weeds. Noxious weeds can be selectively sprayed with Rodeo or Roundup herbicides but are most commonly removed by hand. Herbicides will be administered under the supervision of a Pest Control Advisor and the applicator will use care in avoiding natives.

Post-project Monitoring

Post-project monitoring will consist of determining water and weeding regimes, identifying areas of high mortality, and scheduling subsequent revegetation for those areas experiencing a greater than 30% mortality.

The revegetation sites will be checked at least once every three months to monitor the mortality rates and weed growth. As previously mentioned, the sites will be watered using different methods and schedules depending upon site conditions and age of the plants. The District Biologist will monitor the health and establishment of the plants and determine the ongoing watering and weeding needs at each site. Photos will be taken of each site at least once a year until they are established and do not need any further weeding, watering or replanting.

If a site experiences more than 30% mortality, additional plants will be installed during the next maintenance planting season and the watering and weeding schedule will be adjusted to accommodate the new, smaller plants.

References

Riley, Ann. 1998. Restoring Streams in Cities: a guide for planners, policymakers, and citizens.

URS Corporation. 2000. Creek Inventory and Assessment Study, City of Santa Barbara

IMPACTS AND MITIGATION MEASURES*

ALPHABETICAL LIST OF DEFINITIONS

A

Impacts

AQ = Air Quality

AQ-A. Equipment Emissions. Temporary emissions of reactive organic compounds (ROC), particulate matter, and NOx associated with gasoline and diesel-powered heavy-duty maintenance equipment, as well as employee vehicles and trucks transporting excavated materials to and from maintenance sites. (Class II Impact)

AQ-B. Fugitive Dust Emissions. Temporary emissions of fugitive dust (particulate matter) due to earth moving activities during maintenance, including channel shaping, desilting, bank stabilization by placing fill or grading banks, bank protection construction or repair, pilot channel construction, and access ramp construction. (Class II Impact)

Mitigation Measures

A-1 – Reduce Emissions. Implement the following Santa Barbara County APCD-approved measures for each piece of heavy-duty diesel construction equipment to minimize NO_x emissions: (1) The engine size of construction equipment shall be the minimum practical size; (2) Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated clean diesel engines) should be utilized wherever feasible; (3) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest number is operating at any one time; (4) Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or precombustion chamber engines; (5) Catalytic converters shall be installed on gasoline-powered equipment, if feasible; (6) Diesel catalytic converters shall be installed, if available; and (7) Diesel powered equipment should be replaced by electrical equipment, whenever feasible.

A-2 – Reduce Fugitive Dust. Implement the following Santa Barbara County APCD-approved measures to minimize fugitive dust emissions: (1) After clearing, grading, earth moving or excavation is complete, the disturbed area must be treated with watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur; (2) During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this shall include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency shall be required whenever the wind speed exceeds 15 mph. Reclaimed water shall be

* Extracted from the Final Program Environmental Impact Report, Updated Routine Maintenance Program, November 2001

used whenever possible; (3) Minimize the amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less; (4) Gravel pads should be installed at all access points to prevent tracking of mud onto public roads; (5) If importation, exportation, and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation; (6) Trucks transporting fill material to and from the site shall be tarped; and (6) Dust control requirements shall be shown on all grading plans.

B

Mitigation Measures

B-1 - Compensatory Habitat Mitigation. The District shall provide compensatory habitat mitigation for the removal of riparian and wetland habitat associated with brushing, herbicide spraying, channel shaping, bank stabilization by placing fill or grading banks, pilot channel construction, bank protection installation, access ramp construction, and channel desilting. The mitigation shall be required for all vegetated habitat, with the exception of areas dominated by aggressive, noxious non-native weeds (e.g., giant reed). The restoration treatment shall occur either on-site (i.e., along suitable portions of the drainage and its tributaries where the project is located) or off-site (Los Carneros Mitigation Bank) in accordance with the updated restoration plan described in the updated Program EIR, using a 1:1 acreage replacement ratio. A 2:1 ratio shall be used for impacts due to new grade stabilizers and non-vegetated bank protection, as described in the updated Program EIR. Prior to the use of the Los Carneros Mitigation Bank, the District shall consult with other organizations with expertise in habitat restoration (e.g., Wetlands Recovery Project) to determine if they have any knowledge of any on-site opportunities. Mitigation for specific affected areas shall only occur once during the next ten years of the maintenance program. That is, once habitat mitigation has been achieved for a portion of a drainage, no further mitigation is required for future maintenance of that reach or site over the next ten years regardless of the type of maintenance activity, provided the previous habitat mitigation has been successfully implemented, and the District continues to minimize habitat impacts to the extent feasible. After ten years, the habitat mitigation requirement shall begin again, regardless of previous habitat mitigation. Native trees with a diameter at breast height of 6 inches or more that are removed shall be replaced at a 10:1 ratio at the restoration site, independent of the replacement of habitat based on acreage. To the extent feasible, habitat restoration opportunities shall be sought on the tops of banks and landward of the creek that could provide a bio-filtering benefit for overland stormwater runoff. In addition, the District will seek opportunities to use regionally rare plants in the restoration plans, as feasible.

B-2 – Minimize Vegetation Removal from Channel Bottom. The District shall minimize vegetation removal from the channel bottom to the least amount necessary to achieve the specific maintenance objectives for the reach (i.e., removing obstructive vegetation or silt-trapping vegetation). Brushing and herbicide application for vegetation control on the channel bottom shall be conducted in a non-continuous, mosaic-like manner, to the extent feasible, allowing small patches of in-channel native vegetation to persist.

B-3 - Construction Monitoring During Maintenance Activities. The District Biologist shall monitor maintenance activities daily to ensure that the appropriate methods and limits are used. Results of the monitoring shall be documented in the annual post-maintenance report. These activities include brushing, herbicide application, channel shaping, desilting, bank stabilization by placing fill or grading banks, bank protection construction or repair, grade stabilizer construction or repair, pilot channel construction, and access ramp construction.

B-4 - Restore Temporarily Disturbed Areas. The District shall restore channel banks containing riparian or wetland vegetation that are temporarily disturbed by maintenance or construction activities associated with the following: channel shaping, placement of bank protection, ramp construction, and repair or construction of bank protection and grade stabilizers. Restoration objectives, methods, plant species, maintenance, and monitoring shall follow the guidelines in the updated restoration plan described in the Program EIR. The restoration of channel bed habitats shall only occur if it would not conflict with the maintenance needs in the affected reach.

B-5 – Pre-Construction Biological Surveys and Avoidance Measures. A District biologist shall inspect all maintenance areas in creeks and basins during the annual spring field assessments (April and May) to determine if any sensitive plants, fish, or wildlife species are present, or habitats for these species are present. If the species are present, the District shall modify maintenance activities to avoid removal or substantial disturbance of the key habitat areas or features. Avoidance and impact minimization measures shall be described in the Annual Plan for each maintenance project. If a rare plant could be affected, the District shall relocate the plant by cultivation or seeding methods to a suitable nearby site. If a sensitive fish or wildlife species will be present at a maintenance site during the work period, the District shall schedule the work to avoid the species, if possible. If avoidance is not feasible, the District shall attempt to relocate the species or population with approval from the California Department of Fish and Game, US Fish and Wildlife Service or National Marine Fisheries Service, as appropriate. This measure applies to all currently known sensitive species that occur in maintained drainages and basins, as well as species that are determined to be sensitive in the future. Endangered species experts with handling permits shall be consulted during relocation efforts to provide additional assurances that relocation is effective. Such consultation shall include assistance in field efforts, as warranted.

B-6 – Construction Monitoring for Sensitive Species. The District Biologist shall monitor, on a daily basis, earth and vegetation disturbing maintenance activities located at and adjacent to locations where sensitive species are known to occur. The need for monitoring and the areas to be monitored shall be determined during the annual field assessment in the spring. The objective of the monitoring is to ensure that key habitat features or species locations are avoided.

B-7 – Post Maintenance Channel Bed Treatment. The District shall roughen the channel bed after channel desilting maintenance to create microtopography that will encourage re-establishment of aquatic habitats over time. Pools and riffles shall be recreated in the work area if they were removed during maintenance, to the extent feasible. Modifications of the creek bed shall be consistent with geomorphological considerations identified through mitigation measure H-1.

C

Impacts

CR=Cultural Resources

CR-A. Disturb Cultural Resources. There is a remote potential for certain earth-disturbing maintenance activities to disturb buried prehistoric and historic archeological sites and isolated artifacts. This impact would occur only on undisturbed upland sites outside watercourse channels and basins due to incidental excavation grading banks for stabilization, installing or repairing bank protection, and constructing access ramps. (Class II Impact).

Mitigation Measures

C-1 - Unexpected Archeological Finds. If cultural materials are unexpectedly uncovered during maintenance activities, the District shall immediately consult with a qualified archeologist who shall inspect the material and coordinate with the District to halt or redirect earth-disturbing maintenance work until the significance of the material is determined, and the location is cleared for further work.

C–2 – Archeological Surveys. The District shall conduct an archeological field investigation in maintenance areas that may be disturbed by excavation activities associated with routine maintenance when such work occurs in upland areas outside watercourses and basins that: (1) appear to represent undisturbed ground not subject to previous excavations or significant grading; and (2) contain known significant archeological sites. The investigation shall be conducted by a qualified cultural resource specialist.

F

Impacts

FAW = Fish Aquatic Species and Wildlife

FAW-A. Displace Wildlife due to Vegetation Removal in the Channel Bottom. Removal and/or thinning of vegetation from channel bottom due to brushing, herbicide application, desilting, and channel shaping cause a temporary reduction in vigor and/or cover of successional riparian habitats and emergent wetlands. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. These actions could reduce foraging and loafing habitat for certain riparian and wetland dependent bird species. It can also reduce habitat heterogeneity for reptiles and small mammals, and degrade aquatic habitats by removing protective cover and increasing temperatures. While the long term functions and values of the habitat temporarily disturbed by maintenance would be replaced through the District's updated habitat restoration program, there will be a temporal impact to wildlife that cannot be fully mitigated. (Class I Impact)

FAW-B. Adverse Effects of Maintenance on Aquatic Habitat. Channel shaping, bank stabilization by placing fill or grading banks, sandbar removal, excessive removal and/or thinning of in-channel vegetation, and pilot channel construction could reduce vegetation cover, pools and gravel beds, organic input from overhanging vegetation supporting aquatic productivity, and instream cover and debris providing micro-habitat. In addition, fish and aquatic organisms could be directly displaced. These impacts are temporary and reversible. (Class I Impact)

FAW-C. Displace Wildlife for Hard Bank Protection. Placement of "hard" bank stabilization without native vegetation would permanently reduce the amount of existing and future bank riparian vegetation. This action could also adversely affect nesting and foraging habitat for riparian-dependent bird species, as well as cover for riparian amphibians, reptiles, and mammals. (Class II Impact)

FAW-D. Displace Wildlife for New Access Ramps. Construction or maintenance of access ramps could temporarily reduce the amount of riparian habitat. This action could adversely affect nesting, cover, and foraging habitat for riparian-dependent bird species, as well as cover for riparian amphibians, reptiles, and mammals. (Class II Impact)

FAW-E. Displace or Remove Sensitive Fish and Wildlife. Disturbance of channel banks and bed from heavy equipment during channel shaping, placement of bank protection, channel shaping, desilting operations, ramp construction, and repair of bank protection and grade stabilizers could remove and displace sensitive fish and wildlife species, depending upon location and time of year. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. Species that could be directly affected include the southern steelhead trout, arroyo chub, southwestern pond turtle, two-striped garter snake, San Diego horned lizard, California red-legged frog, silvery legless lizard, and tri-colored blackbird. Species that could be indirectly affected due to habitat modification include southwestern willow flycatcher, least Bell's vireo, yellow warbler, yellow breasted chat, purple martin, warbling vireo, Wilson's warbler, Swainson's thrush, blue grosbeak. (Class II Impact)

FAW-F. Fish and Wildlife Exposure to Herbicide The analyses presented in Section 5.2.3 indicated that the application of herbicides to control emerging vegetation on the channel bed is not expected to introduce substantial amounts of herbicide to the water in the drainage where fish, aquatic organisms, and humans could be exposed, because of reasons: (1) no herbicide is directly applied to open water; (2) overspray is minimized by precise spraying by trained field crews; (3) most spraying occurs in the fall when flows are absent in drainages; (4) glyphosate is strongly absorbed by soil particles and not easily mobilized once it has contact with soils or wet sediments; and (5) residual herbicide in soils or sediments are subject to microbial degradation. However, there is a potential, albeit very remote, that adverse herbicide concentrations may be temporarily present in aquatic areas immediately after spraying due to excessive or poor application. (Class II Impact)

FAW-G. Fish Passage Impacts from New Grade Stabilizers .New grade stabilizers may be installed to stabilize the bed of a channel that is being lowered due to headcutting. A new or reconstructed stabilizer could create a vertical drop, which may become a fish passage impediment or barrier over time, depending on the height of the vertical drop. (Class II Impact)

FAW-H. Increased Water Temperatures in Aquatic Habitats. Brushing and spraying cause the removal of vegetation in the channel bed which could increase the temperature of water present due to greater solar radiation. The higher temperatures could adversely affect the quality of aquatic habitats in the channel bottom, if present. (Class III Impact)

FAW-I. Effects of Sediments and Turbidity on Aquatic Organisms. The following activities could cause a temporary increase in sediment and turbidity levels: brushing, mowing, and spraying channel bed vegetation; channel shaping, desilting, bank stabilization by placing fill or grading banks, pilot channel construction, equipment movement on the channel bed, and pilot channel clearing in basins. The higher levels could adversely affect fish and aquatic organisms present in any aquatic habitats. (Class III Impact)

FAW-J. Impact of Accidental Releases on Aquatic Organisms. There is a very low potential for the accidental discharge of fuel, oil, and herbicides to a channel or debris basin during routine maintenance. Such spills may affect fish and aquatic organisms, if present. (Class III Impact)

Mitigation Measures

F-1 – Assist Others with Fish Passage Impediment Removal Projects. Subject to available resources, the District shall provide technical and regulatory assistance to other parties (agencies and non-governmental organizations) seeking to remove or modify fish passage impediments along reaches maintained by the District. Assistance shall include review and recommendation concerning project plans; and identifying a CEQA lead agency and assisting in the preparation of a CEQA document for the proposed project; and general assistance in acquiring access easements and permits.

H

Impacts

H = Hydrology

H-A. Preventing a Build up of Channel Resistance May Increase Velocities. Channel resistance is reduced by brushing, mowing, spraying, and discing to remove obstructive and/or silt-trapping vegetation; and by removing storm debris and obstructive sandbars. These actions can result in higher velocities, which in turn could theoretically cause minor and localized channel degradation that contributes to bank erosion in the affected reach. This impact is expected to occur very infrequently, if at all, and would only have localized hydraulic impacts. To ensure that this impact is avoided under the current program, the District would conducts an “engineering analysis” (Mitigation Measure H-1) to determine the need, nature, and extent of maintenance activities each year along maintained drainages, and give full consideration of incidental adverse hydraulic effects associated with channel maintenance. (Class II Impact)

H-B. Reduced Bank Stability due to Giant Reed Removal. The District may periodically remove giant reed plants from stream banks for habitat restoration purposes if the

stands are large and appear to represent a significant threat to the local riparian vegetation. Removal of large stands could destabilize banks and result in increased local bank erosion and downstream sedimentation. Hydraulic impacts would be localized. In addition, large stands of giant reed on banks that are vulnerable to erosion are few in number. (Class II Impact)

H-C. Unintended Bank Erosion from Hard Bank Protection. Installation of hard bank protection could cause local bank erosion and channel bed degradation on the opposite banks due to increased flow velocities. This impact is expected to occur rarely, if at all, and would only have localized hydraulic impacts. (Class II Impact)

H-D. Effect of Equipment on Channel Bed. For large maintenance projects, the movement of equipment in the channel bed can disrupt any armored layer on the channel bed and loosen sediments. It may also reduce the channel topographic diversity, which imparts a certain resistance to flow, thereby increasing flow velocities and sediment transport capacity. (Class II Impact)

H-E. Impact of Removing Channel Obstructions (Excessive Desilting). Excessive desilting could result in lowering the channel bed below its previous invert elevation, which could contribute to oversteepened banks that are prone to failure. This impact is expected to occur very infrequently, if at all, and would only have localized hydraulic impacts. (Class III Impact)

H-F. Altered Channel Sinuosity and Slope. Creation of a straight pilot channel could theoretically reduce sinuosity, increase channel slope, and cause channel bed degradation. This impact is expected to occur very infrequently, if at all, and would only have localized hydraulic impacts. (Class III Impact)

H-G. New Grade Stabilizer. The District may occasionally need to stabilize the bed of a channel that is being degraded. A new grade stabilizer will prevent channel bed degradation, which in turn, leads to oversteepened banks. However, it could create a scour pool beneath the grade stabilizer and cause a need for repeated repairs. (Class III Impact)

H-H. Steep or Exposed Access Ramps. Creating an overly steep and unstabilized access ramp can cause increased local bank erosion. (Class III Impact)

H-I. Impacts of Reduced Sediments. Periodic removal of the sediments from the basins contributes to the reduction in overall sediment supply to the downstream reaches of the drainages. Reduced sediment supply can result in channel degradation over time. (Class III Impact)

Mitigation Measures

H-1 - Maintenance Need Analysis. The District shall evaluate relevant hydraulic factors when determining the need, type, and extent of channel maintenance for non-exempt watercourses where natural geomorphic processes are largely intact. Key factors that shall be included in the evaluation include: (1) hydraulic benefits of maintaining the bankful channel (if present) dimensions, natural sinuosity, and natural channel bed roughness; and (2) potential adverse hydraulic effects of excessive brushing, channel shaping, equipment activity in the channel, and bank hardening. Hydraulic principles of

creating and maintaining channel stability and sediment transport equilibrium shall be applied, if applicable. The analyses and determinations relevant to this issue shall be documented in the Annual Plan. Clear maintenance objectives with attainable benefits for the protection of life, property, and habitat shall be established for each project and presented in the Annual Plan. A primary objective of this measure is to minimize maintenance activities to the extent feasible, consistent with District's program objectives.

H-2 - Extent of Desilting. The depth of channel desilting shall not cause bank undercutting or channel headcutting. The District shall make a field determination of the maximum depth of desilting based on channel capacity objectives, an evaluation of channel invert elevation and slope through the project reach, and a consideration of the maximum allowable bank length and slope that would cause bank instability. To the extent feasible, banks and bank vegetation shall not be disturbed or reconstructed during desilting to avoid destabilizing the banks.

H-3 - Post Desilting Restoration. After desilting, the District shall restore the channel geometry at the desilting site to a more natural state, as feasible, based on the channel shape, dimension, and slope upstream and downstream of the project site. The channel geometry shall be designed to enhance post-maintenance sediment transport through the desilted reach. If banks are disturbed during desilting, they should be set at a slope that matches existing undisturbed banks and stabilized, to the extent feasible and taking into account available right of way.

H-4 - Pilot Channel Construction. If it is necessary to construct a pilot channel or substantially modify an existing low flow channel, the District shall attempt to maintain the low flow channel length, width, slope, substrate, and sinuosity that are characteristic of the project reach, as determined by field observations of undisturbed low flow channels upstream and downstream of the project reach.

H-5 - Bank Protection Methods. The construction of bank protection shall be limited to situations where bank stabilization is necessary because the banks are vulnerable to continued erosion which could cause a threat to critical public infrastructure, valuable habitat, or otherwise in the public interest and it has been determined that natural slope settling would not achieve the necessary stability. The District shall evaluate different types of bank protection methods, then select one that is most suitable based on the following order of decreasing preference: (1) vegetation stabilization only; (2) bio-technical methods in which vegetation is incorporated with natural type structural components such as woody branches, natural rock, logs, natural fibers and geotextiles, and biodegradable temporary geotextiles; (3) ungrouted rip rap with vegetation; (4) pipe and wire revetment while retaining vegetation; (5) grouted rip rap; and (6) concrete sackwalls, gabion walls, soil cement, and gunite. Only native plants common to the region shall be used in all bank protection projects. Hard bank protection such as grouted and ungrouted rip-rap, pipe and wire revetment, gunite, concrete sackwalls, gabion walls, and soil cement shall only be used if the District has determined that the above methods will not achieve the desired results, are not cost effective, are logistically or technically infeasible, and/or would create greater incidental environmental impacts. Incorporation of plant material into bank protection, and maintenance and monitoring of such plantings, shall follow the guidelines in the updated Routine Maintenance Program Restoration Plan. The installation of new bank protection shall not adversely affect the stability of nearby banks. Bank protection projects that exceed 150 linear feet at any one

single location would be considered a separate project, not included in the routine maintenance program.

H-6 – Removal of Giant Reed from Banks. If the District will remove a stand of mature giant reed from the bank for habitat restoration purposes, the following measures shall be implemented to ensure that the bank will remain stable after treatment. To the extent feasible, the least invasive method of giant reed removal shall be used, and the removal of native vegetation from the banks shall be minimized. The District shall stabilize the banks after giant reed removal using biotechnical methods that include native plants. This measure shall also apply if similarly large stands of other non-native plants are removed from banks.

H-7 – New or Repaired Grade Stabilizers. Prior to installing a new grade stabilizer to control channel bed degradation, the District shall conduct the hydraulic analysis described in H-1. In addition, the District shall first consider stabilizer designs that use native ungrouted rock. The new structure shall not create a passage impediment for fish. This measure also applies to the repair or reconstruction of existing stabilizers. Detailed plans for new and repaired grade stabilizers shall be presented in Annual Plans, including a consideration of alternative designs and justification for the selected design.

H-8 – Access Ramps. The distance between access ramps shall be determined by balancing the impacts of driving equipment on the channel bed versus creating extra access points. Access ramps shall be placed in areas with minimum potential for erosion. Access ways shall be sited, constructed, and maintained in a manner that minimizes disturbance to native vegetation, wildlife, and aquatic organisms. The width of all new ramps shall be minimized to the extent feasible. Unneeded access ramps shall be removed and restored to a natural condition. For ramps that will be used infrequently (e.g., every three years or more), the District shall seed or plant the ramp after each use with native species, compatible with adjacent vegetation and resistant to occasional vehicle use, to prevent infestations of noxious weeds. Permanent and frequently used ramps shall be stabilized with vegetation, as feasible, and designed to minimize unauthorized vehicle access.

H-9 - Landowner Information Regarding Bank Protection. The District shall provide information to landowners along creeks that wish to stabilize eroding banks on their property. The District shall prepare a guide for landowners that describes methods of bank protection, with an emphasis on bio-technical solutions. The booklet shall be written for an educated layperson and include clear diagrams about materials and installation methods. It shall also include discussions of hydraulic and biological impacts when considering bank protection, and permits required from local, state, and federal agencies. The District shall also make staff available to conduct site visits with property owners to provide guidance on an as-needed basis.

N

Impacts

N = Noise

N-A. Maintenance Equipment Noise. Maintenance activities that require the use of heavy equipment, such as channel shaping and desilting, could temporarily increase the ambient indoor and outdoor noise levels for noise-sensitive receptors located in close proximity to the watercourse where maintenance work is conducted. This impact would be limited to weekdays between 8 AM and 5 PM, with a limited duration of several days at any one location. Increased ambient noise levels could cause a nuisance to noise sensitive receptors, such as residences, schools, nursing homes, and day care centers. (Class II Impact)

Mitigation Measures

N-1 – Minimize Noise. Routine maintenance work shall be limited to weekdays and the hours of 7:30 AM and 4:30 PM. Equipment and haul trucks shall be equipped with functioning and properly maintained muffler systems, including intake silencers where necessary. Additional reductions in noise emissions shall be provided, as feasible, by performing noisy operations, such as chipping and loading spoils into dump trucks on the banks, as far away as practicable from sensitive receptors.

P

P = Public Health and Safety

PH-A. Excessive Herbicide Release and Exposure. Excessive application of herbicide to vegetation on the bottom of a channel or debris basin, including substantial application to the bed itself and open water, could result in increased concentrations in downstream water, which could affect the public. Excessive application of herbicide to vegetation could also adversely affect hikers using the watercourse as a trail or for recreation. This situation would arise from poor application methods or procedures, and is expected to occur rarely, if at all. (Class III Impact)

R

Impacts

R = Recreation

R-A. Potentially Adverse Herbicide Concentrations. The application of herbicides to control emerging vegetation on the channel bed is not expected to introduce substantial amounts of herbicide to the water in the drainage where fish, aquatic organisms, and humans could be exposed. However, there is a potential for localized elevated concentrations of glyphosate in drainages due to excessive application of herbicides or poor application methods that result in overspray which would degrade water quality, and affect recreational users along creeks. This impact would be localized and temporary. (Class II Impact)

R-B. Impacts of Reduced Sediment Supply to Beaches. Periodic removal of the sediments from the basins contributes to the reduction in overall sediment supply to local beaches. (Class II Impact)

R-C. Temporary Disruption of Trail and Park Use. Maintenance activities near a public trail may disrupt the use of the trail for a short period of time, and/or disrupt the use of the creek for informal recreation. (Class III Impact)

R-D. Reduced Beach Sand Supply. The periodic removal of sediments from debris basins contributes to the cumulative loss of beach sand supply. (Class III Impact)

Mitigation Measures

R–1 - Minimize Impacts to Trail and Park Users. To the extent feasible, the District shall provide temporary detours for hikers using public trails that must be closed for maintenance work. All work areas shall be marked by signs, and by flagging if necessary to protect the public from hazardous conditions. The District shall notify appropriate County and City parks departments prior to initiating maintenance work in public parks. The work area shall be visibly marked, and measures taken to prevent public entry. If feasible, work shall be restricted to off-peak park hours.

R-2 – Disposal of Sediments at Beaches. Sediments removed from debris basins or creeks on the South Coast during long-term maintenance of the basins and during routine maintenance of creeks, respectively, shall be disposed at local beaches to the extent feasible. Only suitably sized sediments shall be disposed at the beaches, as permitted by applicable regulatory agencies.

V

Impacts

V= Visual

V-A. Visual Impacts in Channels. Certain maintenance activities could reduce the visual quality of riparian corridors that are visible from both private viewpoints (e.g., private roads, backyards of private residences) and public viewpoints (e.g., public parks roads). These channel maintenance activities include channel shaping, bank protection construction or repair, bank stabilization, and desilting. An adverse visual impact would occur if such activities remove substantial amounts of riparian vegetation or very large specimen trees (such as oaks, sycamores) and/or substantially modifies the banks and bed of a watercourse such that the affected reach is clearly characterized as a man-altered landscape feature. (Class II Impact)

V-B. Visual Impacts in Basins. The grading of a pilot channel in the middle of a debris basin would reduce the amount of vegetation in the basin. The removal of vegetation and accumulated sediment from debris basins will periodically reduce the amount of riparian vegetation in the basin. These impacts would be minor because they are temporary and affect a very small area; the basin (i.e., visual setting) is a man-made feature; and public access to the basin and/or nearby public viewing locations is generally prohibited. (Class III Impact)

Mitigation Measures

V–1 - Minimize Visual Impacts in Channels. The District shall minimize brushing in the channel bottom (per Mitigation Measure B-1), minimize remove of bank vegetation (per Mitigation Measure H-2), incorporate natural channel dimensions during channel reshaping (per Mitigation Measure H-1), restore all temporarily disturbed areas with native riparian trees and shrubs (per Mitigation Measure B-4), and use biotechnical methods with riparian vegetation for bank protection and repair, as feasible (per Mitigation Measure H-4). Implementation of these measures will reduce short and long-term visual impacts.

W

Impacts

WQ = Water Quality

WQ-A. Potentially Reduce the Amount of Natural Biofiltering. Removal and/or thinning of vegetation from channel bottom due to brushing, herbicide application, desilting, and channel shaping cause a temporary reduction in vigor and/or cover of successional riparian habitats and emergent wetlands. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. It could potentially reduce the bio-filtration effects (if any) of emergent wetlands present along the wetted channel and debris basin bottom. As such, maintenance activities could contribute to an overall decrease in water quality. (Class I Impact)

WQ-B. Potentially Adverse Herbicide Concentrations. The application of herbicides to control emerging vegetation on the channel bed is not expected to introduce substantial amounts of herbicide to the water in the drainage where fish, aquatic organisms, and humans could be exposed because of the following reasons: (1) no herbicide is directly applied to open water; (2) overspray is minimized by precise spraying by trained field crews; (3) most spraying occurs in the fall when flows are absent in drainages; (4) glyphosate is strongly absorbed by soil particles and not easily mobilized once it has contact with soils or wet sediments; and (5) residual herbicide in soils or sediments are subject to microbial degradation. However, there is a potential for localized elevated concentrations of glyphosate in drainages due to excessive application of herbicides or poor application methods that result in overspray which would degrade water quality. While this impact would be localized and temporary, it is considered a significant, but mitigable cumulative impact because of the wide use of herbicides throughout the county. (Class II Impact)

WQ-C. Accidental Spills and Leaks. Accidental leakage or spill of fuel and/or oil from heavy equipment working within or directly adjacent to the watercourse or in a debris basin can cause discharge of pollutants to the creek, which would degrade water quality. This impact is anticipated to be highly localized because most accidental spills are limited in quantity (e.g., less than 50 gallons) and would occur in the dry season when flows are absent. Potential accidental spills of herbicides from applicators. (Class II Impact)

WQ-D. Temporary Sedimentation and Turbidity. Channel shaping, desilting, bank stabilization by placing fill or grading banks, bank protection construction or repair, pilot channel construction, access ramp construction, and excessive removal and/or thinning of in-channel vegetation could cause localized increases in suspended sediments and turbidity which could temporarily degrade water quality. This impact would also occur due to debris basin desilting and to a lesser degree, to pilot channel and outlet works clearing. (Class III Impact)

WQ-E. Increase Water Temperatures. Brushing and spraying remove of vegetation from the channel bed which could redcue shade and increase water temperatures. The magnitude of the impact is low because most of the vegetation affected under the program does not occur in standing water nor provide critical shading. The District does not remove bank vegetation, which provides most of the shade along creeks, as part of the program. (Class III Impact)

WRR = Wetland, Riparian Habitat and Rare Plants

WRR-A. Reduce Amount and Quality of Channel Bottom Habitat. Removal and/or thinning of vegetation from channel bottom due to brushing, herbicide application, desilting, and channel shaping cause a temporary reduction in vigor and/or cover of successional riparian habitats and emergent wetlands. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. Although the functions and values of the habitat temporarily disturbed by maintenance would be replaced through the District's habitat restoration program, there is a potentially adverse cumulative effect of annual habitat disturbances throughout the County. (Class I Impact)

WRR-B. Remove Bank Habitat. The District may place "hard" bank protection (i.e., grouted rip-rap) to stabilize a severely eroded bank. Under the updated maintenance program, the use of hard bank protection would only be allowed if no other alternatives using biotechnical methods are available or feasible. This impact would occur very rarely and typically involve a limited reach (e.g., less than 200 feet). Use of hard bank protection would permanently reduce the amount of existing and future bank riparian vegetation. (Class II Impact)

WRR-C. Access Ramp Habitat Impacts. Construction or maintenance of access ramps could temporarily reduce the amount of riparian habitat. (Class II Impact)

WRR-D. Temporary Habitat Disturbance. Disturbance of channel banks and bed from heavy equipment during channel shaping, placement of bank protection, desilting operations, ramp construction, and repair of bank protection and grade stabilizers could temporarily remove wetland, riparian and aquatic habitats in work areas. (Class II Impact)

WRR-E. Displace Sensitive Plants. Disturbance of channel banks and bed from heavy equipment during channel shaping, placement of bank protection, channel shaping, desilting operations, ramp construction, and repair of bank protection and grade stabilizers could remove regionally rare plant species This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. This impact is expected to occur infrequently because so few sensitive plants occur in the areas maintained. (Class II Impact)

WRR-F. Facilitate Weed Colonization. Disturbance of channel banks and bed from heavy equipment during channel shaping, placement of bank protection, desilting operations, ramp construction, and repair of bank protection and grade stabilizers could facilitate colonization of disturbed areas by non-native invasive weeds. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. (Class III Impact)

Mitigation Measures

W-1 - Reduce Sedimentation. The District shall minimize the amount of surface disturbance and vegetation removal to the extent feasible during all maintenance activities in order to reduce the area of disturbed soils that could be eroded during winter runoff. No stockpiles or dewatering operations shall be established in the channel bed or basin bottom. All fill shall be compacted to reduce erosion. All disturbed banks and terraces above the low flow channel shall be seeded with appropriate riparian grasses and herbs and/or planted with willows, mulefat, or other woody plant species. The objectives of the seeding and/or planting are to stabilize these areas and reduce erosion. The selection of species to be used and the density of seeding or planting shall balance the need for maintaining channel capacity while meeting these objectives. If work must occur in a wetted channel that has continuous flow downstream of the work site, the District shall either temporarily divert streamflow around the work site, or provide temporary sediment containment downstream of the site. In addition, the District shall check silt fencing, diversions, and settling ponds twice a day.

W-2 – Responsible Herbicide Application. To the extent feasible, the primary herbicide application each year shall occur during the months of August through November, when stream flows are minimal. In some instances, a follow-up application will be made in the spring to reduce the frequency of maintenance. Herbicides shall be applied by hand-held sprayers rather than from truck mounted sprayers to the extent feasible. The dilution and application of herbicides shall be conducted in strict accordance with all label recommendations, including all restrictions related to public health, worker safety, and the protection of aquatic organisms. Herbicides shall not be applied when winds at the application site exceed 5 miles per hour, within 12 hours of a forecasted rain event, or when vegetation surfaces are covered with water from recent rainfall or dew. Herbicides shall be applied carefully to plant surfaces in minimal effective amounts, minimizing drift to non-target plants and overspray onto the ground or to open water. Signs shall be placed to warn the public if herbicides are applied within 50 feet of any public recreation location, such as a trail, picnic spot, or other site of regular human activity. The signs shall remain for 48 hours after the application of the herbicide. The District shall also notify residences and businesses located adjacent to drainages to be treated with herbicides. Notification shall occur by mail within 7 days of the planned maintenance work.

W-3 - Maintain Biofiltering by Reseeding Channel Bottom Areas. To the extent feasible and consistent with the maintenance objectives, the District shall avoid removal of emergent herbaceous wetland vegetation on the channel bottom that is rooted in or adjacent to the low flow channel or a pond. This same type of vegetation shall be protected, to the extent feasible, during the removal of taller obstructive woody vegetation on the channel bottom. In addition, the District shall re-seed desilted channel areas that formerly contained emergent vegetation, provided that suitable native seeds

from plants that provide biofiltration are available and that the new vegetation will not significantly affect channel conveyance or significantly increase the need for future maintenance. Seeding shall occur after the major winter runoff has occurred and stream flows have receded to prevent loss of seeds.

W-4 - Prevent Accidental Spills and Leaks. The mixing and dispensing of herbicides and equipment fueling or maintenance shall not occur within a channel or a basin. Spill containment and clean-up procedures for herbicides and vehicle fuels and oils shall be developed by the District. All field personnel shall be trained and all field vehicles shall be equipped with appropriate materials.

W-5 - Water Quality Monitoring During Herbicide Application for Large Projects. The District shall monitor concentrations of glyphosate downstream of large maintenance projects that involve herbicide application. Large projects are defined as projects that involve continuous or near-continuous herbicide application along reaches of more than 250 feet where there is flowing water along the entire reach. Water samples shall be collected from the flowing water at the following locations: Site A - above the work site, representing the ambient water quality conditions; Site B - immediately downstream of the work site; and Site C - approximately 200 feet downstream of the work site. Samples shall be collected using the following protocol: (1) Prior to herbicide application – samples at Site A, and Sites B and C if there is a storm drain outlet or similar feature within the maintenance reach that may contribute off-site flow and possible herbicides to the water samples; (2) 24 and 96 hours after herbicide application – samples at Sites A, B, and C. If glyphosate concentrations exceed 15 mg/l in the 24-hour sample or 10 mg/l in the 96-hour sample, the District shall modify the spray program at all remaining maintenance sites to be sprayed. Modification may include reducing the rate of herbicide application and/or using hand removal techniques. The District shall continue to apply herbicides only if the glyphosate concentrations are consistently below the 24 and 96-hour thresholds. If the 24 and/or 96-hour thresholds are exceeded five times during the maintenance year, regardless of location, the District shall cease application of herbicides in aquatic situations until the program can be modified to reduce concentrations to the acceptable range.

W-6 – Public Education Regarding Creek Water Quality. The District shall prepare information brochures for residents located along maintained drainages that explain: (1) how the District applies herbicides in a responsible manner, and provides guidelines on how landowners can use herbicides for residential and commercial uses in a similarly responsible manner to minimize water quality impacts to the creeks; and (2) how landowners can reduce pollution to the creek from their activities by employing best management practices for landscape fertilization; disposal of household paints, hazardous materials and petroleum products; management of trash and landscaping debris; and handling of pet wastes. The brochure shall be prepared in coordination with Project Clean Water and mailed to affected areas on a 3-year rotating basis. It shall include the Project Clean Water phone numbers for technical assistance and for reporting illegal dumping. The brochure shall also include information on how landowners can make their land available for habitat restoration under the routine maintenance program.

W-7 – Reporting Water Quality Incidents. The District shall train its maintenance crews to identify and report incidents or materials observed in the creeks during routine maintenance work that could cause significant water quality impacts, including illegal

dumping of trash, pet waste, and green waste; homeless encampments; and drain outlets with evidence of poor water quality. The staff shall contact appropriate authorities in the County or affected municipalities.

W-8 - Reduce Overall Herbicide Use. The District shall make every feasible effort to reduce the overall amount of herbicides used in the maintenance program over the next ten years through more restrictive and selective applications, greater use of manual clearing, actions to reduce in channel obstructive vegetation through shading by new canopy trees, and coordination with the the County's Integrated Pest Management Strategy to identify more environmentally friendly pesticides. The IPM Strategy was adopted by the Board of Supervisors to promote the maintenance of the County's landscapes in way that protects and enhances natural resources and public health, while providing a framework for evaluating pesticide use by County Departments in pursuit of their missions.

2001 PEIR CLASS I, II AND III IMPACTS WITH ASSOCIATED MITIGATION MEASURES SANTA YNEZ RIVER PROJECT

Class I Impacts

No Class I Impacts are identified for the Santa Ynez River Routine Maintenance Project.

WATER QUALITY
CLASS II IMPACTS

SY-WQ-A. Equipment Leaks and Spills. Accidental leakage or spill of fuel and/or oil from the mowing equipment working within the channel can cause discharge of pollutants and degrade water quality.

Mitigation:
SY-H-1. - *Prevent Equipment Leaks and Spills.* Equipment fueling or maintenance shall not occur within the river channel. Spill containment and clean-up procedures for vehicle fuels and oils shall be developed by the District. All field personnel shall be trained and all field vehicles shall be equipped with appropriate materials.

WATER QUALITY
CLASS III IMPACTS

SY-WQ-B. Temporary Sedimentation and Turbidity. Mowing activities would generate vegetative debris that is discharged to the riverbed and susceptible to being suspended in winter runoff. This debris could cause temporary increases in suspended solids and turbidity in downstream areas. This impact is not considered significant because the effect would be temporary, similar to natural suspended material in winter flows, and the sediments produced would be very small compared to the sediments from the entire watershed.

Mitigation:
No mitigation required for a Class III (adverse but not significant) impacts.

WETLAND, RIPARIAN HABITAT AND RARE PLANTS
CLASS II IMPACTS

SY-WRR-A. Habitat Disturbance. Periodic disturbance to immature willow scrub due to mowing operations. Early to mid-successional woody vegetation dominated by willows in the channel bottom is periodically mowed, then allowed to re-sprout and develop for 3 to 5 years, depending upon runoff conditions. The amount of such habitat disturbed during each maintenance event will not exceed 16 acres.
Mitigation:

SY-B -1 – Compensatory Habitat Mitigation. The District has already initiated long-term compensatory habitat mitigation for the periodic disturbance of riparian habitats in the river channel, establishing 18 acres of various riparian habitats along the river upstream of the project site at three permanent mitigation sites, per the requirements of the California Department of Fish and Game. The creation, maintenance, and protection of these restoration sites represents full and complete mitigation for removal of up to 16 acres of riparian habitat at any time in the future as part of the project. However, subject to available resources, to further mitigate impacts of future periodic maintenance activities on riparian habitat, the District shall remove giant reed plants by the use of herbicides from the lower Santa Ynez River (Robinson Bridge to 13th Street Bridge) and prevent the colonization of this reach of the river for the life of the maintenance project. Stands of giant reed shall be removed, as needed in each reach maintained, in an on-going and proactive program to protect the lower river from this aggressive species. The District shall consider additional habitat restoration if and when future mitigation opportunities arise along the lower river through efforts by other public agencies and private entities.

SY-B-2 – Limits of Disturbance**.** Prior to clearing, District personnel shall place flagging, stakes, or other readily visible markers along the margins of the swaths to be cleared. No more than 16 acres of riparian woodland shall be mowed within the river channel. No clearing shall occur within 25 feet of the primary low-flow channel except when it is necessary to connect cleared swaths from one side of the low flow channel to the other side, or when it is necessary to clear a path across the low-flow channel for temporary equipment and crew access.

SY-B-3 – Minimize Surface Disturbance***.*** Disturbance of the riverbed shall be avoided to the extent feasible. The riverbed shall not be scraped, pushed, excavated, filled, or otherwise directly manipulated by equipment. Vegetative material cut from the riverbed shall be less than six feet in length. Cut vegetative material shall be allowed to fall in place, and shall not be collected, stockpiled, and/or disposed in a directed and purposeful manner.

SY-B-4 – Training and Monitoring. Prior to clearing, the District biologist shall conduct a training session with construction personnel to instruct them on areas to avoid and other environmental protection measures. The District biologist shall be present at all times during clearing activities to ensure that limits of work are observed. Monitoring activities shall be recorded daily.

SY-WRR-B. Disturbance to Wetlands. Mowing operations and accessing the river channel could in advertently disturb ponds and wetlands. The latter are defined as areas dominated by perennial wetland herbs such as watercress, spikerush, cattails, and bulrushes, and do not have a substantial number or density of willow trees or large mulefat plants.

Mitigation:
SY-B-5 – Avoid Ponds and Wetlands. No clearing shall occur within 25 feet of ponds and wetlands. Prior to clearing, District personnel shall place flagging, stakes, or other readily visible markers around ponds and wetlands to be avoided.

See Mitigation Measure SY-B-1- Compensatory Habitat Mitigation

SY-WRR-C. Access Ramp Habitat Impacts. Construction or maintenance of access ramps could temporarily reduce the amount of riparian habitat, which in turn could adversely affect nesting, cover, and foraging habitat for riparian-dependent bird species, as well as cover for riparian amphibians, reptiles, and mammals.

Mitigation:
SY-B-6 – Access Ramp Restoration. After each mowing event, the access ramps shall be seeded with low-growing native grasses, herbs, and shrubs common to the river banks of the project reach to restore habitat after the mowing event, but without dense woody plants that would preclude it use for the next maintenance event.

SY-WRR-D. Impacts to Rare Plants. Accessing the river channel with the crew and mower could potentially affect the regionally rare Lompoc figwort which occurs in woodland habitat along the river banks. Although this species is not known to be present at any of the existing access points, there is a remote possibility that it may be present in the future.

Mitigation:
SY-B-7 - Pre-Construction Biological Surveys. The District biologist shall conduct a biological survey no later than five (5) days prior to the clearing to confirm the limits of the work area, the flagging of environmentally sensitive areas, and to search for: (1) Lompoc figwort at access points; and (2) the western pond turtles and California red-legged frog, both of which could occur in ponds or portions of the low flow channel. The latter species would be physically captured and removed if they occur in areas where clearing or equipment access must occur. They would not be removed from ponds that are protected from clearing or from the low flow channel that is protected by a 25-foot wide buffer zone. The District biologist has the requisite permits and authorizations to handle and relocate these species from CDFG and USFWS. If the Lompoc figwort is present, the District shall modify access routes, if feasible, to avoid removal or disturbance. If the plant cannot be avoided, the District shall relocate the plant by cultivation or seeding methods to a suitable nearby site.

FISH, AQUATIC SPECIES, AND WILDLIFE
CLASS II IMPACTS

SY-FAW-A. General Impacts to Wildlife. Mowing will temporarily displace wildlife that utilize immature willow scrub, and reduce the quality of the habitat. Between mowing events, the habitat would recover and be recolonized by wildlife.

Mitigation:
SY-B-8 – Seasonal Avoidance. Clearing shall occur during the months of October 1st to December 1st, to prevent conflicts with the riparian breeding birds, and the endangered southwestern willow flycatcher and the least Bell's vireo.

See Mitigation Measures:
SY-B-2- Limits of Disturbance
SY-B-5- Avoid Ponds and Wetlands

SY-FAW-B. Displace or Disturb Sensitive Wildlife. Mowing operations and accessing the river channel could displace or disturb the California red-legged frog and the southwestern pond turtle. These species are residents in ponds and wetland areas of the river channel. Impacts to these species would be avoided. The willow flycatcher, least Bell's vireo, and various regionally rare riparian breeding birds are absent from the river during the work period. Periodic mowing of immature willow scrub would not adversely affect the quality of the habitat for these species.

Mitigation:
SY-B-9 - Monitor for Sensitive Species. The District biologist shall monitor clearing events located at or near sensitive species locations, as determined during the pre-construction survey. The objective of the monitoring is to ensure that key habitat features or species locations are avoided, and to relocate species if they are unexpectedly encountered in a work area. The District biologist shall examine ponds and channels near the work areas for the presence of pond turtles and/or red-legged frogs; and move these species if it appears that they may be indirectly affected by the clearing activities. Results of the monitoring shall be documented in a post-maintenance report.

See Mitigation Measures:
SY-B-2-Limits of Disturbance
SY-B-5- Avoid Ponds and Wetlands
SY-B-7- Pre-Construction Biological Surveys
SY-B-8-Seasonal Avoidance

SY-FAW-C. Disturbance to Migrating Steelhead. Mowing operations and accessing the river channel could displace or disturb steelhead if they are migrating through the project reach. The southern steelhead migrates upstream from December 1st through March 1st. Smolts migrate downstream to the lagoon or ocean during the period February through May. The mowing will be restricted to the period October through November, and as such, will avoid impacts to migrating steelhead.

Mitigation:
See Mitigation Measure:
SY-B-8 Seasonal Avoidance

SY-FAW-D. Equipment Leaks and Spills, as it affects aquatic organisms and sensitive species (see Water Quality)

Mitigation:
See Mitigation Measure SY-H-1-Prevent Leaks and Spills

HYDROLOGY
CLASS III IMPACTS

SY-H-A. Reduced Channel Resistance. Mowing in-channel vegetation may have a slight effect on velocities of low to moderate flows that would otherwise pass through this vegetation. The reduction in channel resistance could result in increase in velocities of certain flows, which in turn, could cause increased channel bed scour and downstream sedimentation. This hydraulic impact is expected to be negligible due to the small area removed, the low resistance of the vegetation being mowed, and the wide channel available for flows to spread.

Mitigation:
No mitigation required for a Class III (adverse but not significant) impacts.

AIR QUALITY
Class III Impacts

SY-AQ-A. Equipment Emissions. Temporary emissions of reactive organic compounds (ROC), particulate matter, and NOx associated with the mower and chain saws.

Mitigation:
SY-A-1 – Reduce Emissions. Implement the following Santa Barbara County APCD-approved measures for each piece of heavy-duty diesel construction equipment to minimize NO_x emissions: (1) The engine size of construction equipment shall be the minimum practical size; (2) Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated clean diesel engines) should be utilized wherever feasible; (3) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest number is operating at any one time; (4) Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or pre-combustion chamber engines; (5) Catalytic converters shall be installed on gasoline-powered equipment, if feasible; (6) Diesel catalytic converters shall be installed, if available; and (7) Diesel powered equipment should be replaced by electrical equipment, whenever feasible.

SY-AQ-B. Fugitive Dust Emissions. Temporary emissions of fugitive dust (particulate matter) due to mower operations.

Mitigation:
No feasible measures can be employed to reduce unavoidable dust created during mowing operations and none are required for Class III (adverse but not significant) impacts.

NOISE
CLASS III IMPACTS

SY-N-A. Mower Noise. Mowing and chain saw operations would temporarily increase the ambient noise levels in adjacent land uses. However, there are no noise-sensitive receptors in proximity to the project site. This impact would be limited to weekdays between 7 AM and 5 PM, with a limited duration of several days at any one location.

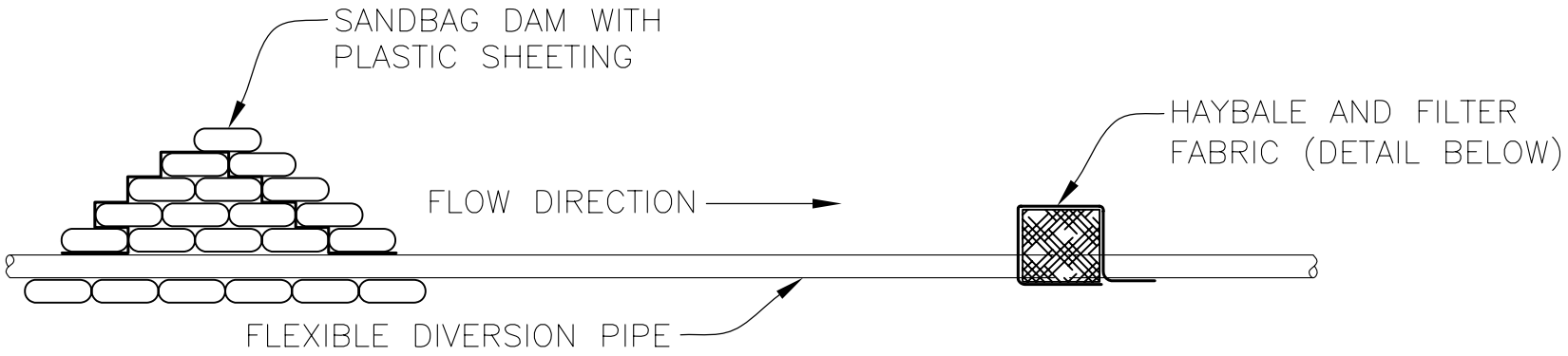
Mitigation:
No mitigation required for Class III (adverse, but not significant) impacts.

VISUAL
CLASS III IMPACTS

SY-V-A. Visual Impacts of Mowing. Mowing would increase the open areas in the river channel, exposing open sandy floodplain. This impact would be minor because only a

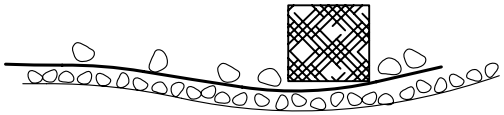
small proportion of the channel would be affected, dense woodland and mature trees on the banks would be avoided, and public viewing locations of the river channel are not present.

Mitigation:
No mitigation required for Class III (adverse, but not significant) impacts.

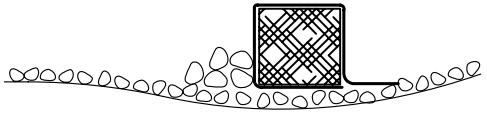


1. PREPARATION—SMOOTH A FLAT AREA OF CHANNEL BY MOVING COBBLES AND SAND (PERFORMED WITH HANDTOOLS ONLY)

2. LAY FILTER FABRIC OVER CHANNEL, ANCHOR LIGHTLY WITH COBBLE



3. PLACE HAYBALE AT ONE END OF FILTER FABRIC



4. WRAP FILTER FABRIC OVER HAYBALE, ANCHOR LEADING EDGE WITH COBBLE

HAYBALE AND FILTER FABRIC INSTALLATION

N.T.S.

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

TEMPORARY WATER DIVERSION