

ANNUAL ROUTINE MAINTENANCE PLAN SUMMARY

FISCAL YEAR 2018-2019



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 2018/2019 Annual Routine Maintenance Plan marks the 27th 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 "*Avoid, 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, Operations and 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.

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.

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.

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,

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 and List of Creeks by Supervisorial District.
2. Exempt Facilities; Notice of Exemption and description of CEQA 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 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 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 6.8 acres. The District has utilized 4432 square feet of credit from the bank for the 2013/2014 Annual Plan, 2510 square feet for 2014/2015, 3895 square feet for 2015/2016, 460 square feet for 2016/2017, and 1050 square feet from 2017/2018 (total to date = 12, 347 square feet).

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

Between 2002 and 2018 the District has implemented approximately 26.3 acres of restoration throughout the county directly related to the Annual Routine Maintenance Plan. That is made up of 9.5 acres on the south coast and 16.8 acres in North County. Within North County 13.5 of the 16.8 acres is within the Santa Maria River. The 12.8 acres of strictly creek-bank restoration that has been implemented throughout the county, just in the last 12 years, is equivalent to 8.8 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 shear 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.

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, southwestern 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	Refugio Creek
Arroyo Paredon Creek	Romero Creek
Atascadero Creek	San Antonio Creek
Barger Canyon Creek	San Antonio Creek
Carpinteria Creek	San Jose Creek
Cieneguitas Creek	San Pedro Creek
Gobernador Canyon Creek	San Roque Creek
Los Carneros Creek	San Ysidro Creek
Maria Ygnacio Creek	Santa Maria River
Mission Creek	Sycamore Creek
Montecito/Cold Springs Creek	Tecolote Creek
Rattlesnake 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 new 10-year Section 401B Water Quality Certification in 2017. Pursuant to the 401B Water Quality Certification, the District has made changes to the Annual Plan in order to

provide information to RWQCB staff. In particular, the District provides drawings of proposed shaping, bank protection and water diversion sites. Shear stress and geomorphological analyses are performed for bank protection sites. Where bank protection/rebuilding is implemented with a native habitat restoration component, the District also provides 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.

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 10-year Stream Alteration Agreement from the California Department of Fish and Wildlife in 2015.

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, Operations and 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 over 25 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.

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.

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.

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.

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. The 18/19 Annual Plan contains 29

drainages. 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 2017/2018 Annual Routine Maintenance Plan, it is estimated that approximately 9% of the maintained drainages length (9.5 miles of the 105 miles of potential maintained drainage length) will receive some level of maintenance or 1% of the 940 miles of major drainages within Santa Barbara County.

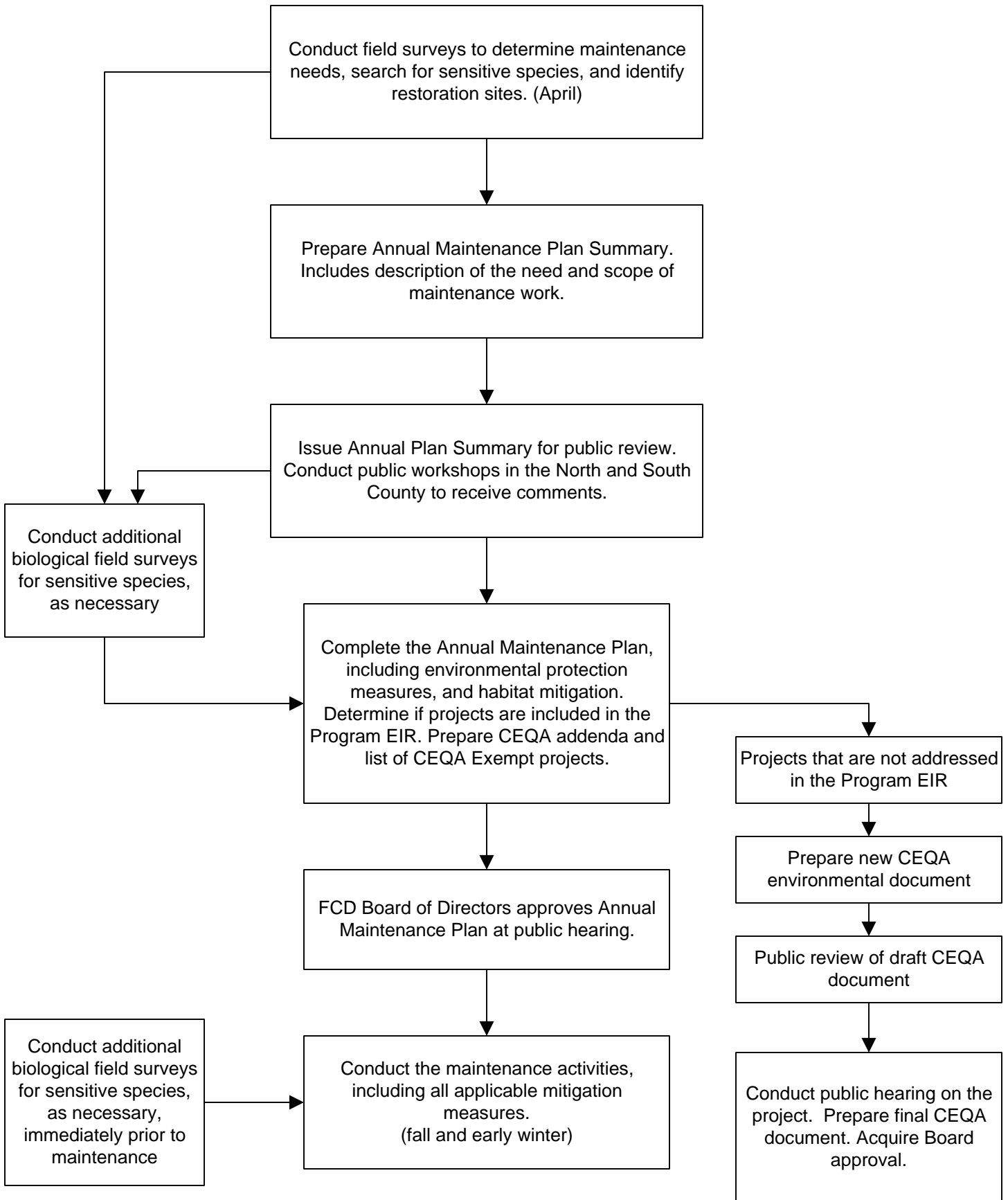


Chart 1. Annual Maintenance Program Process

Supervisory Districts 2018-2019

First District

Carpinteria Creek
Lagunitas Creek
Mission Creek
Montecito Creek

Second District

Arroyo Burro Creek
Atascadero Creek
Maria Ygnacio Creek
Mission Creek
San Antonio Creek-Goleta
San Jose Creek

San Pedro Creek
San Roque Creek

Third District

Alamo Pintado Creek
Canada De La Pila Creek
Davis Creek
Middle Green Canyon Channel
Mission Hills Channel
North Green Canyon Channel
Orcutt/Solomon Creek
Rodeo/San Pasqual Channel
Santa Maria River
Santa Ynez River

Tanglewood Ditch
Tecolotito Creek
Zanja De Cota Creek

Fourth District

Airport/Abex Channel
Cebada Canyon Creek
Orcutt/Solomon Creek

Fifth District

East Ditch
Unit II Ditch
Unit II Tailwater
West Main Ditch

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 2018/2019 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 2018/2019 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
- 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.

- (e) **Historical Resources.** A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

There are no historic resources in 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 22, 2018

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 22 2018

S B COUNTY

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.

The District will conduct herbicide application in the facilities listed below beginning May 1st, and desilting and mowing of non-native vegetation beginning June 1st following that Annual Plan's approval.

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 Donovan Road (a distance of approximately 2,600 feet) the channel is asphalt and sediment tends to settle out requiring 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. Desilting is done on a biannual basis and will not be done this year. Potential Area of impact is less than 100 square feet from spot spraying. 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 Donovan Street portions of the concrete channel are desilted approximately every 3 years. The earthen channel is sprayed on an annual basis to control silt trapping weeds and is not desilted. Potential area of impact is 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. Additionally, on a biannual basis, seedlings are sprayed in the concrete V-ditch to keep the ditch from deteriorating. Potential Area of Impact from mowing is .17 acres and less than 50 square feet for

spot spraying seedlings in the V-ditch. Refer to Page 7 for the location of this facility.

4. **Crescent Avenue Ditch:** This is a concrete V-ditch with earthen sides. It is approximately .75 miles long. On a biannual basis a Kubota is used to desilt portions of the V-ditch. 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 spot spray the stumps so they don't damage the concrete. Refer to Page 9 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 is less than 100 square feet for spot spraying. Refer to Page 10 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 facility will not be desilted this year. Potential Area of Impact from spot spraying is less than 50 square feet. Refer to Page 11 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 desilt portions of the channel approximately every 3 years. This facility will not be desilted this year. Potential Area of Impact from spot spraying is less than 50 square feet. Refer to Page 12 for the location of this facility.
8. **Green Canyon Spillway:** This is a concrete spillway that is part of Bradley Lake. The District spot sprays the spillway if vegetation is growing through weep holes or cracks and maintains the spillway free of woody debris. Potential area of impact is less than 50 square feet. Refer to Page 14 for the location of this facility.
9. **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 facility is not scheduled for desilting this year. Potential Area of Impact from spot spraying is less than 100 square feet. Refer to Page 1 for the location of this facility.
10. **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 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. This facility is not scheduled for desilting this year. Potential Area of Impact from mowing grass and weeds along the banks is .01 acres. Refer to Page 17 for the location of this facility.

11. **McCoy Lane Drain:** This is an approximately 200' long earthen ditch vegetated with grasses and weeds located between Broadway and Skyway Drive. The District mows this ditch on an annual basis to reduce silt trapping vegetation. Potential Area of Impact from mowing grass and weeds along the banks is .01 acres. Refer to Page 19 for the location of this facility.
12. **Patterson Rd Ditch:** This is a concrete bottom ditch with concrete vertical walls approximately 443' long. This ditch flows through 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. Potential area of impact is less than 50 square feet. Refer to Page 29 for the location of this facility.
13. **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 32 for the location of this facility.
14. **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 for fire suppression purposes. Portions of the channel are desilted approximately every 5 years. This facility will not be desilted this year. Potential area of impact is less than 100 square feet for spot spraying. Refer to Page 34 for the location of this facility.
15. **Texaco Ditch:** This is an earthen channel approximately 2,300' long. The District spot sprays this ditch on a biannual annual basis to reduce silt trapping vegetation (weeds) and desilts portions of the channel approximately every 5 years. This facility will not be desilted this year. Potential area of impact is less than 100 square feet for spot spraying. Refer to Page 11 for the location of this facility.
16. **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 every 5-10 years. Potential Area of Impact from spot spraying is less than 50 square feet. Refer to Page 13 for the location of this facility.
17. **Willemssen Ranch Channel:** This is an earthen ditch 720 feet long beginning just downstream of Park Circle in Santa Ynez. This ditch is spot sprayed annually to keep sediment from accumulating or obstructive vegetation from colonizing the channel. The ditch is desilted approximately every 7-10 years. This facility will not

be desilted this year. Potential area of impact is less than 100 square feet for spot spraying. Refer to Page 37 for the location of this basin.

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. This facility will not be desilted this year. Potential areas of impact are 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 basin is also known as Orcutt Regional Detention Basin B. This basin is mowed on an annual basis for fire suppression purposes. The outlet structure is sprayed on annual basis to eliminate vegetation from blocking the outlet structure. This basin is desilted every 5-7 years. Potential area of impact for mowing is 1.0 acres. Refer to Page 28 for the location of this facility.
3. **Blosser Basin:** The upper access road around this basin is mowed annually for fire control and volunteer woody vegetation and cattails are spot sprayed. Potential Area of Impact is .18 acres from mowing the access road around the top of the basin. 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 is less than 50 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 is 2.5 acres from mowing. Refer to Page 6 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 annual basis to eliminate vegetation from blocking the inlet structure. Potential area of impact is .5 acres from mowing and less than 50 square feet for spot spraying. Refer to Page 25 for the location of this facility.
7. **Deer Field Basin:** This basin is located within the Deer Field Estates taking street drainage. The banks of this basin are mowed on an annual basis for weed and fire control. The V-ditches are spot sprayed on an annual basis. Refer to Page 10 for the location of this basin.
8. **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 is less than 50 square feet from spot spraying and .25 acres from mowing. Refer to Page 13 for the location of this facility.
9. **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. This facility will not be disced

this year. Potential Area of Impact is .35 acres from spraying the fence line. Refer to Page 13 for the location of this facility.

10. **Hummel 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 annual basis to eliminate vegetation from blocking the inlet structure. Potential area of impact is 1.0 acre for mowing and less than 10 square feet for spot spraying. Refer to Page 25 for the location of this facility.
11. **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 is .28 acres for mowing and less than 10 square feet for spot spraying. Refer to Page 13 for the location of this facility.
12. **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 is .2 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 15 for the location of this facility.
13. **Kovar Basin:** The area immediately surrounding the inlet of this basin is spot sprayed on a biannual basis. Potential area of Impact for spot spraying is less than 100 square feet. Refer to Page 13 for the location of this facility.
14. **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 is .5 acres for mowing and less than 10 square feet for spot spraying. Refer to Page 16 for the location of this facility.
15. **Mesa Oaks Basin:** This basin is located within the Mesa Oaks Subdivision receiving urban runoff. 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 is .4 acres for mowing and less than 100 square feet for spot spraying. Refer to Page 20 for the location of this basin.
16. **Mud Lake Basin 1,2,3:** All three basins are connected together and work as retention basins. On an annual basis, these basins are mowed for weed and fire control. The bottom of Mud Lake Basin 1 is spot sprayed on an annual basis to eliminate the woody vegetation that may begin to colonize the basin. Potential area of impact is 2.5 acres for mowing and less than 100 square feet for spot spray. Refer to Page 24 for the location of this basin.
17. **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 is .28 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 24 for the location of this facility.

18. **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 is 1.8 acres for mowing. See Page 27 for the location of this facility.
19. **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 is .23 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 30 for the location of this facility.
20. **Quail Meadows Basin:** This Basin is a retention basin located in an urban area and 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 is .2 acres for mowing and less than 10 square feet for spot spraying. Refer to Page 16 for the location of this facility.
21. **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 debris trapping sediment from the outlet structure. Potential area of impact is less than 100 square feet for spot spraying. Refer to Page 33 for the location of this facility.
22. **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. Potential Area of Impact is less than 50 square feet for spot spraying. See Page 35 for the location of this facility.
23. **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 is .1 acres for mowing and less than 10 square feet for spot spraying. Refer to Page 25 for the location of this facility.
24. **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 is .1 acres for mowing and less than 10 square feet for spot spraying. Refer to Page 25 for the location of this facility.

Los Alamos:

Ditches:

1. **Los Alamos Eastside Ditch:** This is a 200' long grassy swale and is mowed annually. Potential Area of Impact is 1.5 acres from mowing the ditch. Refer to Page 18 for the location of this facility.

Santa Ynez/Lompoc:

Ditches

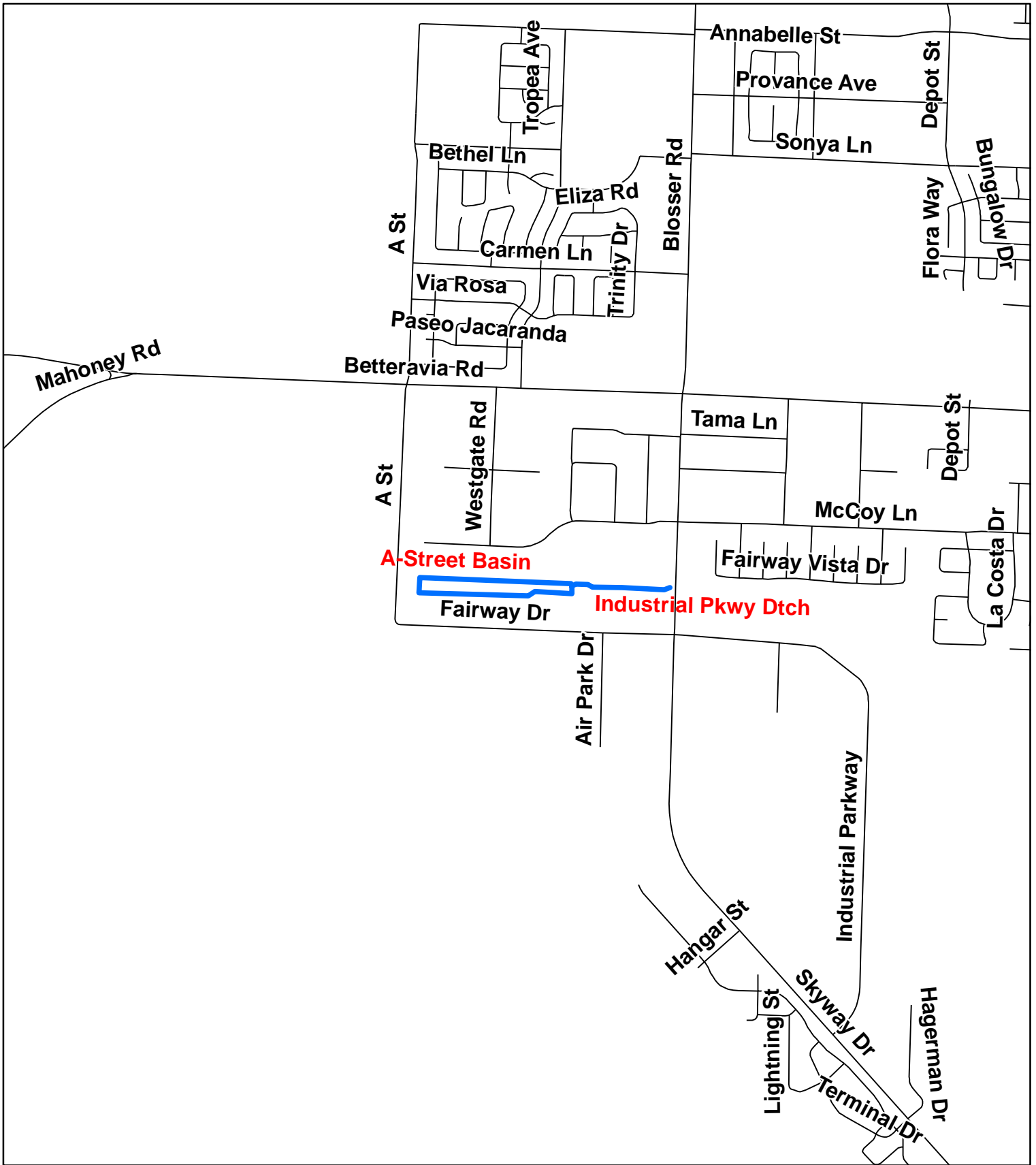
1. **Airey-Skytt Channel:** This is a half concrete/half earthen channel. The earthen channel is spot sprayed annually to reduce silt trapping vegetation. Potential Area of Impact is less than 50 square feet for spot spraying. Refer to Page 2 for the location of this facility.
2. **Amby Ditch:** This 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. Potential Area of Impact is less than 50 square feet for spot spraying. Refer to Page 3 for the location of this facility.
3. **Calvert Ditch:** This earthen 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 is less than 100 square feet for spot spraying and .7 acres for mowing. Refer to Page 20 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 are spot sprayed on an annual basis. Potential Area of Impact is less than 100 square feet for spot spraying. Refer to Page 8 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 8 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 is less than 50 square feet for spot spraying and 1.0 acre for mowing. Refer to Page 8 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 is less than 100 square feet for spot spraying. Refer to Page 21 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 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 22 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. Potential area of impact is less than 100 square feet for spot spraying. Refer to Page 31 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 is 6 acres from driving the loader down the concrete channel. Refer to Page 31 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 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 weeds growing in them, and weep holes remain functional. Potential area of impact is less than 100 square feet for spot spraying. Refer to Page 31 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 and the earthen channel is occasionally spot sprayed, and access roads mowed on an annual basis. Potential Area of Impact is less than 50 square feet for spot spraying. Refer to Page 36 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 and the basins are desilted approximately every 3-5 years. The basins are spot sprayed annually to remove unwanted vegetation from the invert of the basin. Potential Area of Impact 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. **Cemetery 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 is .04 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 23 for the location of this facility.

3. **Fault Canyon Basin:** Weeds and grasses are mowed on an annual basis in the basin and the basin is desilted every 7-10 years and spot sprayed annually to remove woody vegetation if it becomes established. Potential Area of Impact is .04 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 23 for the location of this facility.
4. **Miguelito Basin:** The edge of the basin is spot sprayed on a biannual basis so it doesn't become colonized with bulrush. The basin is desilted approximately every 5-10 years. Potential area of impact is less than 100 square feet for spot spraying. Refer to Page 21 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 is 1.5 acres for mowing. Refer to Page 22 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. Potential Area of Impact is .04 acres for mowing. Refer to Page 23 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 is .04 acres for mowing. Refer to Page 21 for the location of this facility.
8. **Rudolph Basin:** This basin is very occasionally mowed to control weeds. Potential Area of Impact is .04 acres for mowing. Refer to Page 23 for the location of this basin.

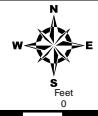


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A-Street Basin Industrial Parkway Ditch



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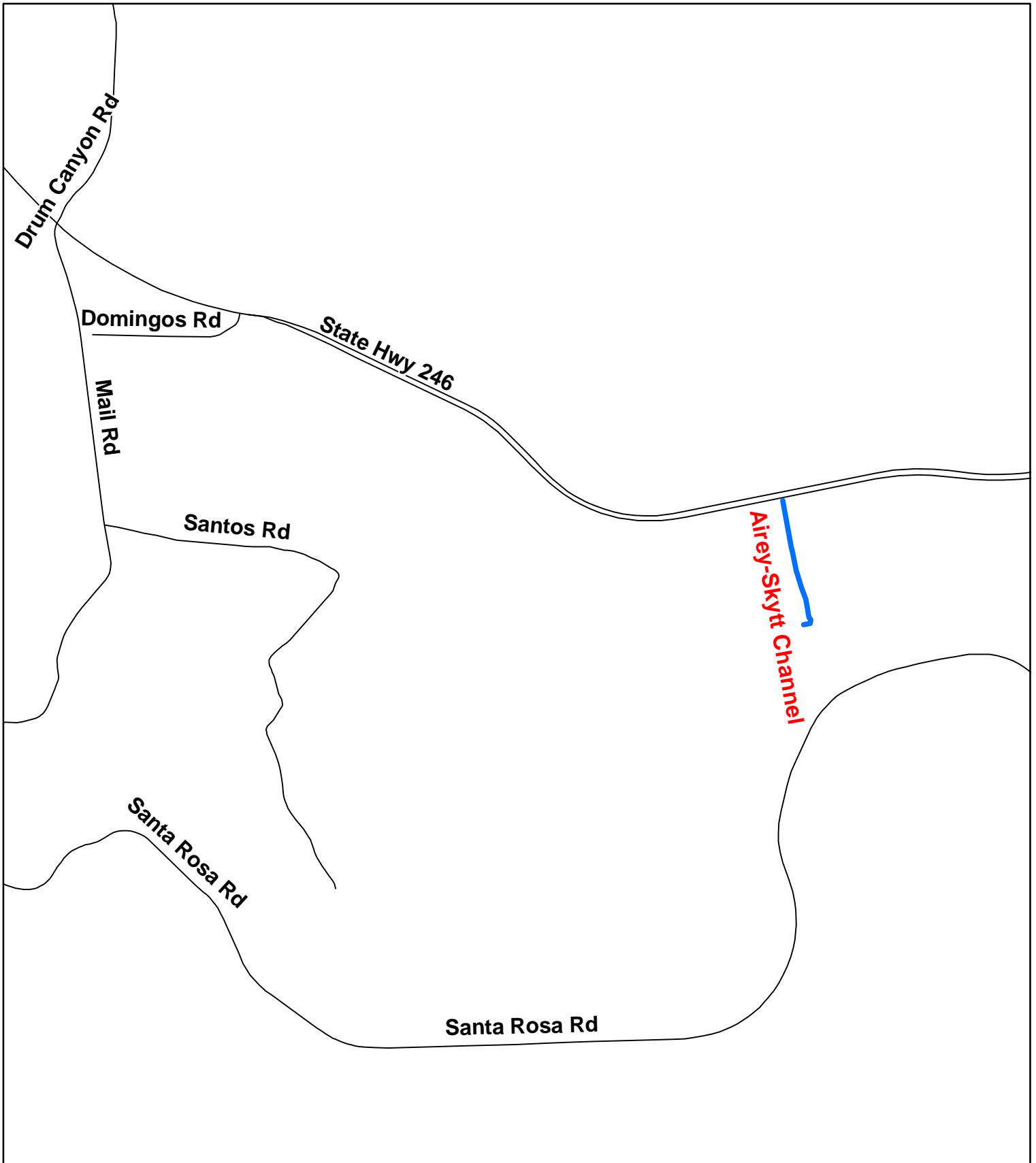
1,250 625 0 1,250
Foot

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
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Airey-Skytt Channel



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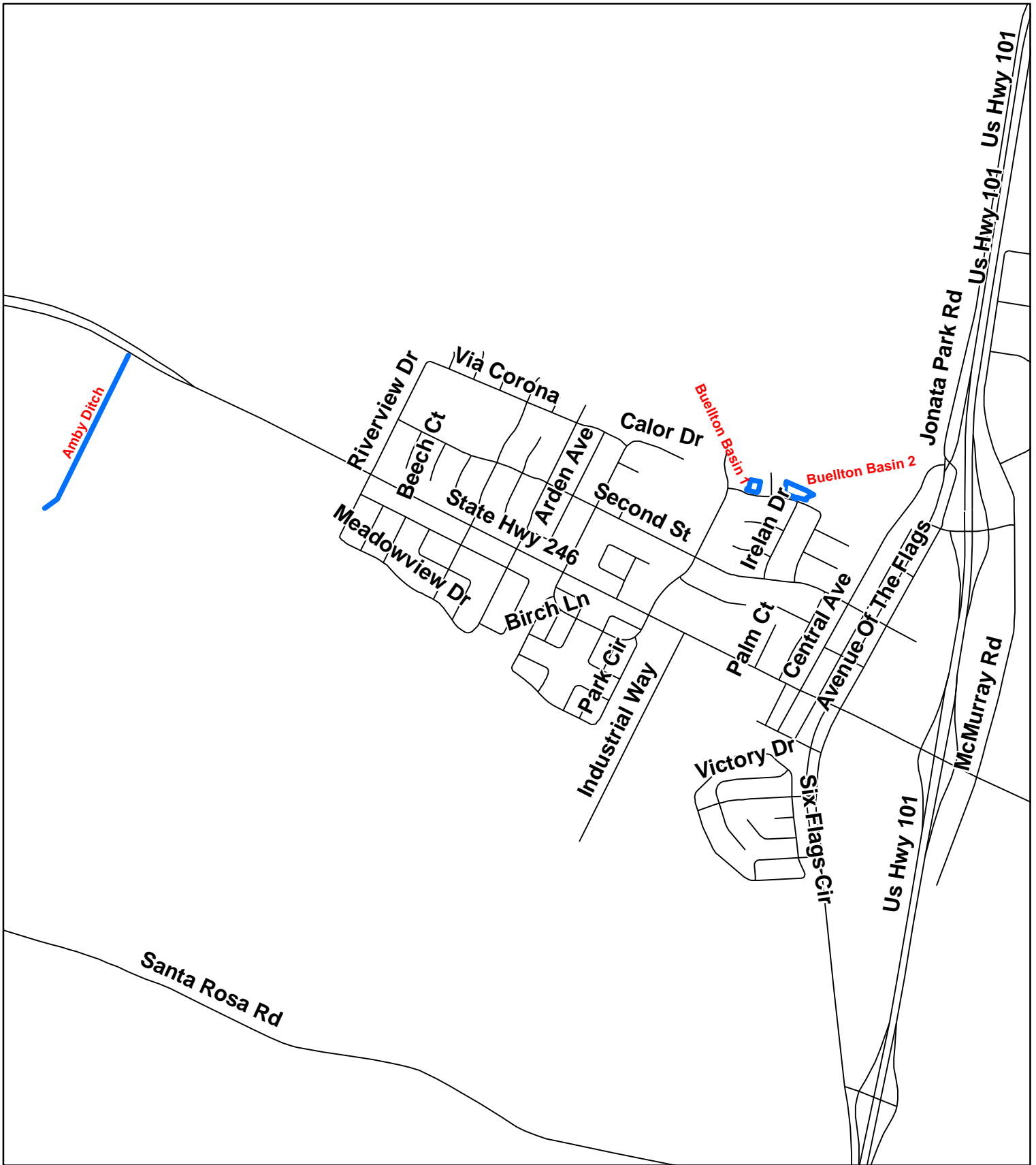
1,900 950 0 1,900
Feet

Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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Amby Ditch Buellton Basins 1&2



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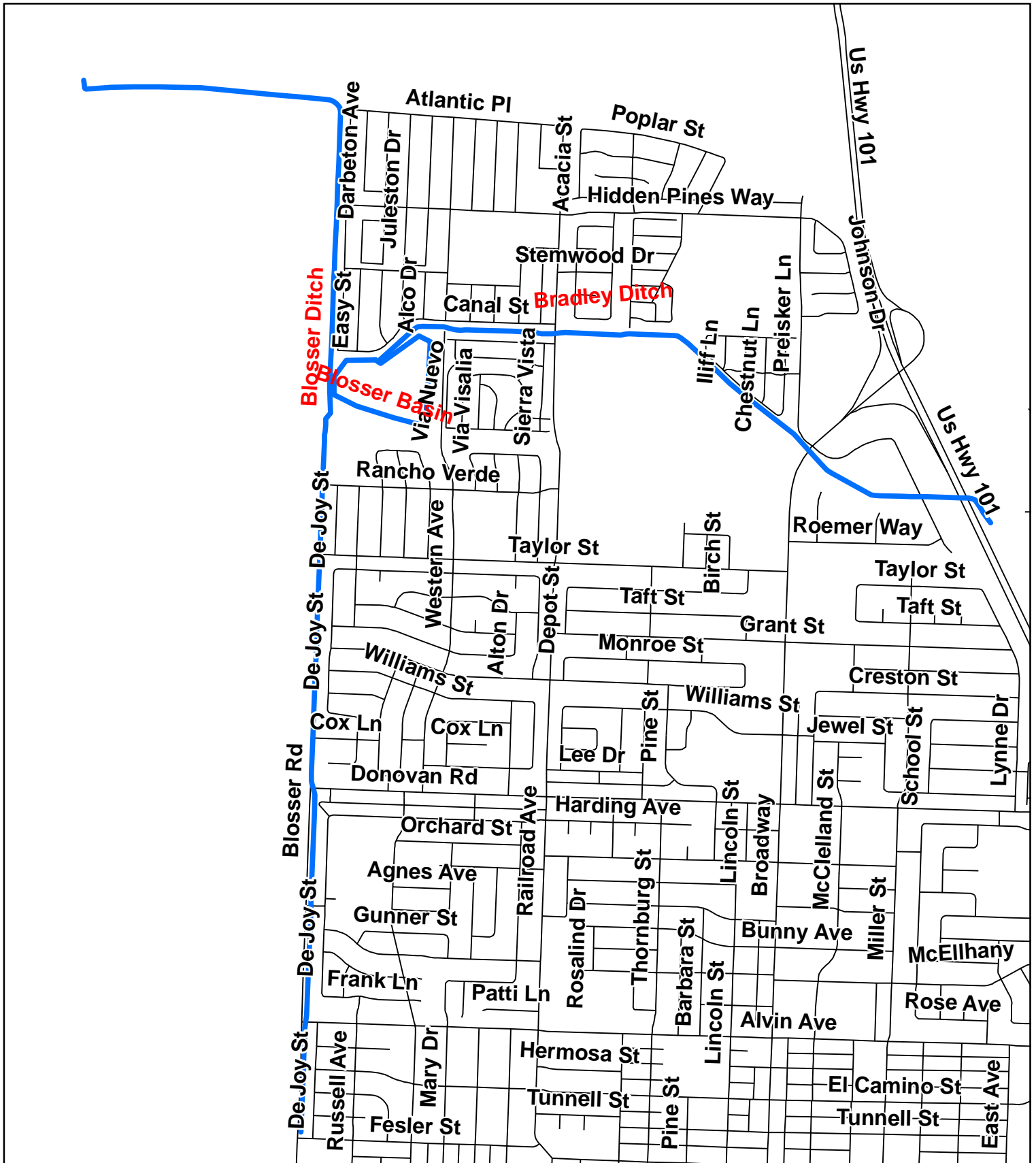
1,100 550 0 1,100
Feet

Coordinate System: State Plane, California Zone V NAD 83

Annual Routine Maintenance Plan

Santa Barbara County, California

Prepared By:
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Blosser Basin Blosser Ditch



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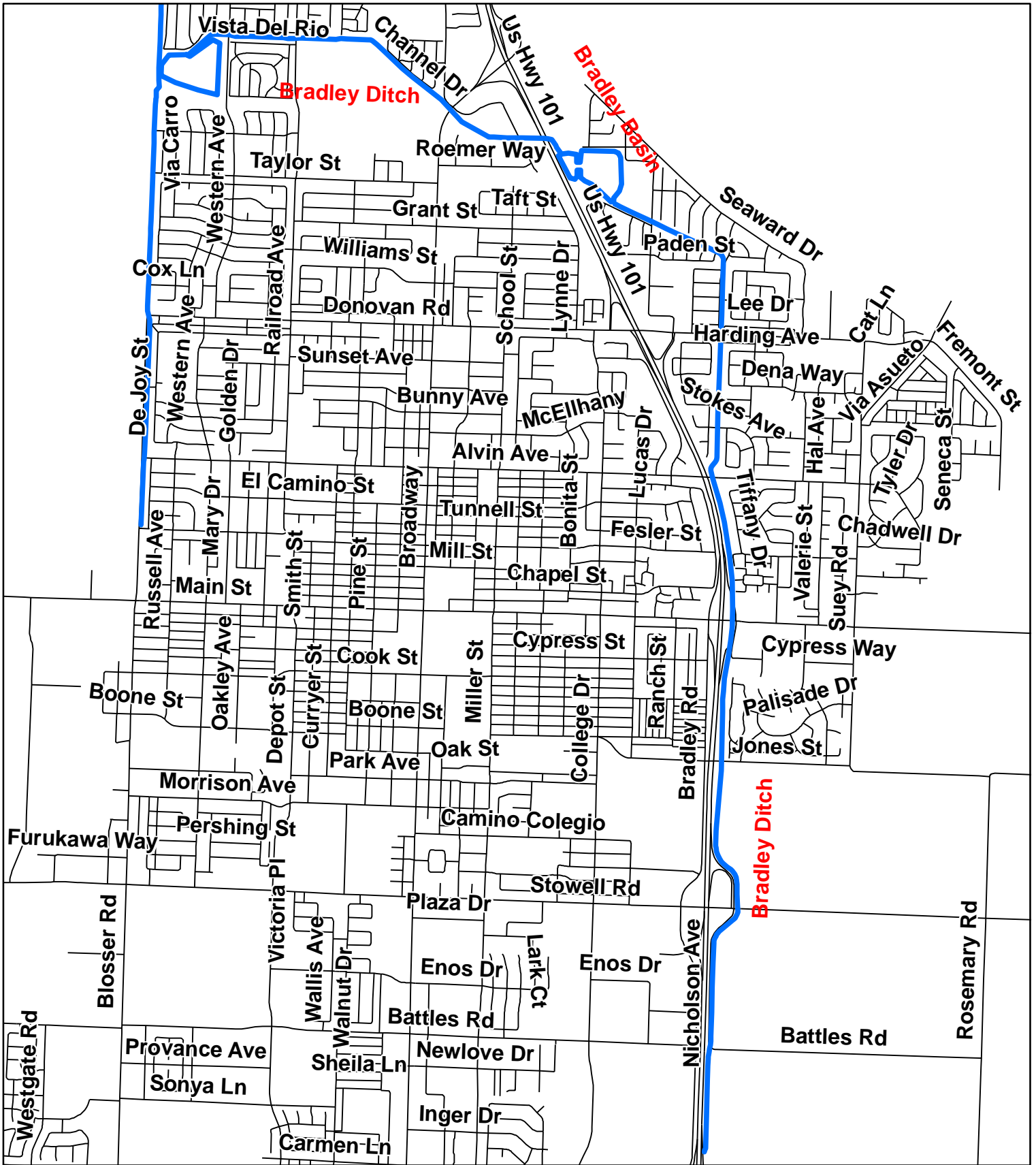
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Coordinate System: State Plane, California Zone V NAD 1983

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Bradley Ditch Bradley Basin



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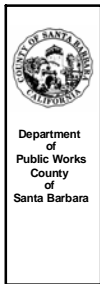
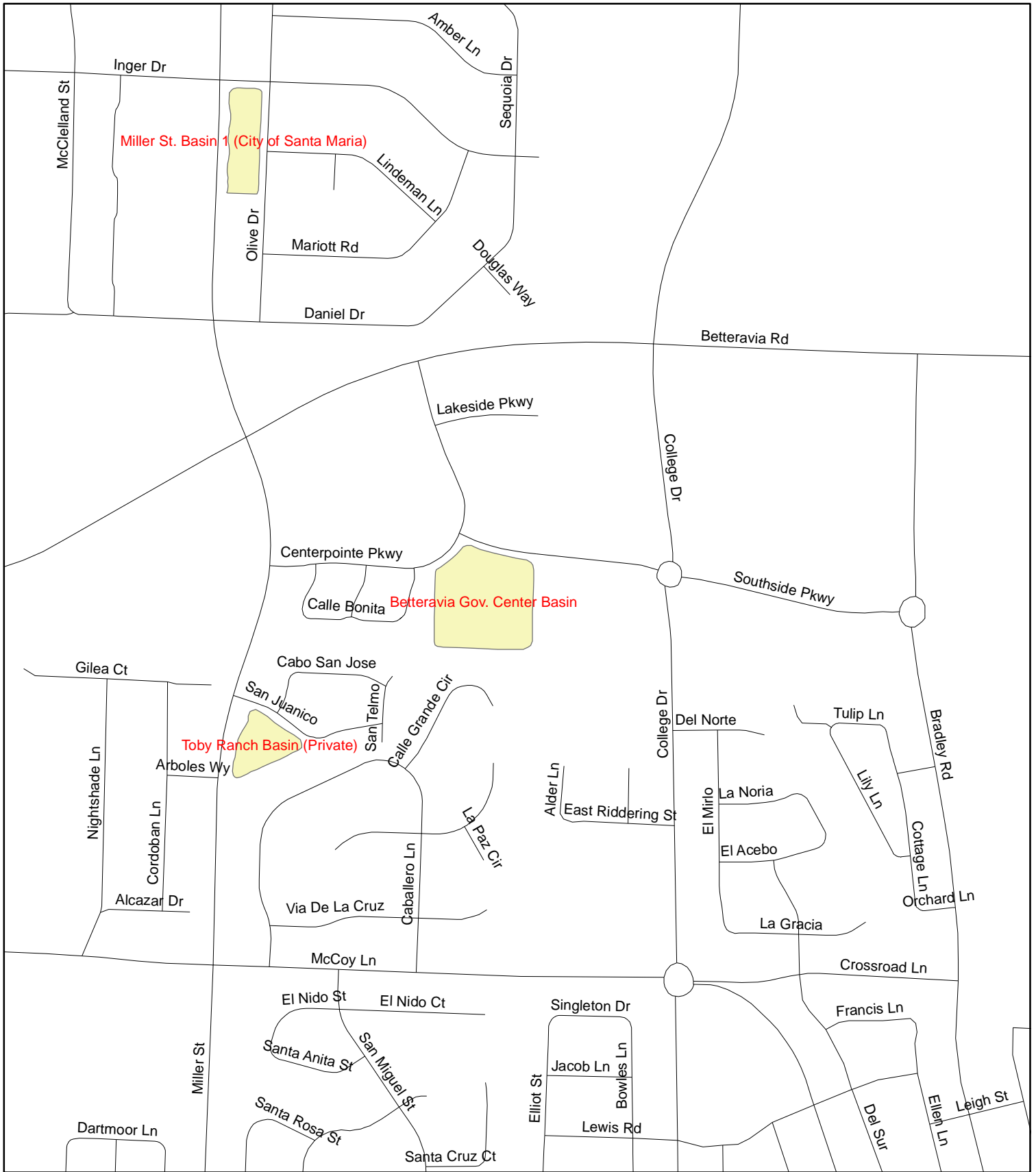
2,100 1,050 0 2,100
Foot

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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C2P2 Basin (Betteravia Gov. Center Basin)



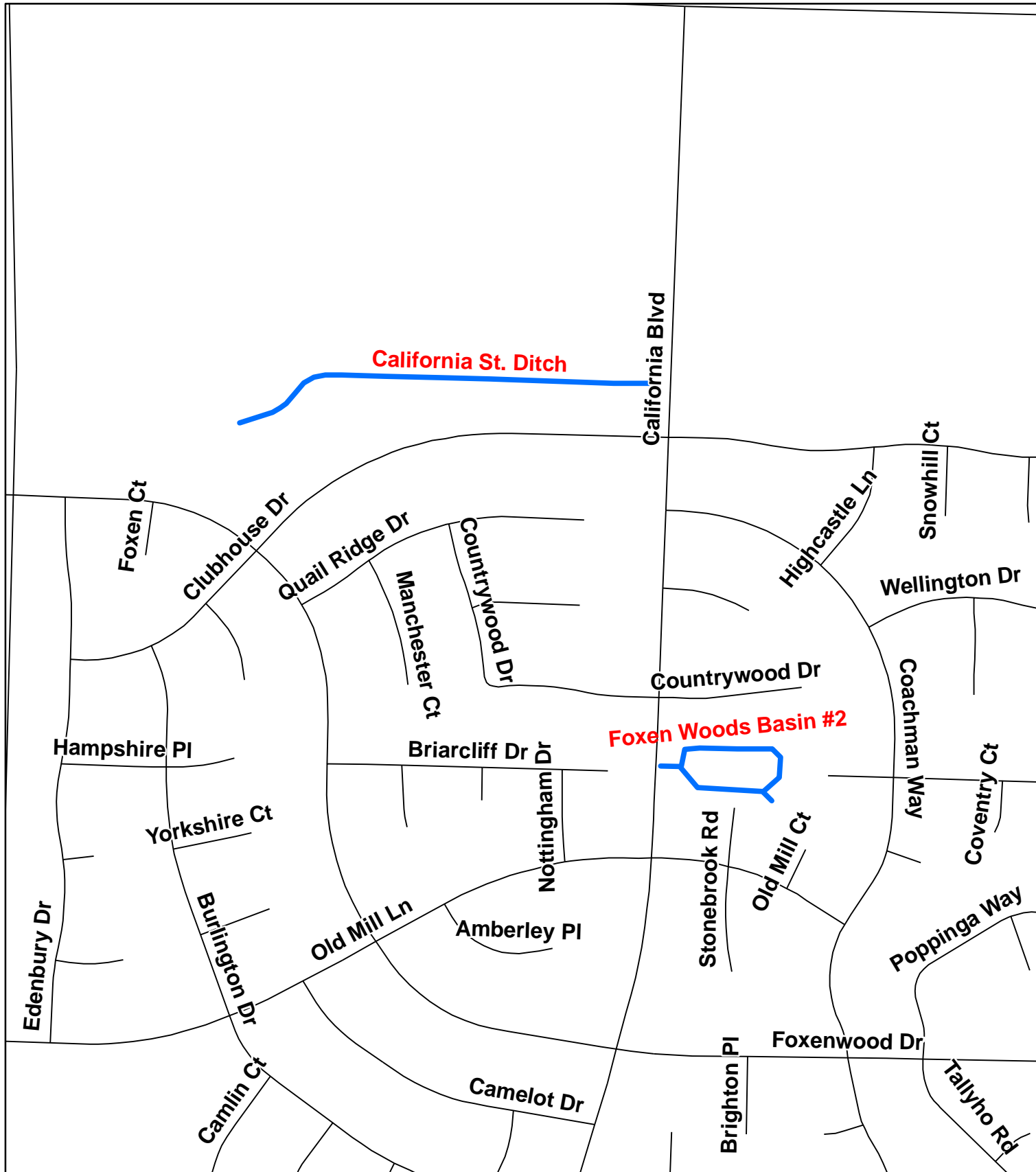
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Coordinate System: State Plane, California Zone V NAD 1983

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California St. Ditch Foxen Woods Basin #2



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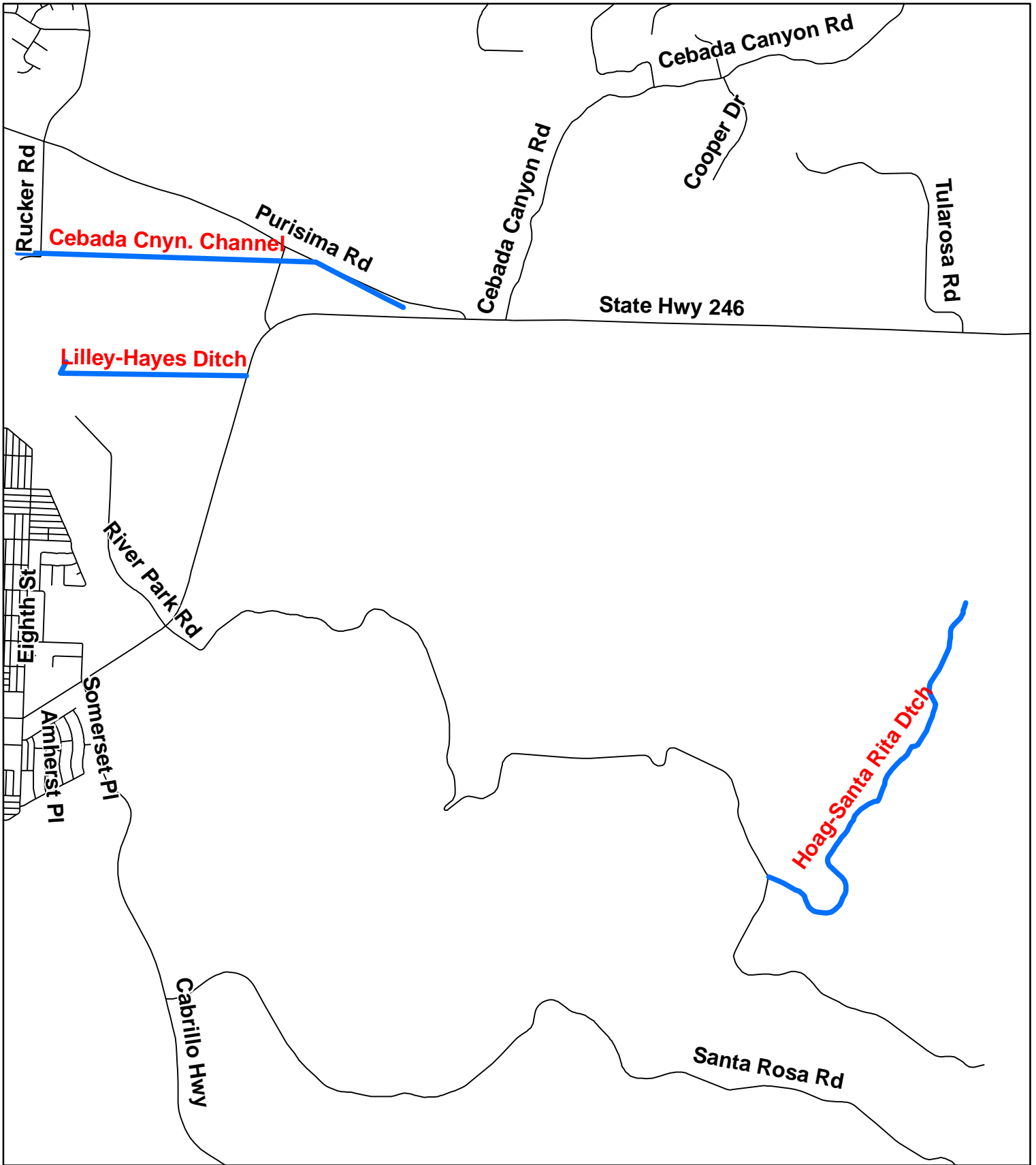


425 212.5 0 425
Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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



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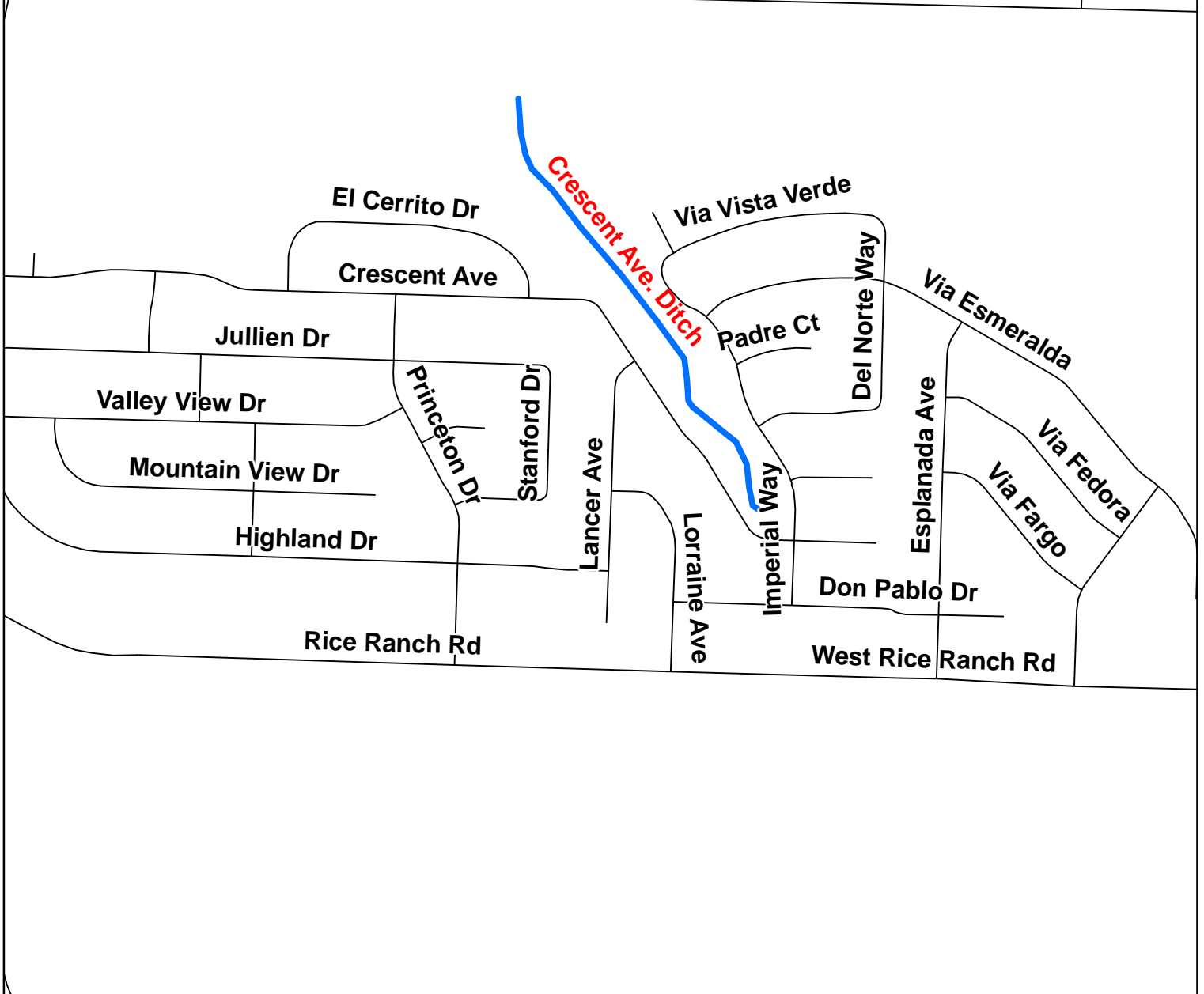
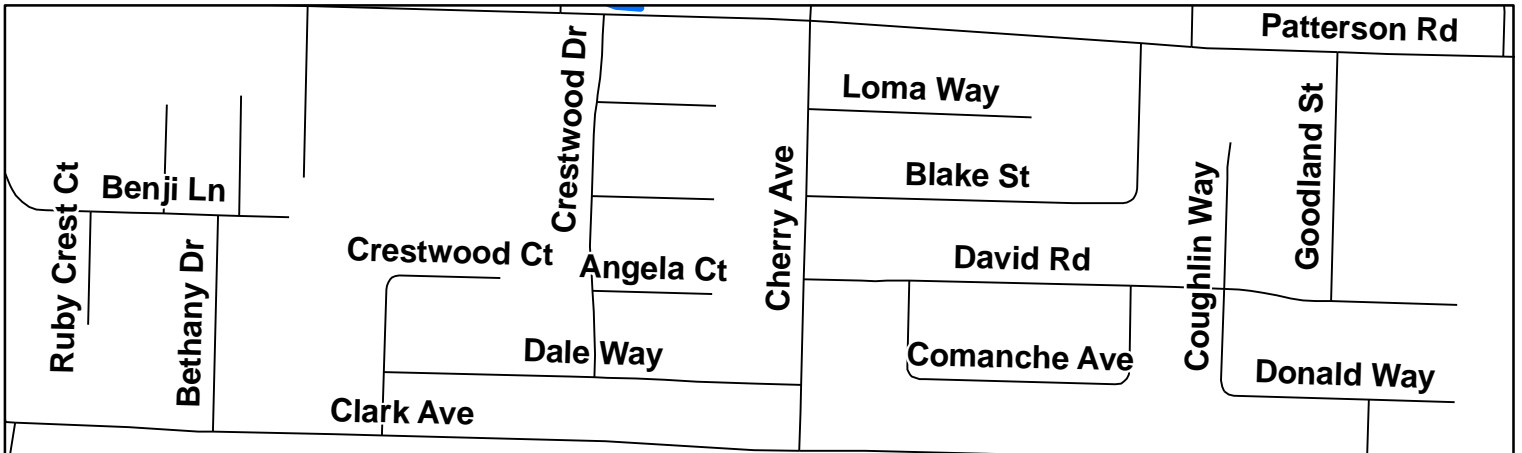


2,500 1,250 0 2,500
Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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Crescent Avenue Ditch



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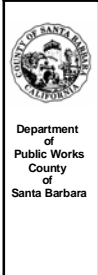
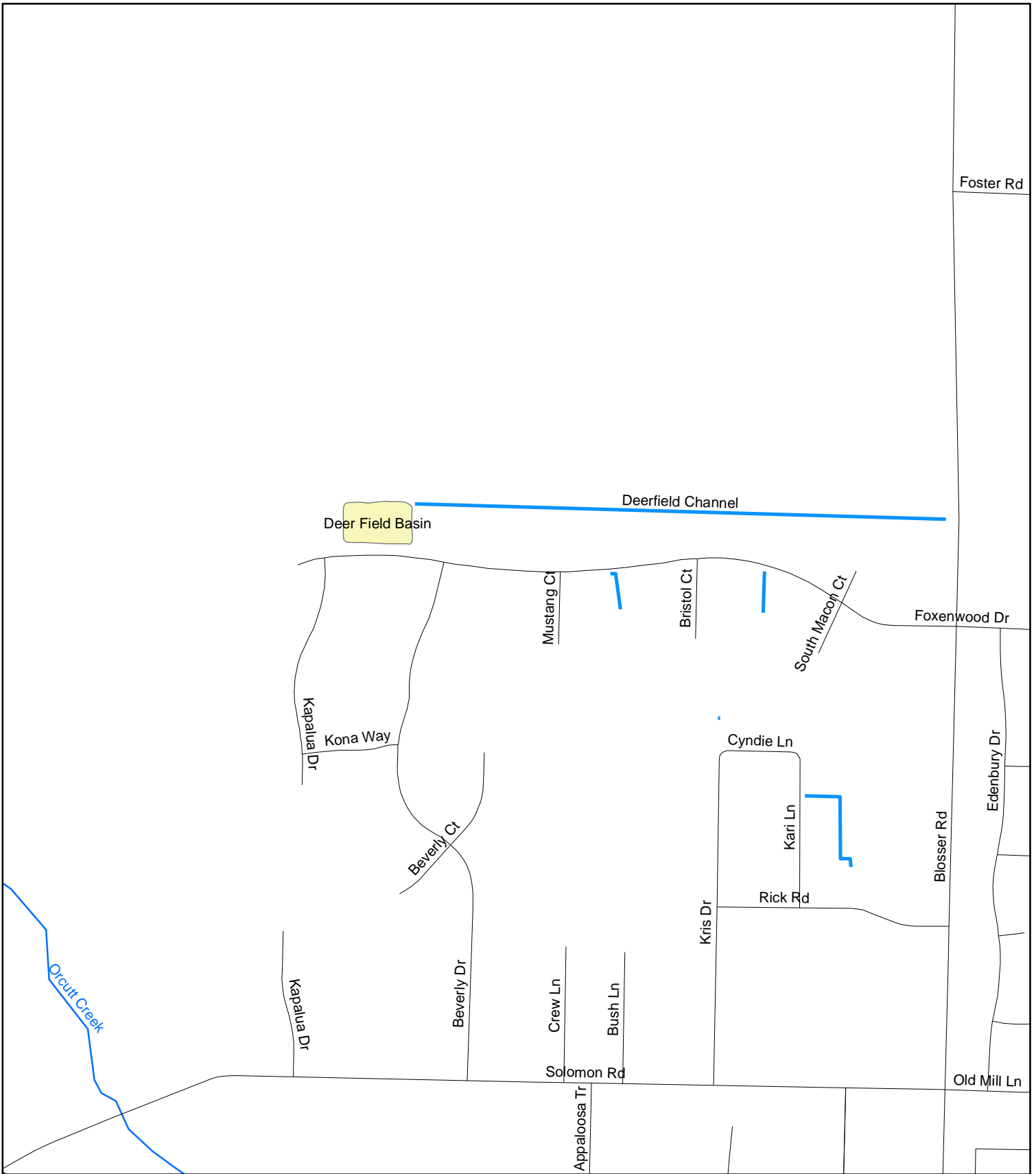


Coordinate System: State Plane, California Zone V NAD 1983

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Santa Barbara County, California

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Deerfield Channel Deerfield Basin



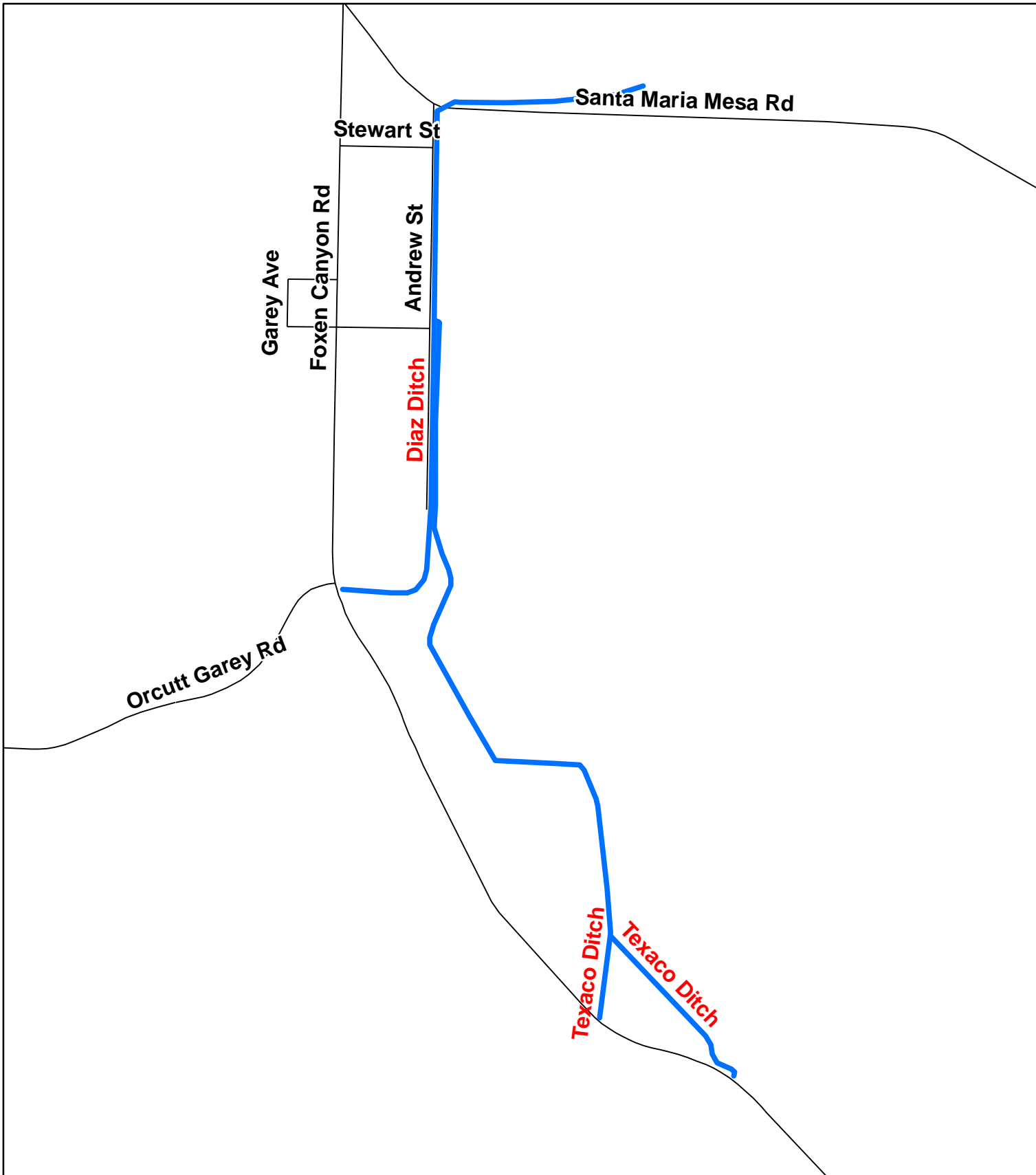
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Coordinate System: State Plane, California Zone V NAD 983

Annual Routine Maintenance Plan

Santa Barbara County, California

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Diaz Ditch Texaco Ditch



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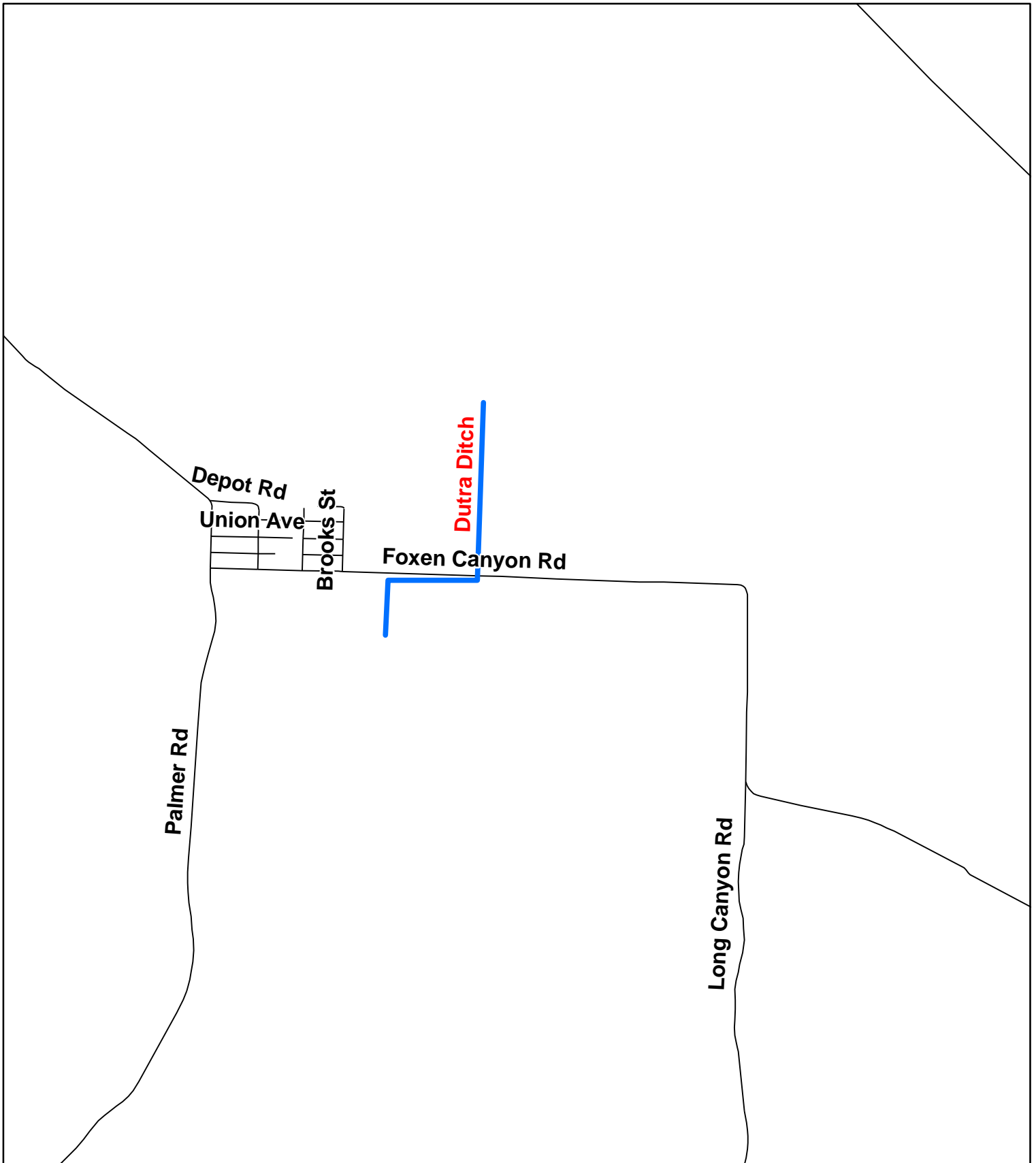


870 435 0 870
Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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Dutra Ditch



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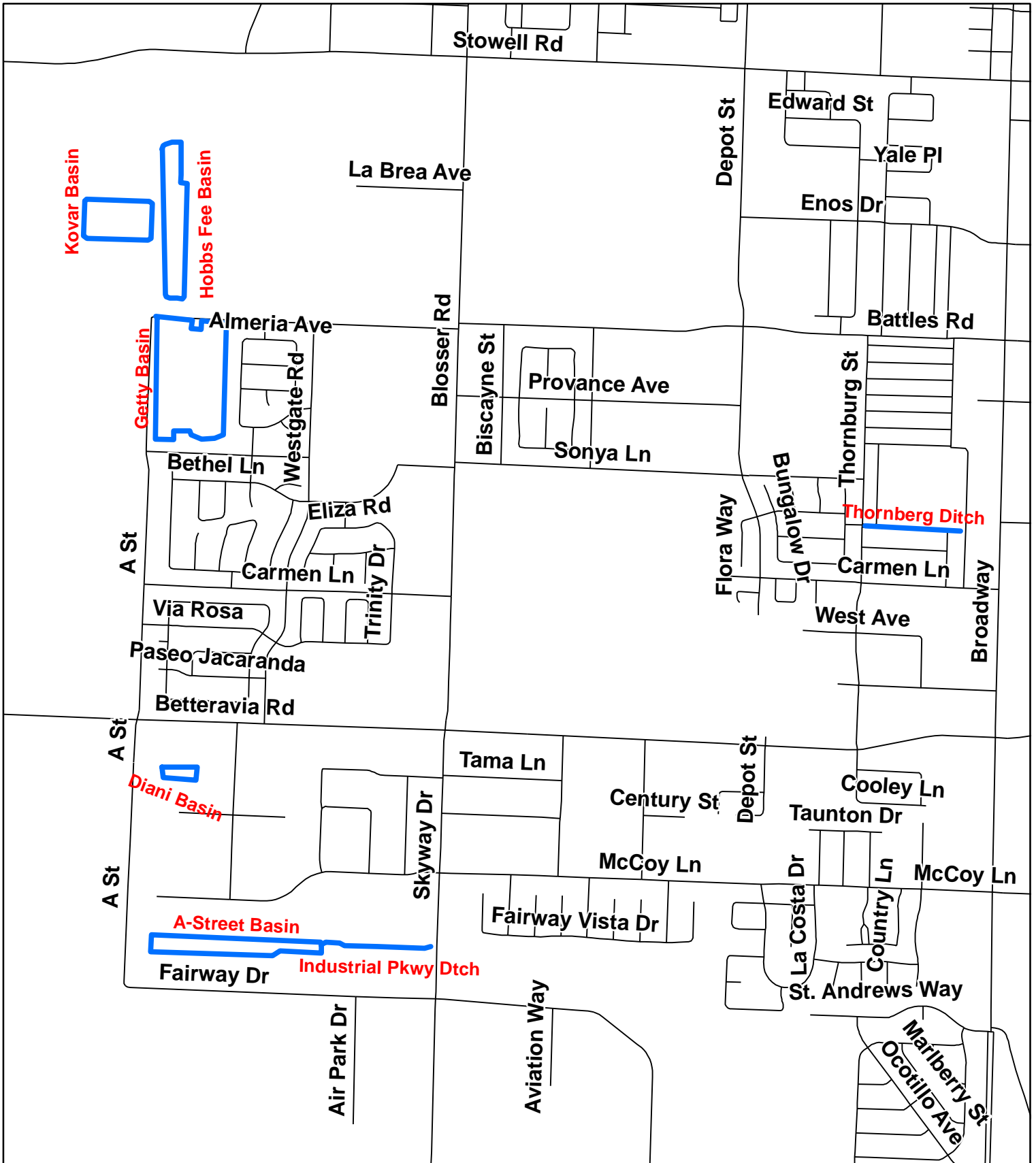


Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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



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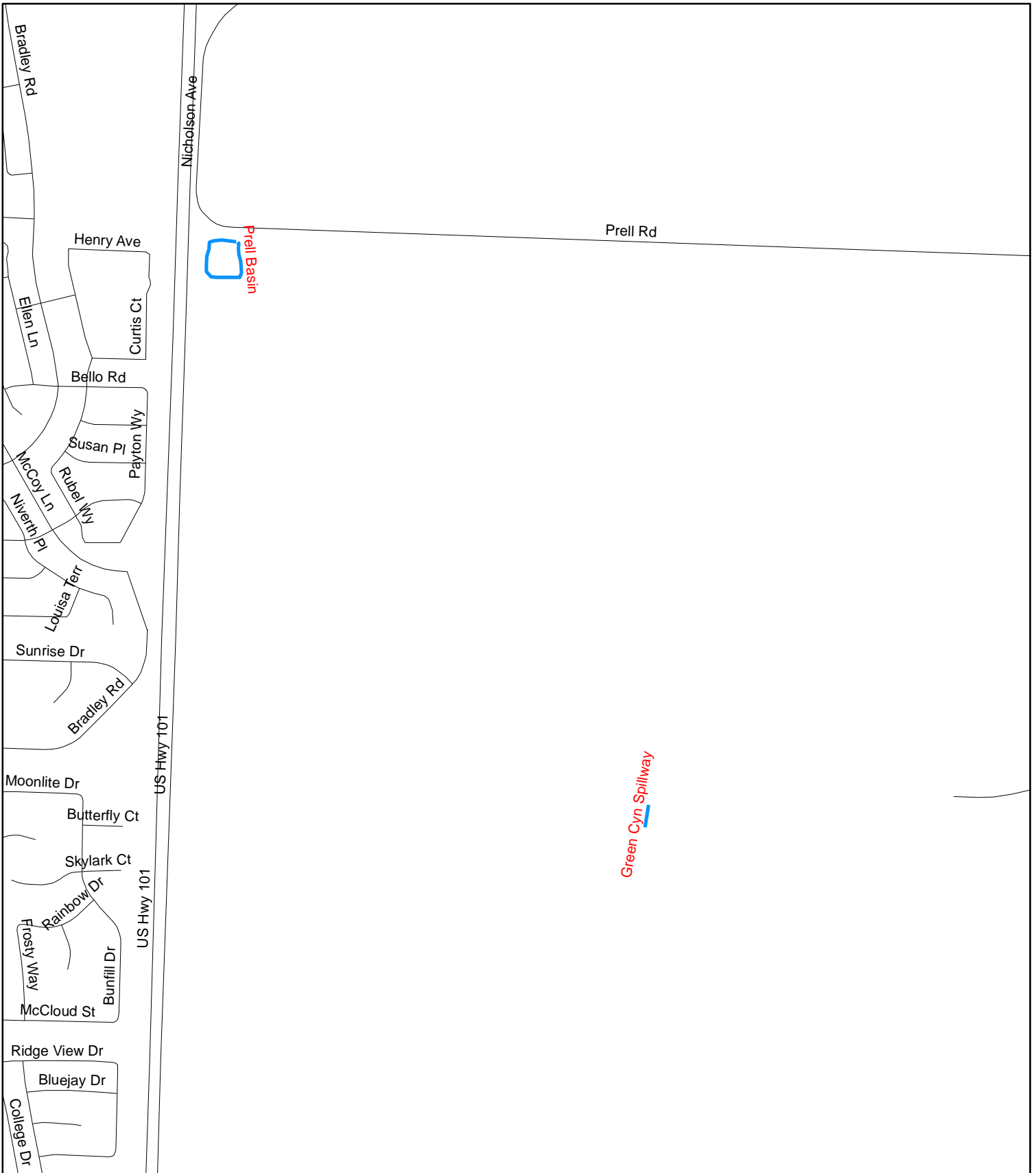
1,100 550 0 550 1,100
Feet

Coordinate System: State Plane, California Zone V NAD 1983

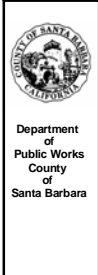
Annual Routine Maintenance Plan

Santa Barbara County, California

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Green Cyn Spillway



Green Canyon Spillway



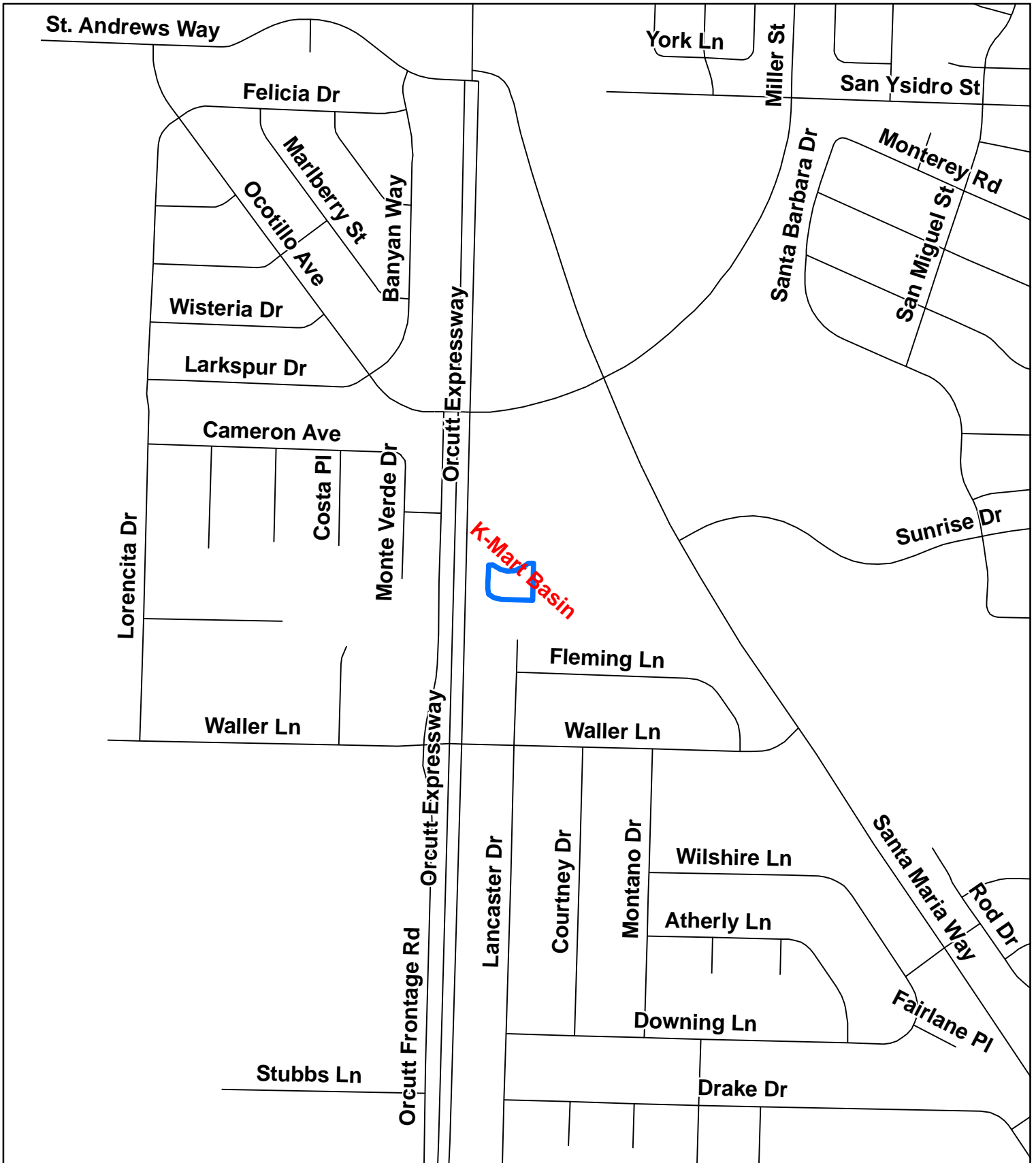
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Coordinate System: State Plane, California Zone V NAD 1983

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Santa Barbara County, California

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K-Mart Basin



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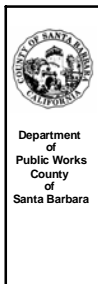
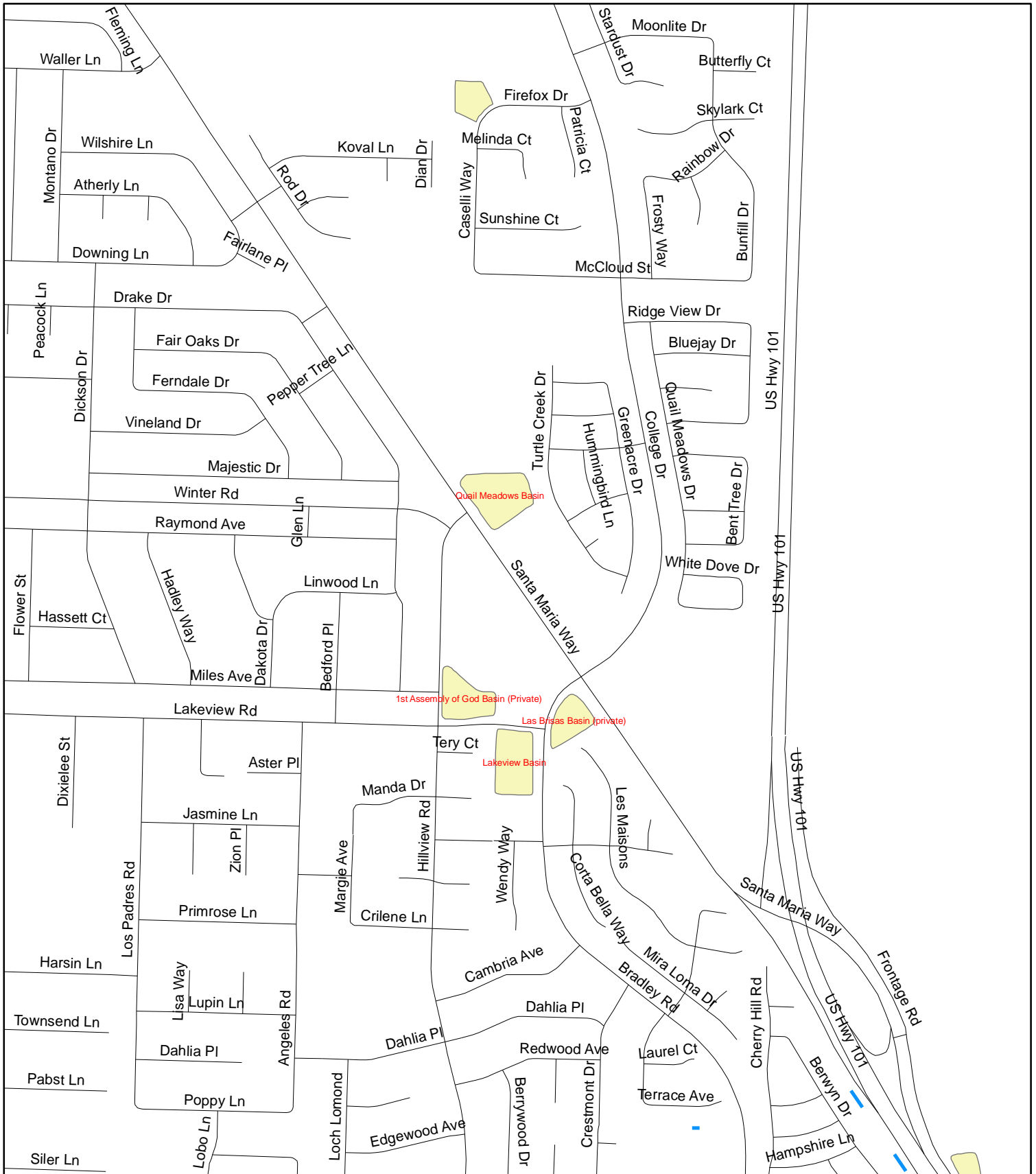


Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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Lakeview Basin Quail Meadows Basin



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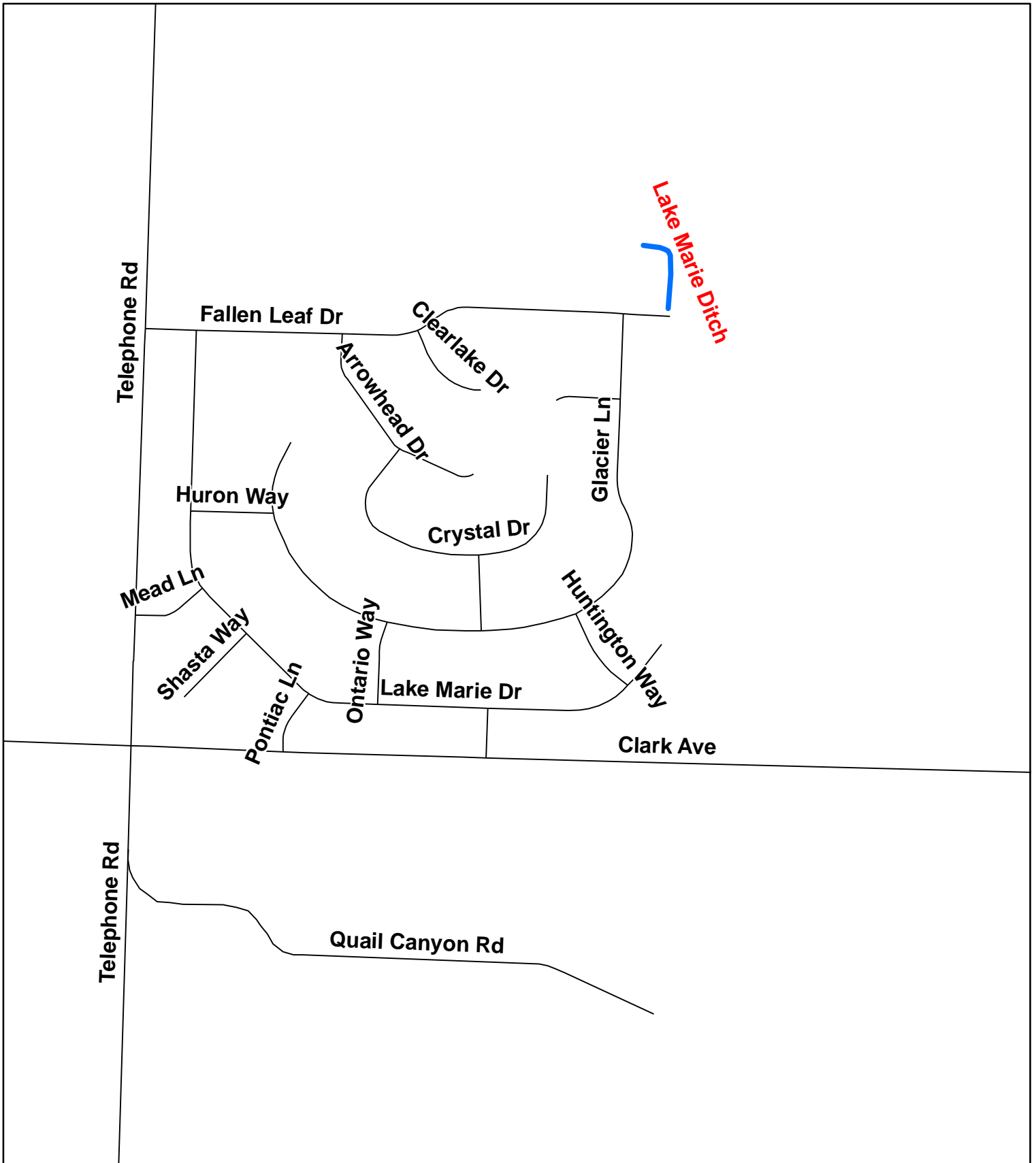
650 325 0 650
Feet

Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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Lake Marie Ditch



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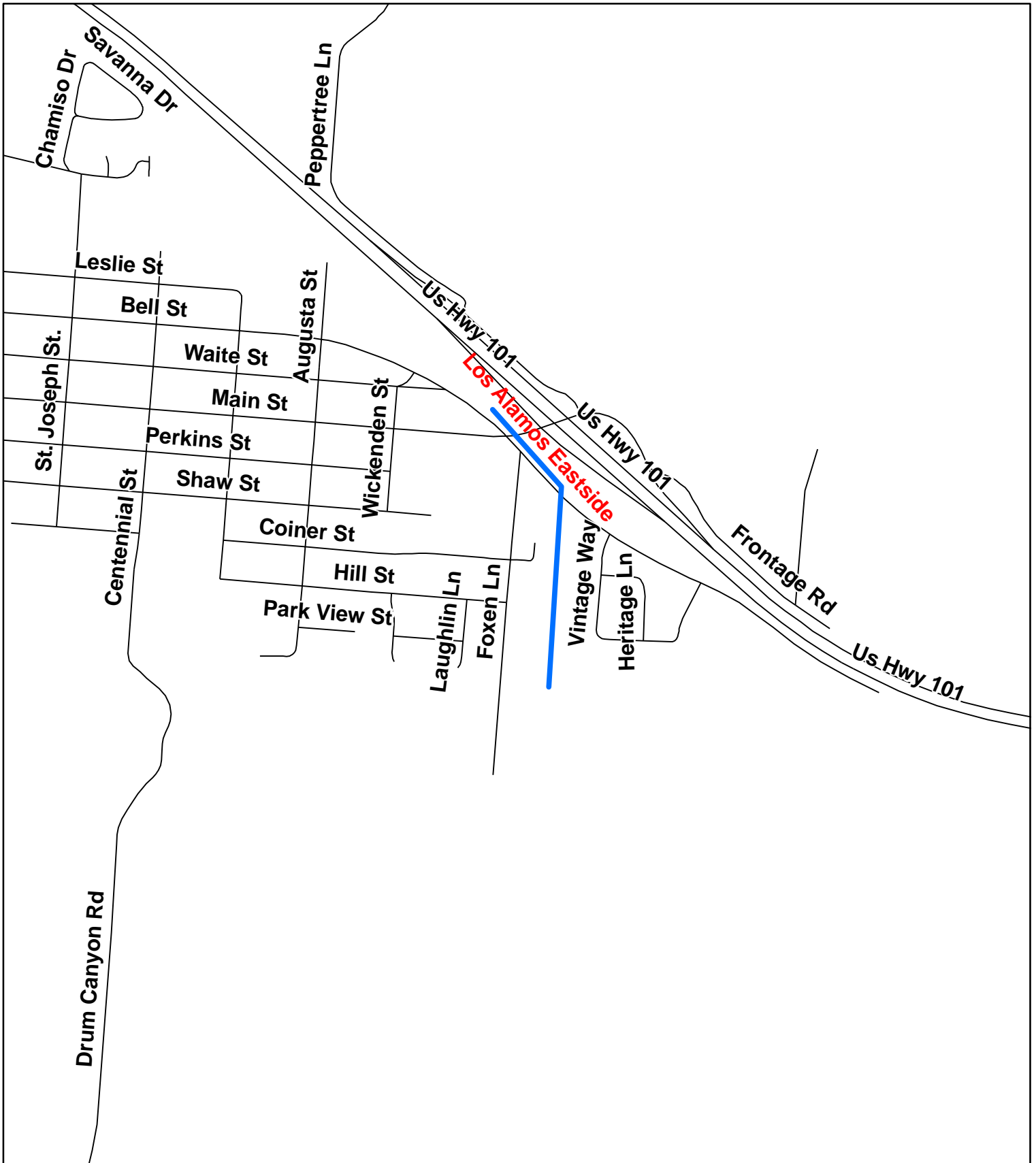
560 280 0 560
Feet

Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

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Los Alamos Eastside Ditch



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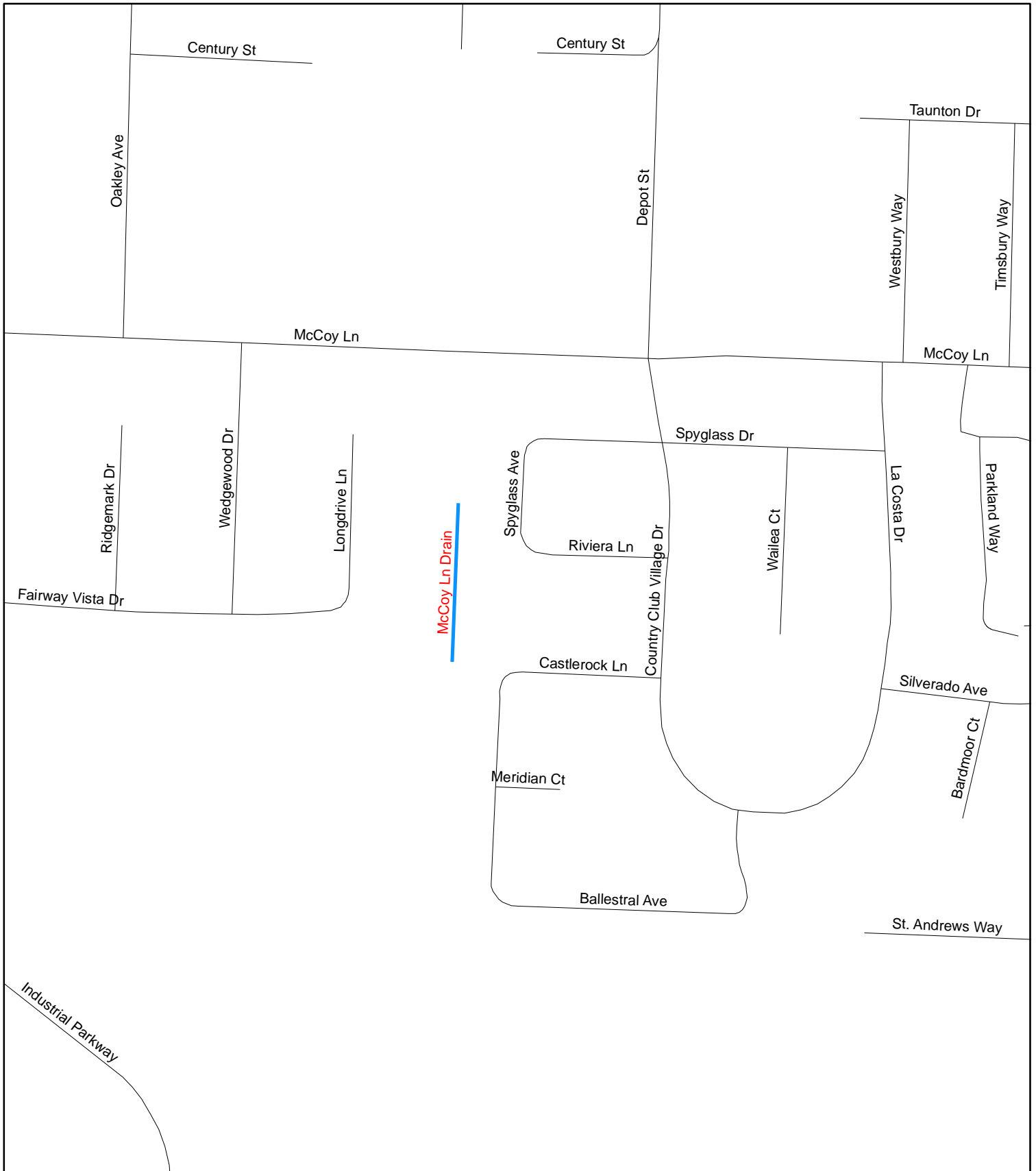
725 362.5 0 725
Feet

Coordinate System: State Plane, California Zone V NAD 1983

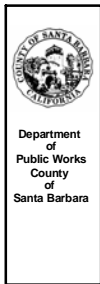
Annual Routine Maintenance Plan

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McCoy Ln Drain



McCoy Lane Drain



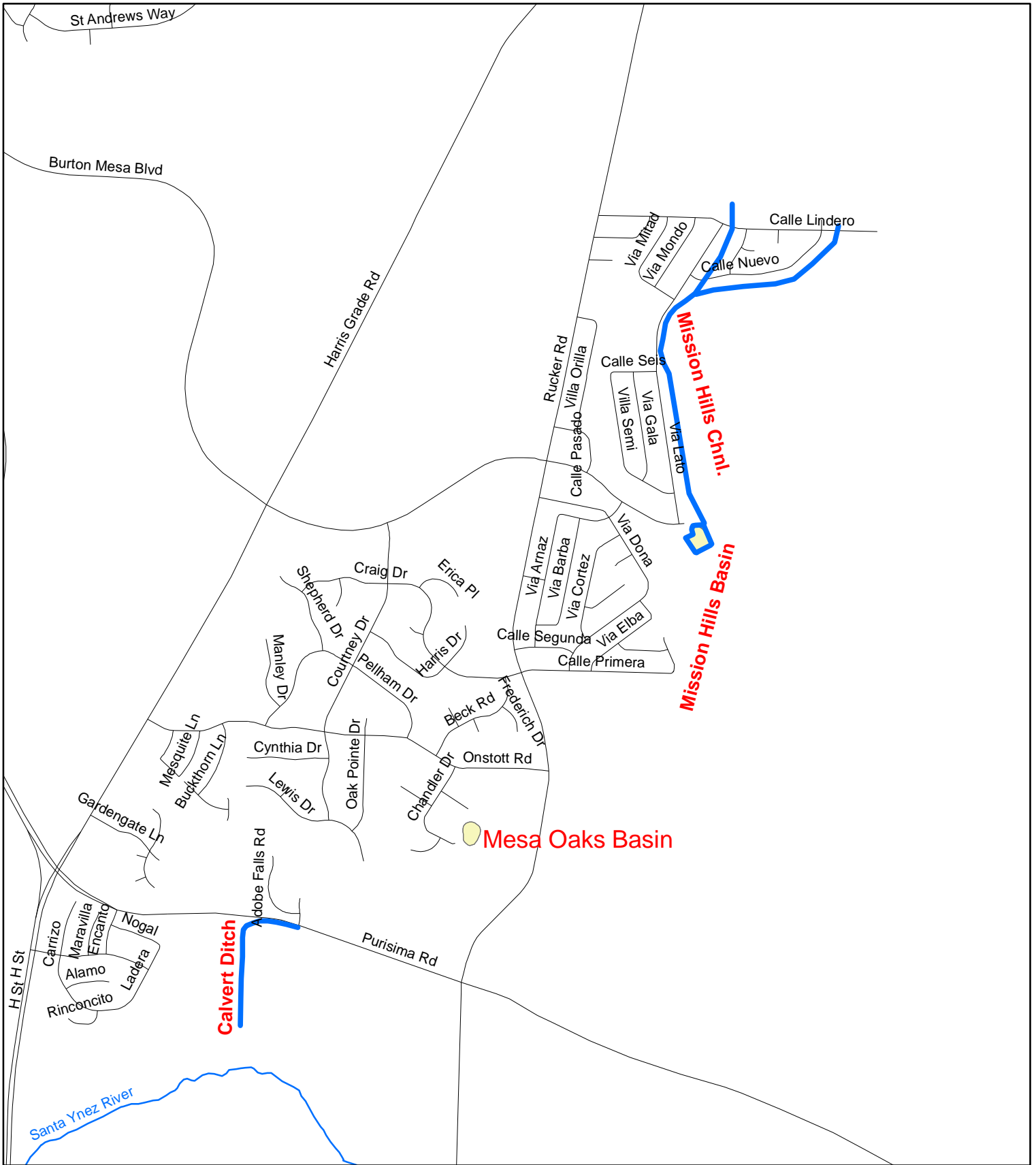
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Mesa Oaks Basin Mission Hills Channel Mission Hills Basin Calvert Ditch



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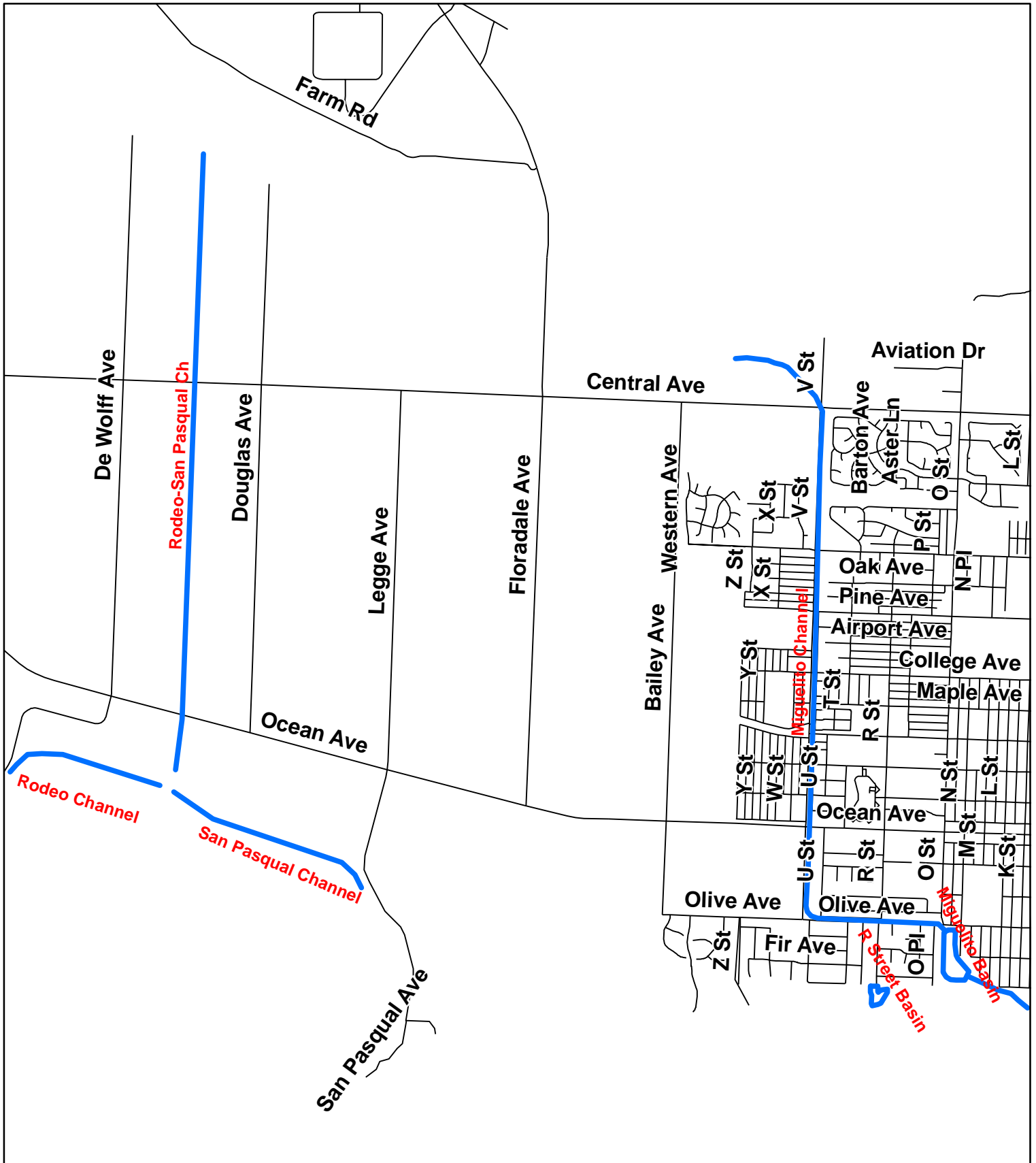
1,300 650 0 1,300
Feet

Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2011-2012

Santa Barbara County, California

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



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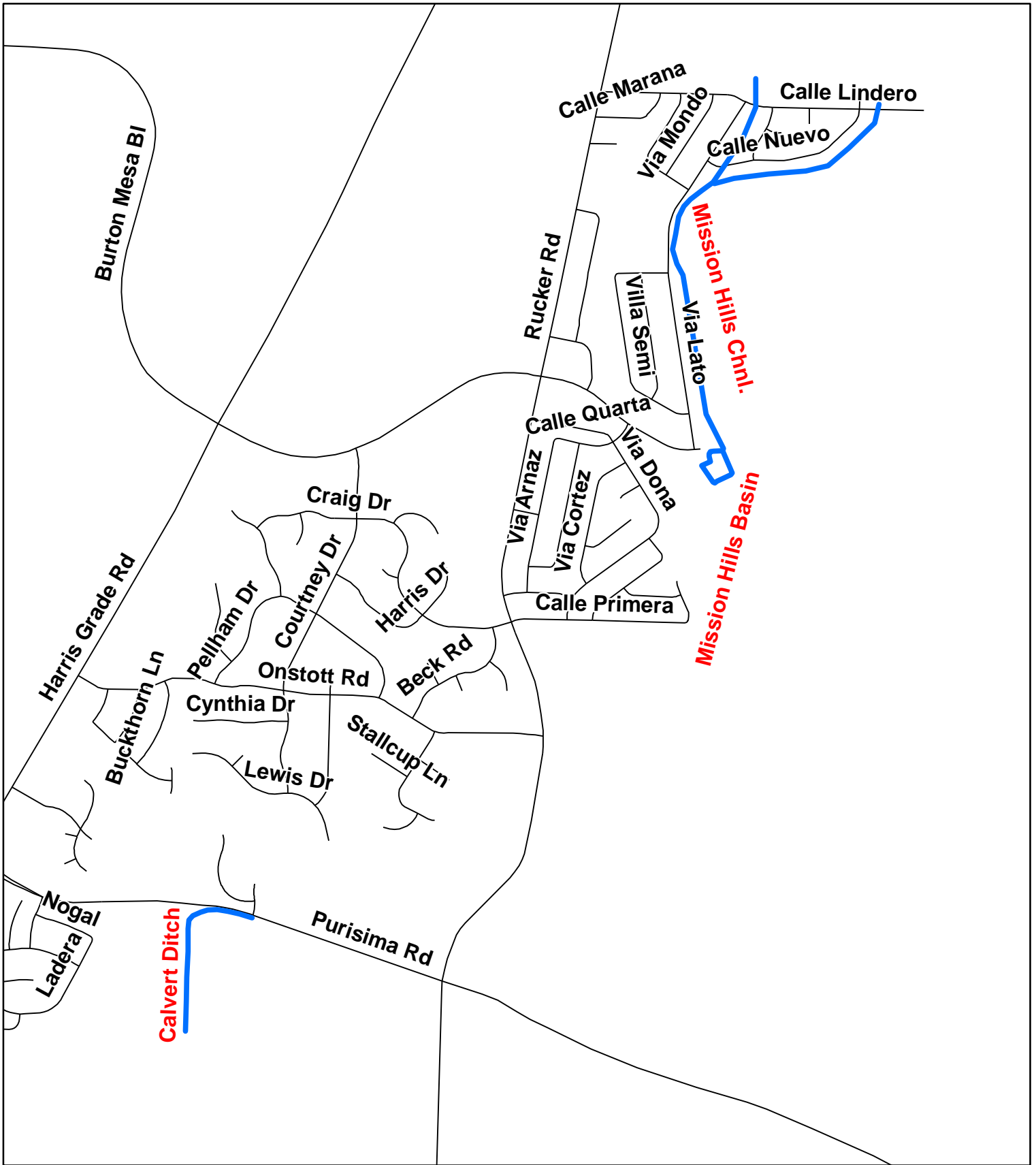
2,100 1,050 0 2,100
Feet

Coordinate System: State Plane, California Zone V NAD 1983

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Santa Barbara County, California

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Mission Hills Channel Mission Hills Basin Calvert Ditch



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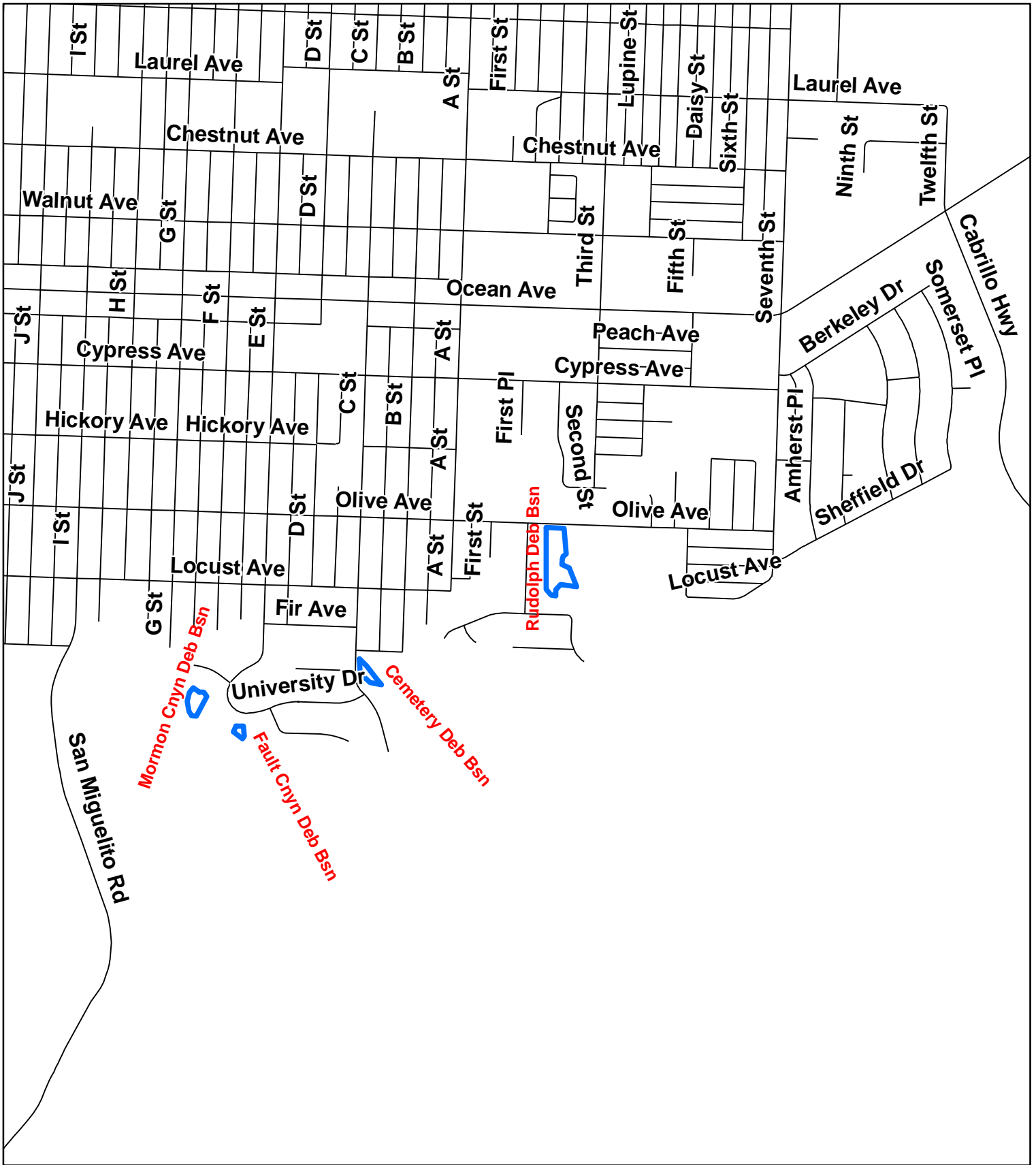
1,200 600 0 Feet 1,200

Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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



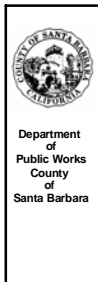
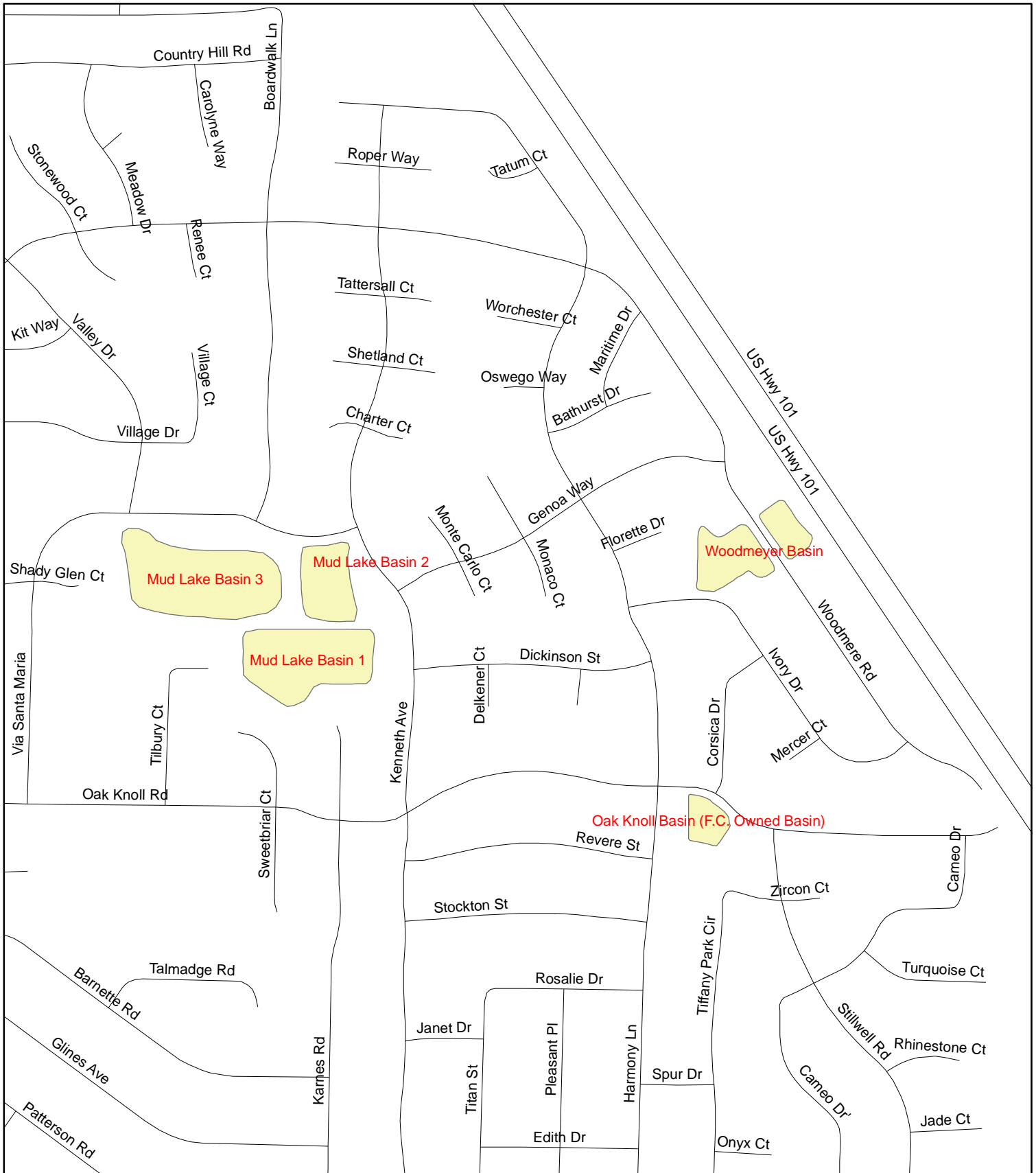
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950 475 0 95
 Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

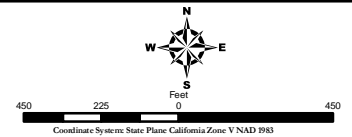
Santa Barbara County, California
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Mud Lake Basins 1,2,3 Woodmeyer Basin

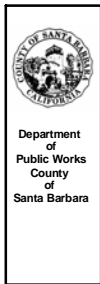
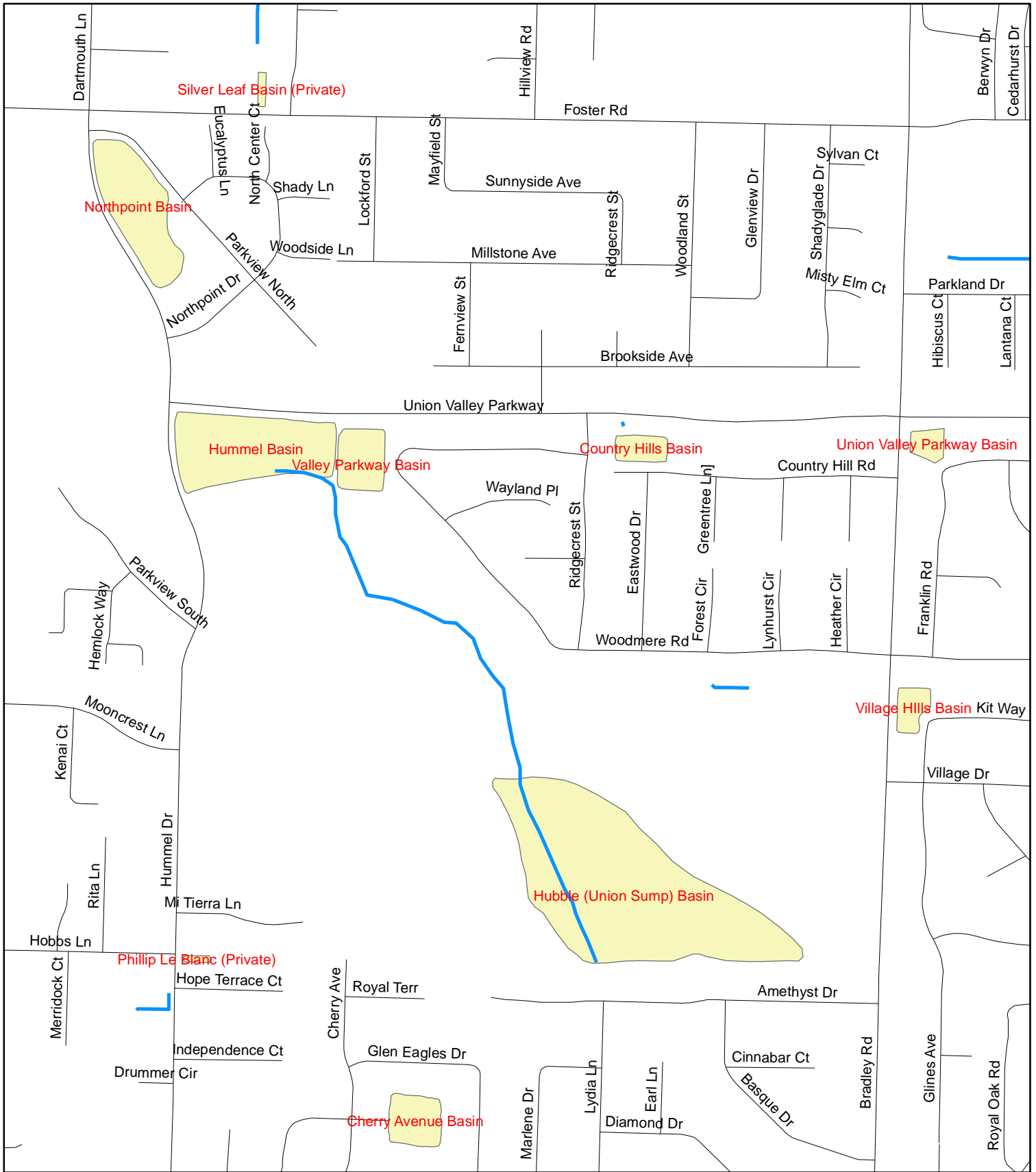


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Annual Routine Maintenance Plan

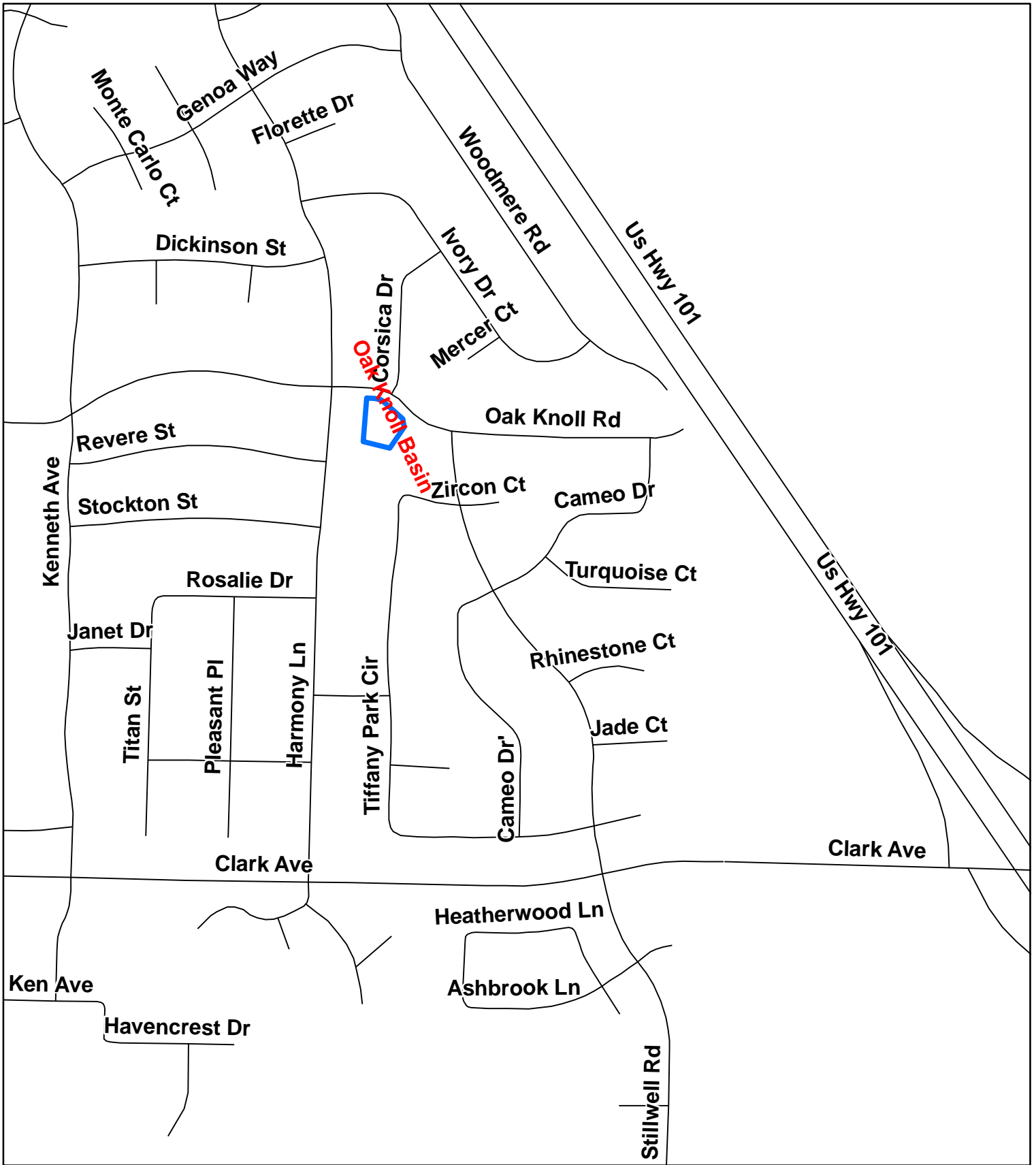
Santa Barbara County, California
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Northpointe Basin
Hummel Basin
Valley Parkway Basin
Country Hills Basin
Union Valley Parkway Basin
Village Hills Basin
Hubble Basin
Cherry Avenue Basin

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Coordinate System: State Plane California Zone V NAD 1983
Annual Routine Maintenance Plan
 Santa Barbara County, California
 Prepared By:
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Oak Knoll Basin



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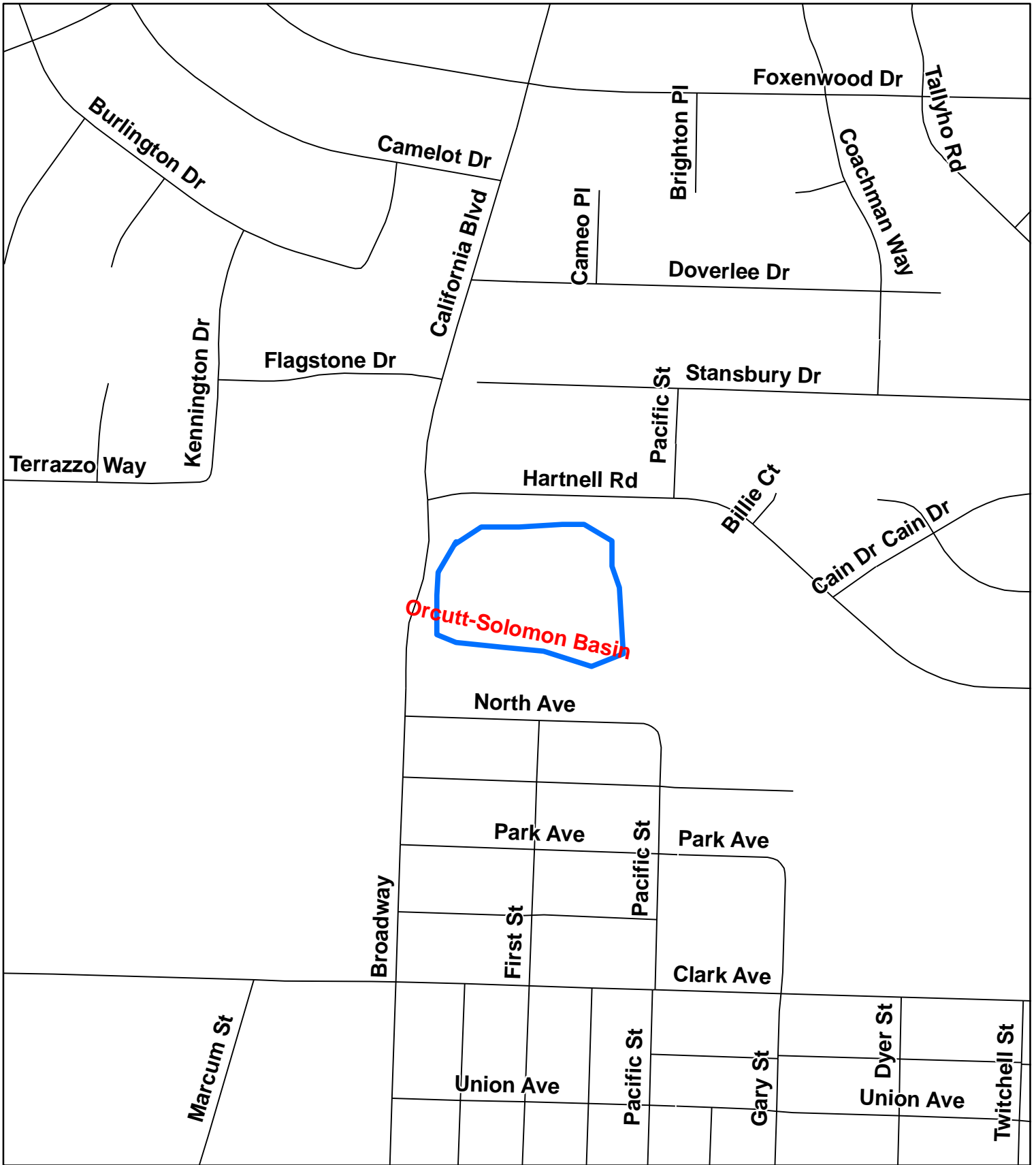
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Feet

Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

Prepared By:
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Orcutt-Solomon Basin



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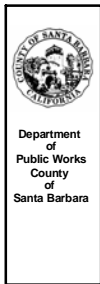
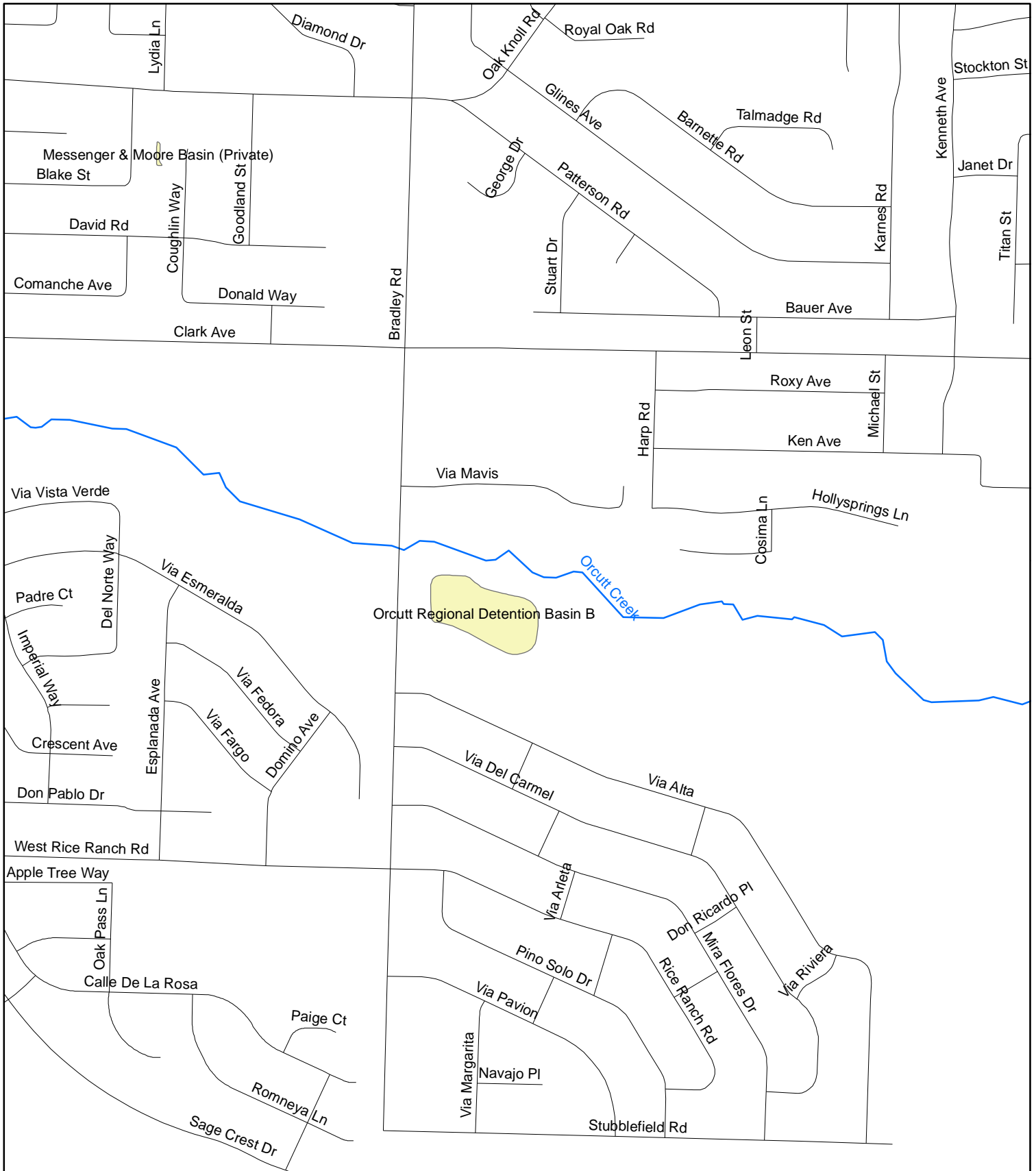


325 162.5 0 325
Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

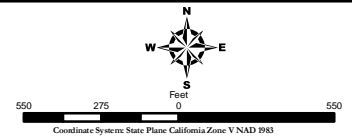
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Orcutt Regional Detention Basin B

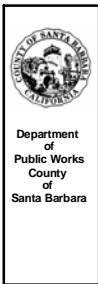


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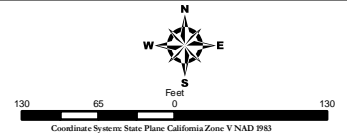
Santa Barbara County, California
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Patterson Rd. Ditch

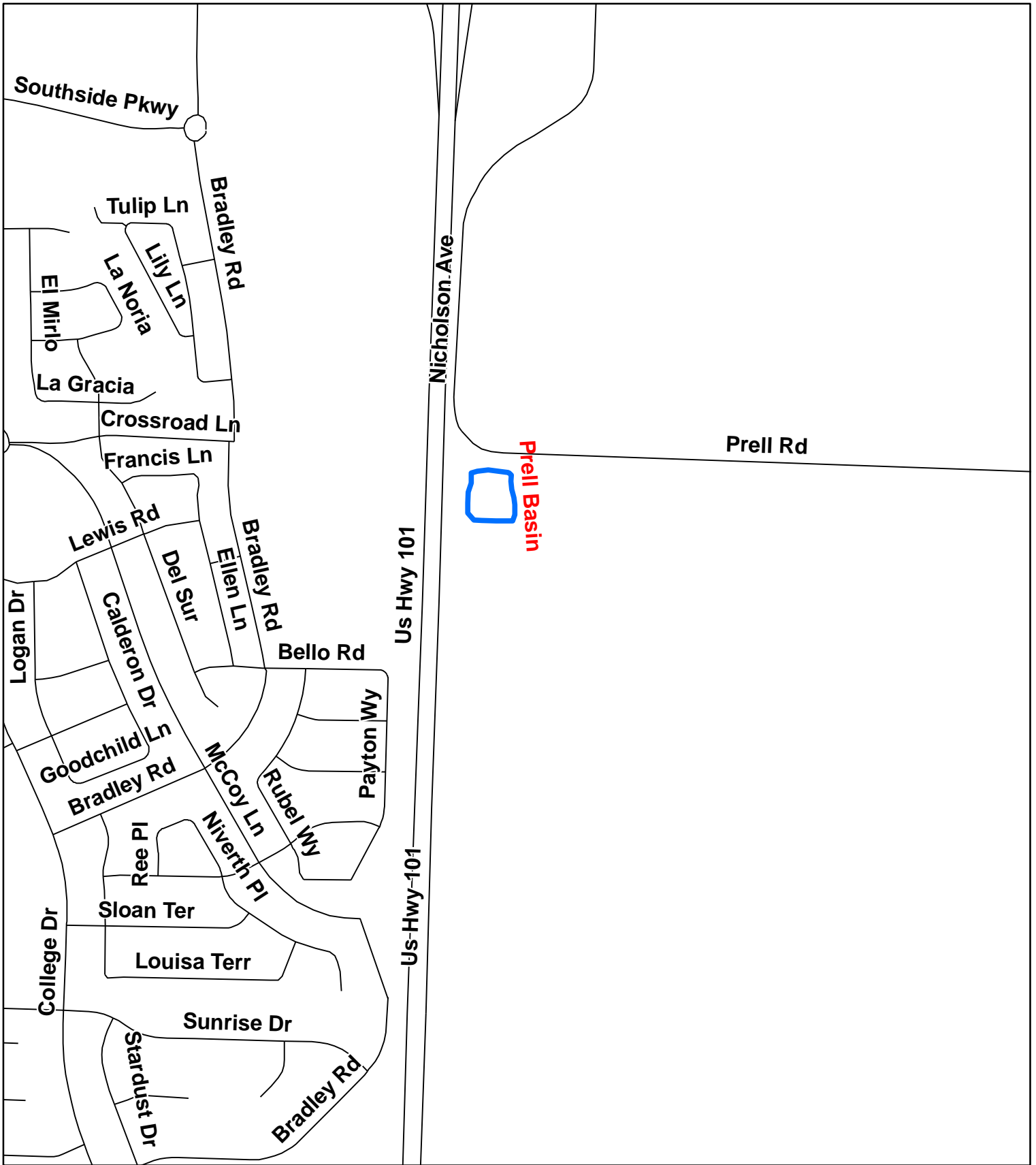


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Prell Basin



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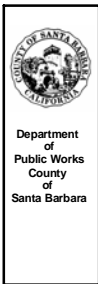
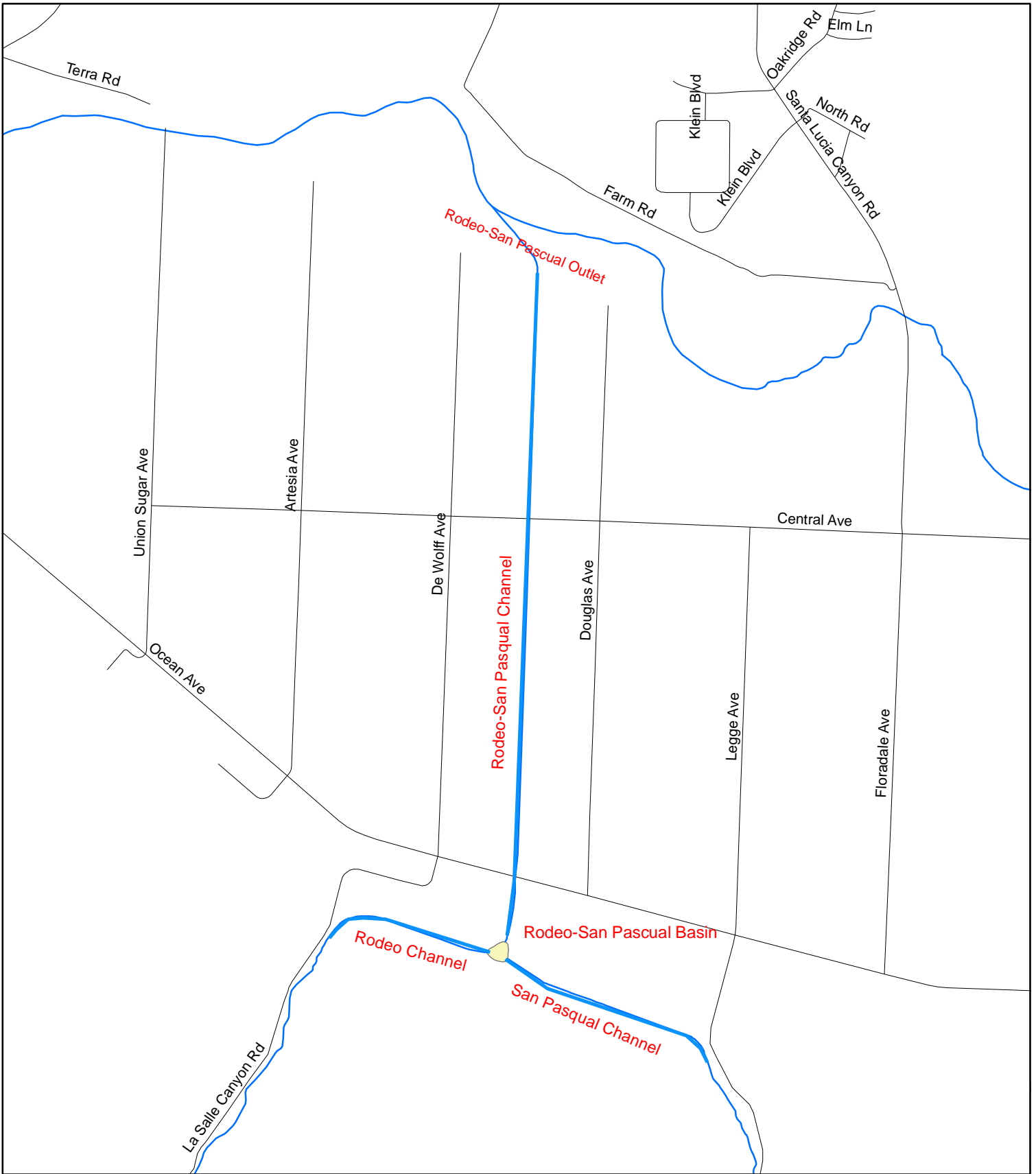
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Coordinate System: State Plane, California Zone V NAD 1983


Annual Routine Maintenance Plan

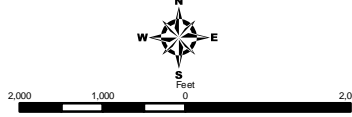
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Rodeo Channel
San Pasqual Channel
Rodeo-San Pascual Basin
Rodeo-San Pascual Channel
Rodeo-San Pascual Outlet


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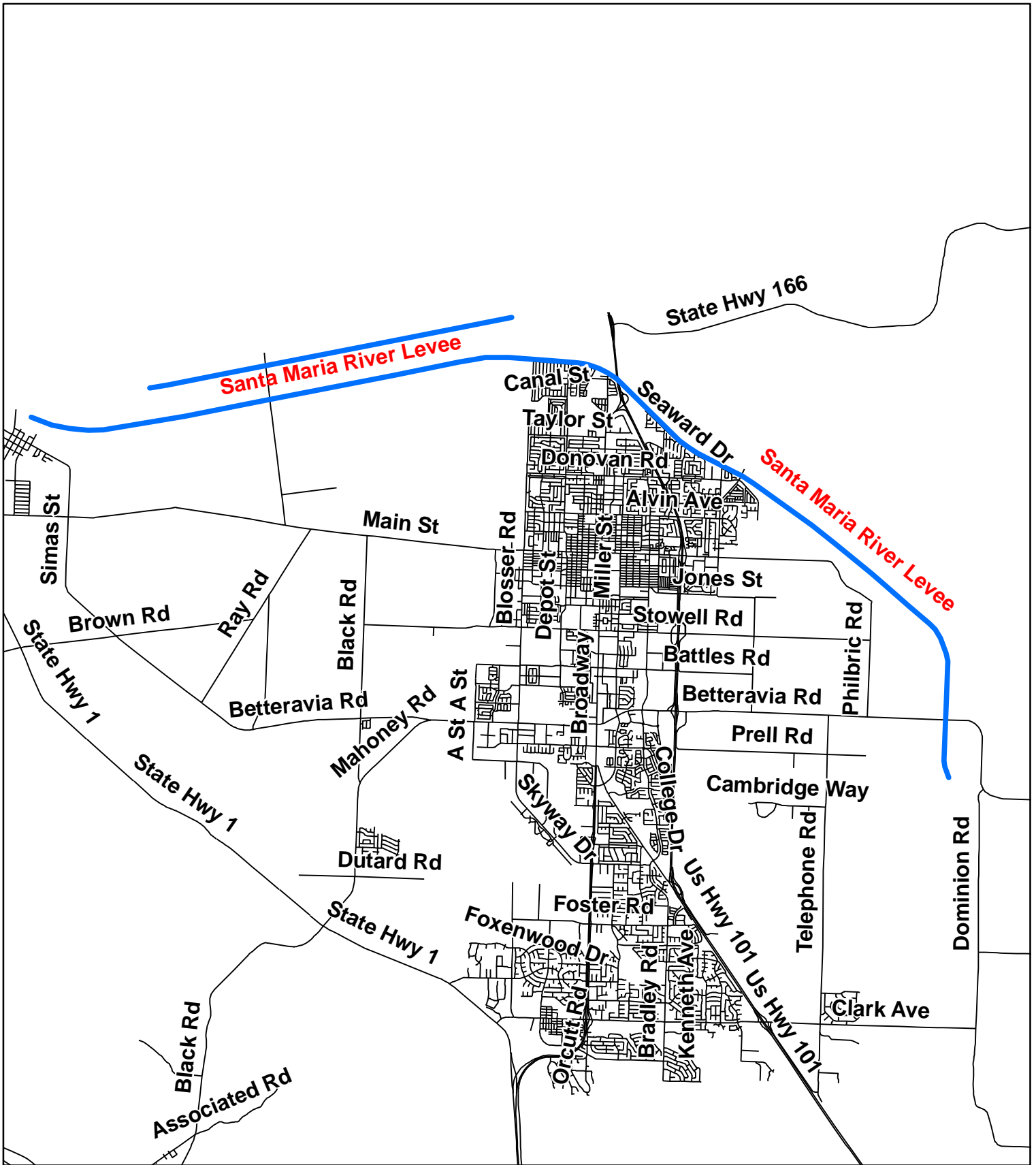


Coordinate System: State Plane California Zone V NAD 1983

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7,300 3,650 0 7,300
Feet

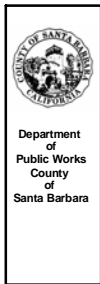
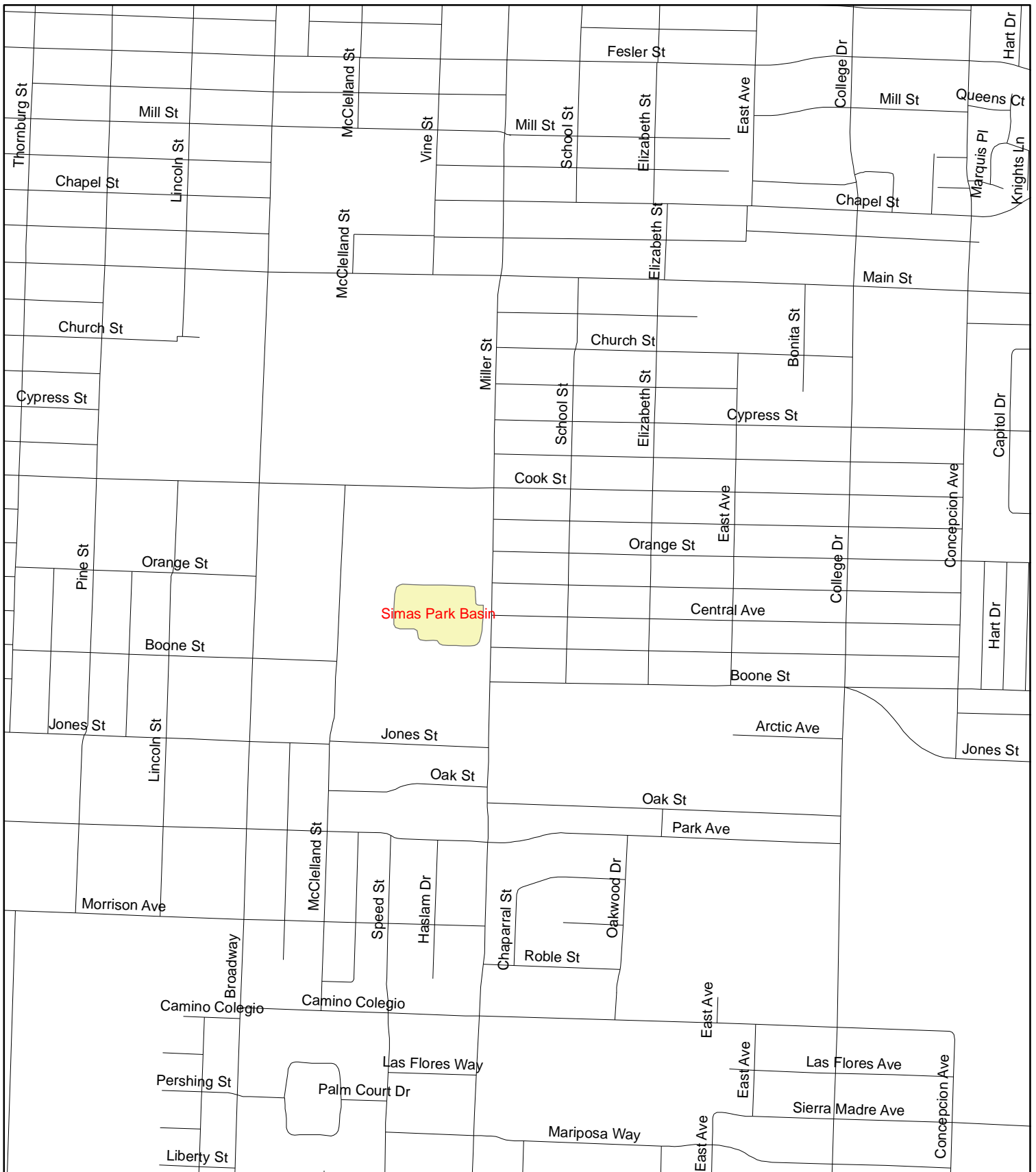
Coordinate System: State Plane California Zone V NAD 1983

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Santa Maria River Levee

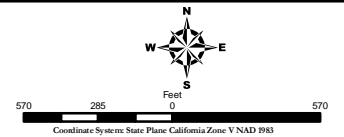


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Simas Park Basin

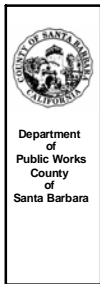


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Annual Routine Maintenance Plan

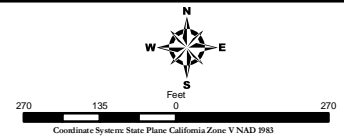
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Sonya St. Ditch

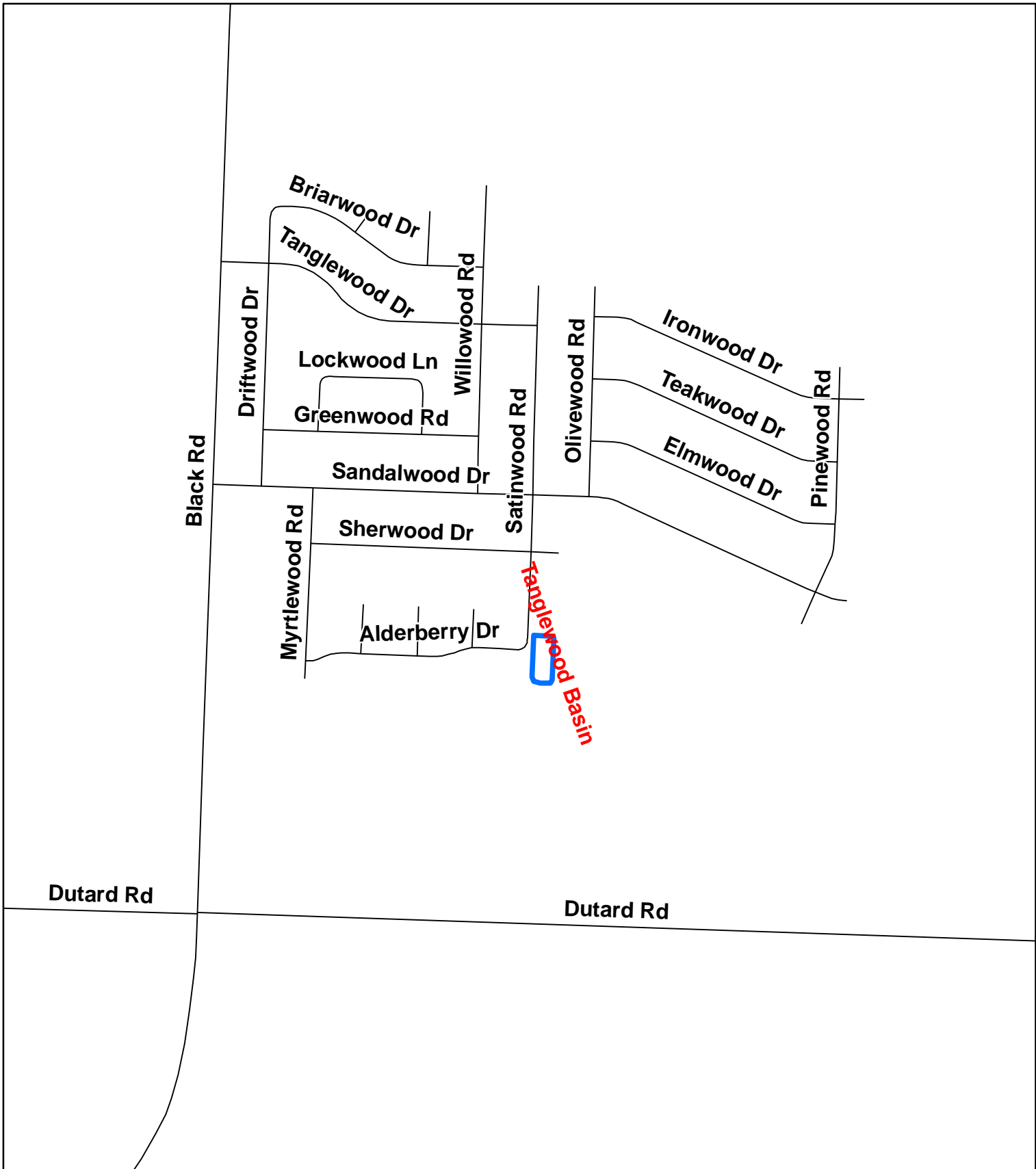


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Tanglewood Basin



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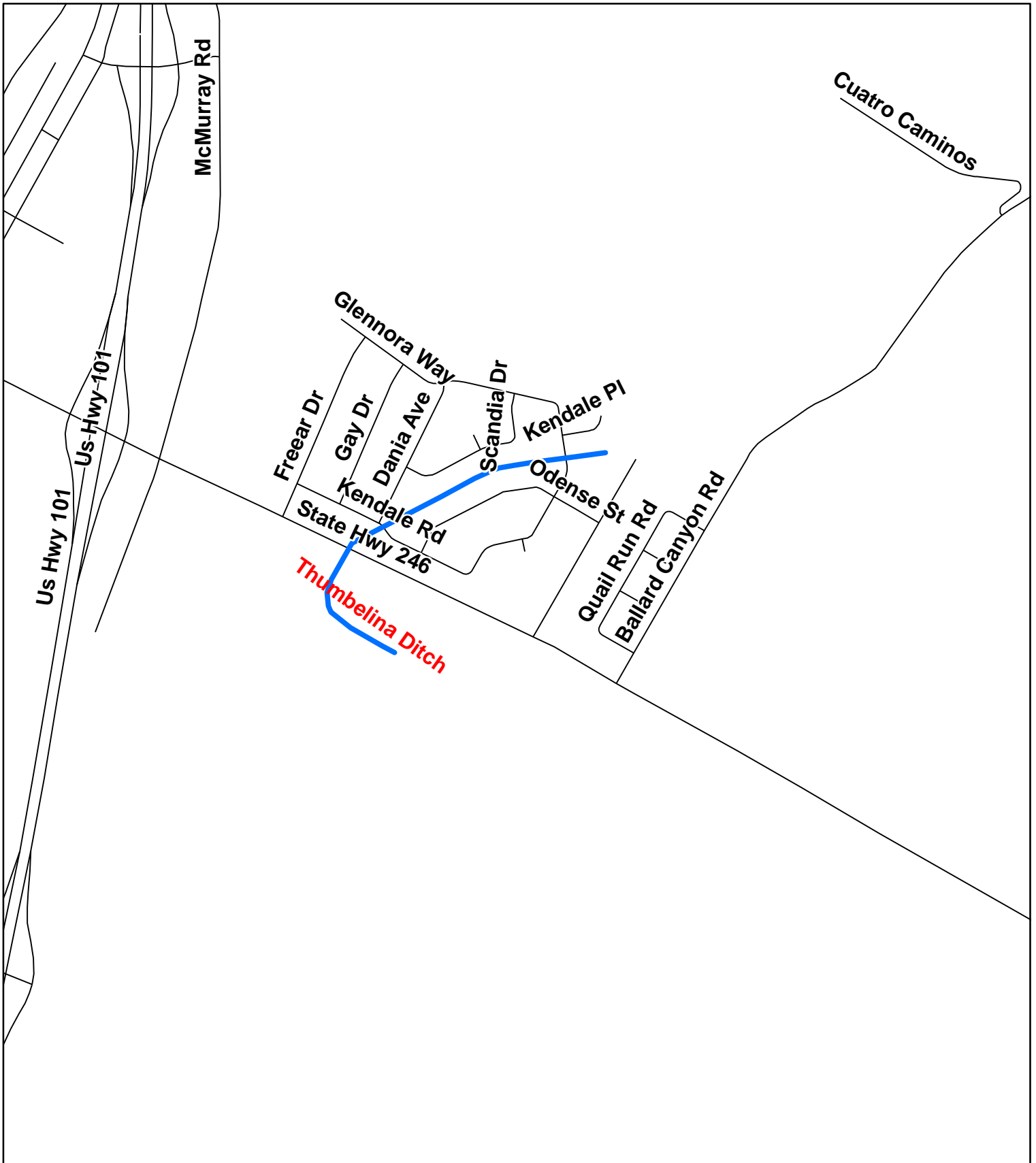
510 255 0 510
Feet

Coordinate System: State Plane, California Zone V NAD 1983

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Thumbelina Ditch



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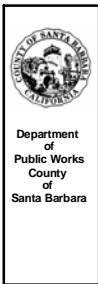
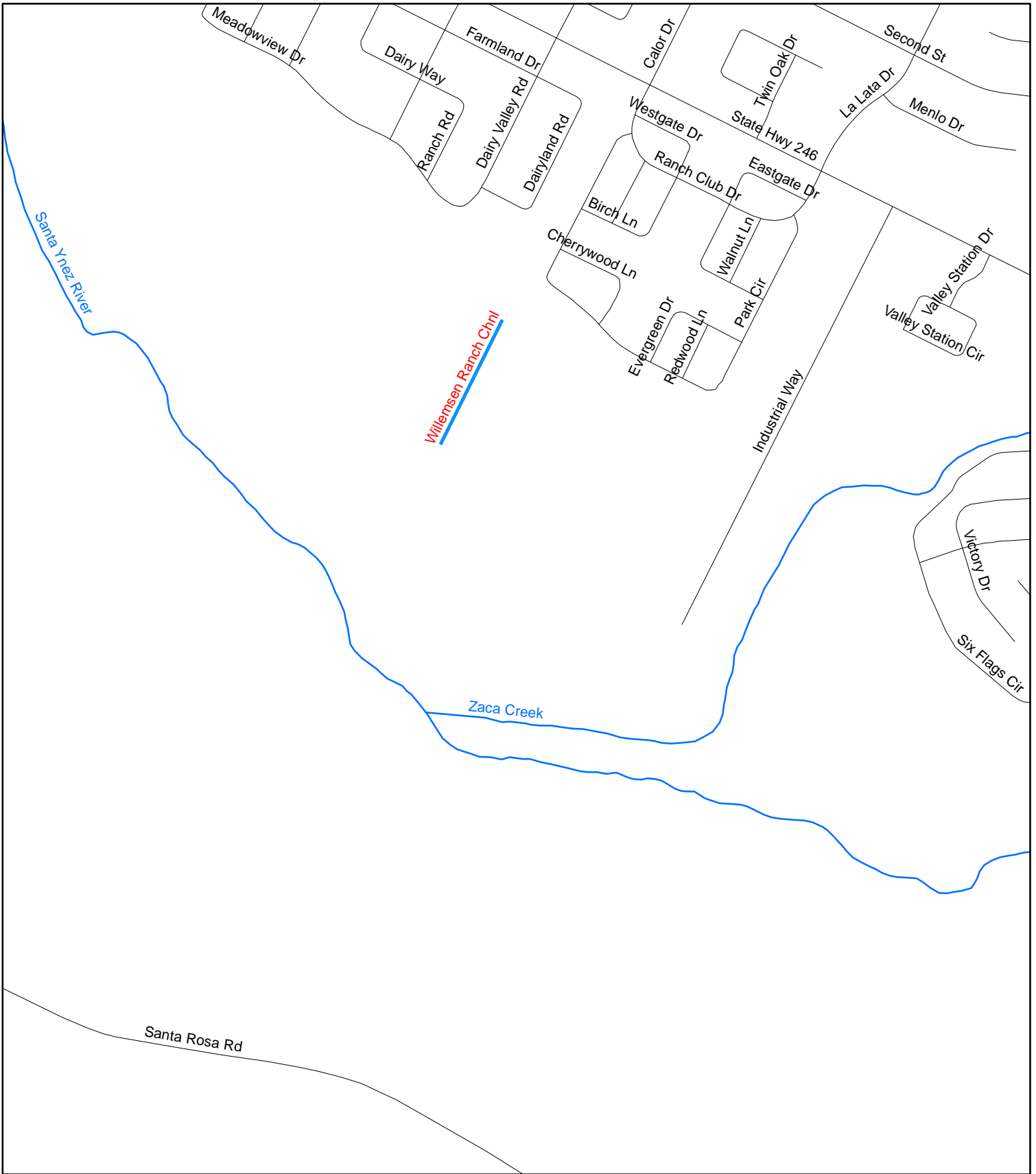
680 340 0 680
Feet

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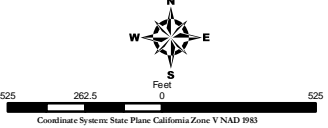


Willemesen Ranch Channel



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Page 37



Coordinate System: State Plane California Zone V NAD 983

Annual Routine Maintenance Plan

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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.

The District will conduct herbicide application in the facilities listed below beginning May 1st, and desilting and mowing of non-native vegetation beginning June 1st following that Annual Plan's approval. If the project does not specifically state that desilting will occur, then that facility will not be desilted under this year's Annual Plan.

All South Coast Facilities have a potential area of impact of less than 100 square feet from spot spraying.

Concrete Channels:

1. **Arroyo Burro Channel:** From the confluence with San Roque Creek downstream to Calle Real Street, approximately 166 feet. Sediment is removed approximately every 5 years. 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 downstream to Modoc Road, a distance of 500 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 3.
4. **Derbiano Drain:** From the confluence with Hospital Creek upstream 1000'. This concrete channel consists of 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. **Encina Drain:** From Cathedral Oaks Road to Berkeley Road, a distance of 371 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. The channel is desilted every 3 to 5 years. Refer to Page 6.
7. **Franklin Channel:** From upstream of Casitas Pass Road downstream to the Carpinteria Salt Marsh, a distance of 2.2 miles. Every 3 to 5 years sediment is removed from the channel between Carp Ave and the salt marsh with a loader so

sediment does not accumulate. Approximately 1,000 cy of sediment will be removed from the channel. Refer to Page 7.

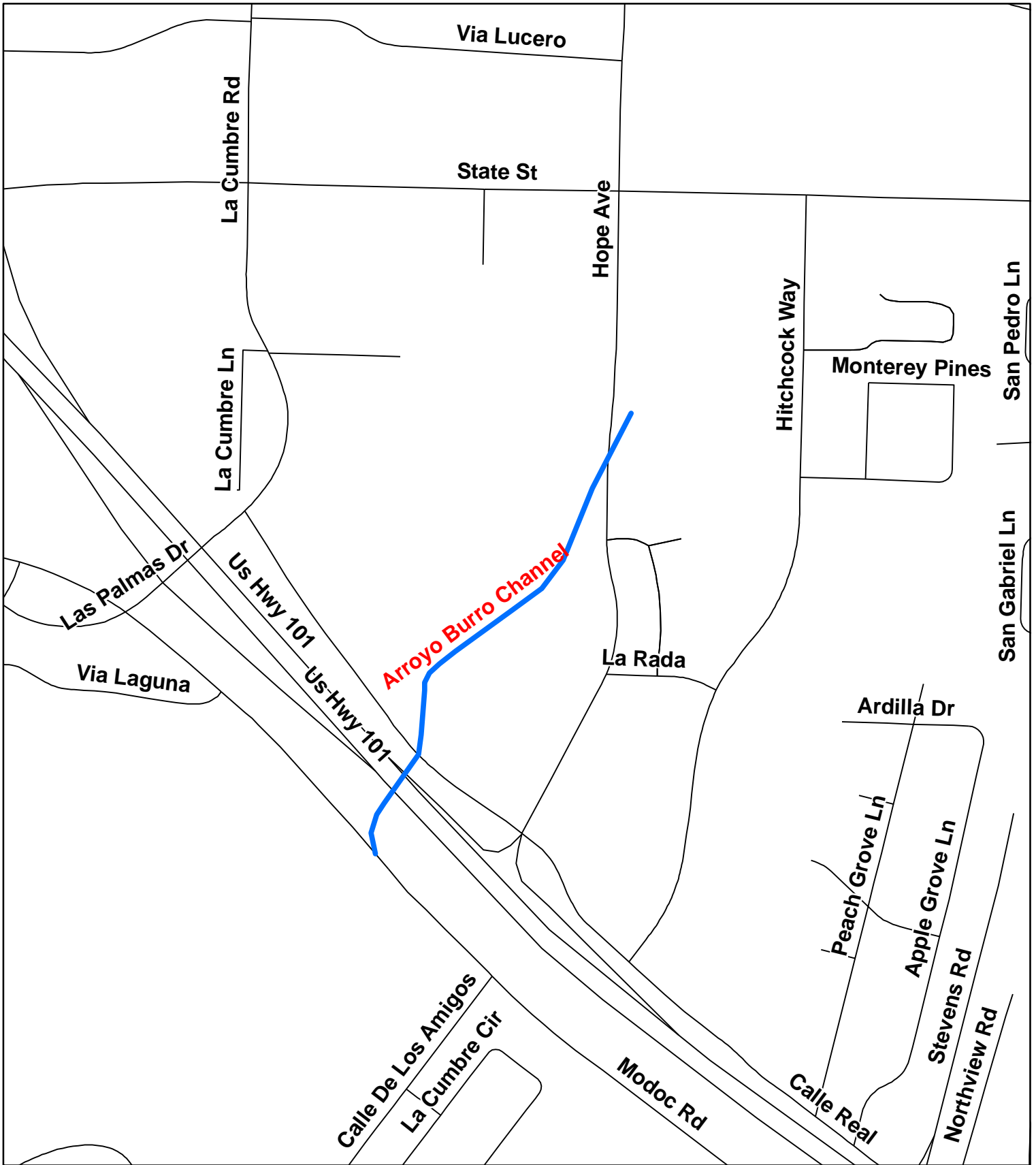
8. **Fremont Channel:** From Queen Anne Road downstream 125 feet. Every 3-5 years, sediment is removed from the channel. The bottom of the channel is spot sprayed along with graffiti removal on an annual basis. Refer to Page 9.
9. **High School Drain:** On the east side of Carpinteria High School from 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 7.
10. **Hog Canyon Channel:** From the confluence with Carpinteria Creek upstream 500'. Every 5 to 7 years, sediment is removed from the channel. Refer to Page 10.
11. **Hospital Channel:** From Hollister Avenue downstream to the confluence with Atascadero Creek, a distance of 2,060'. 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.
12. **Las Positas Channel:** From Veronica Springs Road upstream 1000'. 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. Refer to Page 12.
13. **Los Carneros Channel:** From Los Carneros Road downstream to Hollister Avenue, a distance of 227'. 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 13.
14. **Mission Channel:** From Los Olives to Pedregosa St and from Valerio to Canon Perdido, a total distance of 5,641'. Garbage or debris, along with graffiti removal is conducted on a yearly basis. Refer to Page 14.
15. **Montecito Channel (Casa Dorinda Channel):** From Hot Springs Road downstream to the Montecito Debris Basin, a distance of 1000'. Every 3 to 5 years, sediment is removed from the channel. Approximately 10cy will be removed from the channel. Refer to Page 15.
16. **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. Approximately 5cy of material will be removed from the channel. Refer to Page 7.
17. **Patterson Drain:** This concrete swale runs parallel to Patterson Road for a distance of 150'. This channel is desilted every 3 to 5 years. Refer to page 17.
18. **Patterson Estates Drain:** Is the inlet to Patterson drain located at the upper end of Patterson Estates. The inlet is weeded and spot sprayed on an annual basis. Refer to page 17.

19. **Placencia Drain:** This is a drain pipe that drains water from the low lying Placencia St. neighborhood into San Pedro Creek. The District maintains the inlet free of sediment and debris on an annual basis. Refer to page 18.
20. **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. Refer to Page 13.
21. **Romero Channel:** From Fernald Point Road to the ocean, a distance of 600'. Every 3 to 5 years, sediment is removed from the channel. Refer to Page 19.
22. **San Jose Channel:** From Hollister Avenue downstream 4,000' to Goleta Slough. The District maintains the access road within the channel on the right side. The road is weeded and spot sprayed on an annual basis. The channel will be desilted as needed. Potential area if impact is less than 500 square feet for spot spraying. Refer to Page 22.
23. **San Pedro Channel:** Runs from Calle Real upstream 1600'. Vegetation that is overhanging or has fallen in the channel is removed and weep holes are spot sprayed. Refer to Page 20.
24. **Sandpiper Drain:** This channel is located on the west side of the Sandpiper trailer park for a distance of 200'. Debris and unwanted vegetation is removed on an annual basis. Maintenance will be scheduled for this year. Refer to Page 7.
25. **Santa Monica Channel:** This channel runs from the Santa Monica Debris basin downstream approximately 1.2 miles to Carpinteria Salt Marsh. Debris and unwanted vegetation is removed on an annual basis. Approximately 1000cy will be desilted this year. Refer to Page 7.
26. **Serenidad Drain:** From the confluence with Las Vegas Creek upstream 350'. Every 5 to 7 years, sediment is removed from the channel. Refer to Page 20.
27. **Shirrell Drain:** This is a concrete v-ditch that drains a portion of the housing track just west of Las Vegas Creek. Vegetation that is overhanging or has fallen in the channel is removed as needed. Refer to Page 21.
28. **Via Regina Ditch:** On the east side of the homes located on Via Regina, for a distance of 700'. Every 5 to 7 years, sediment is removed from the channel. Refer to Page 23.
29. **Westside Storm Drain:** The District maintains the outlet structure at the Boys and Girls club. This outlet requires removal of garbage and debris from outlet grate on an as needed basis. Refer to Page 24.

Basins:

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

2. **Franciscan Basin:** This sediment basin is at the upstream end of Franciscan Culvert 1360 Cravens Lane in Carpinteria. This basin requires desilting approximately every 5 years and occasional spot spraying for weeds or cattails. Refer to Page 7.
3. **Hog Canyon Basin:** This basin requires desilting approximately every 5 years. 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. Refer to Page 11.
4. **Hospital Basin:** Immediately north of Goleta Valley Little League fields on Hollister Avenue. This basin requires desilting approximately every 5 years. 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. Refer to Page 2.
5. **Kim's Basin:** Next to Kim's Market on Via Real in Carpinteria: This basin requires desilting approximately every 10 years and occasional spot spray of cattails (approximately 5 square feet of cattail removal). Refer to Page 7.
6. **Parma Basin:** Weedy vegetation is mowed annually within the basin it is also spot sprayed every other year if woody vegetation begins to colonize the basin. Refer to Page 16.



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Arroyo Burro Channel



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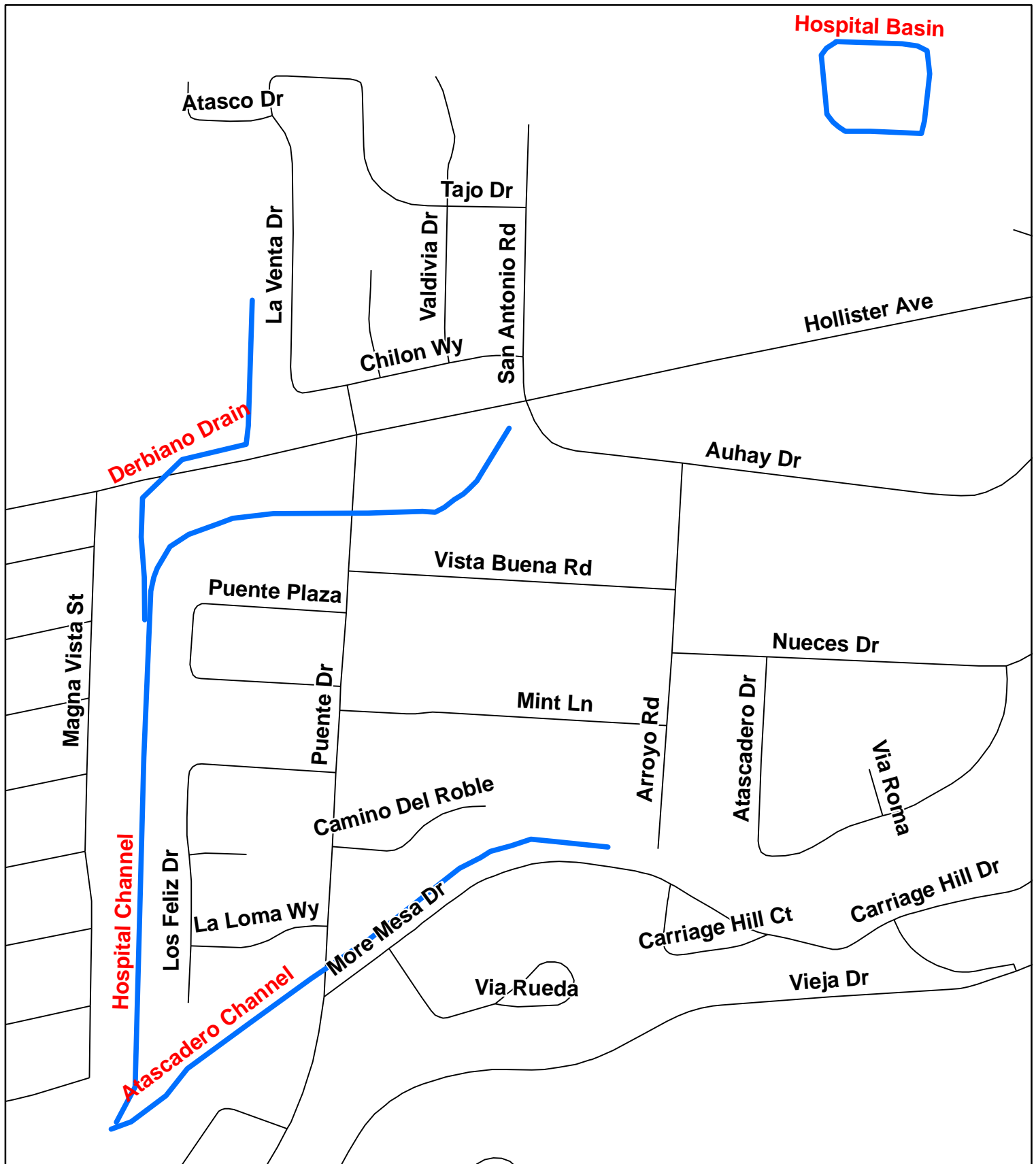


380 100 0 380
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Atascadero Channel Derbyano Drain Hospital Channel Hospital Basin



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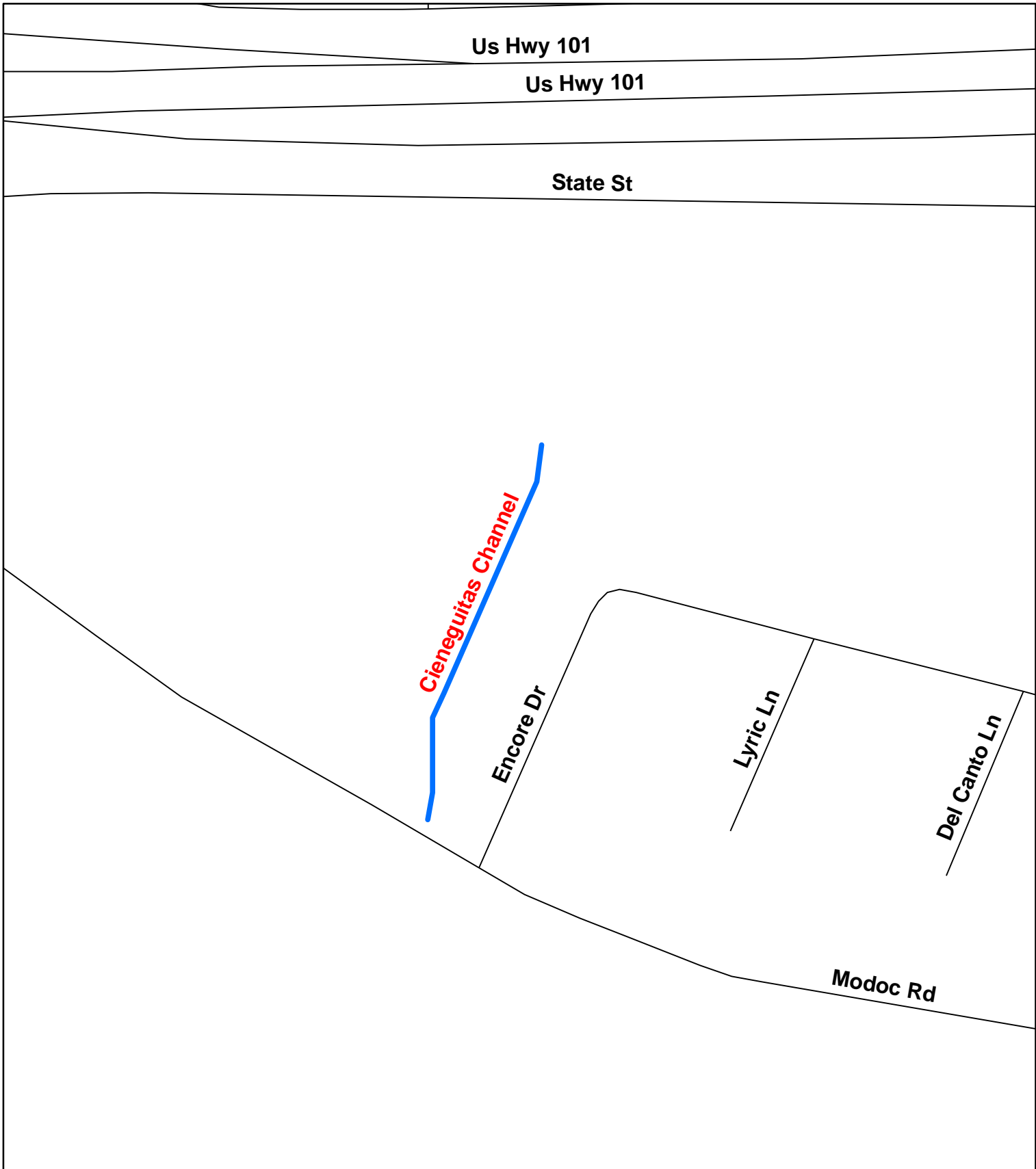
375 187.5 0 375
Feet

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Cieneguitas Channel



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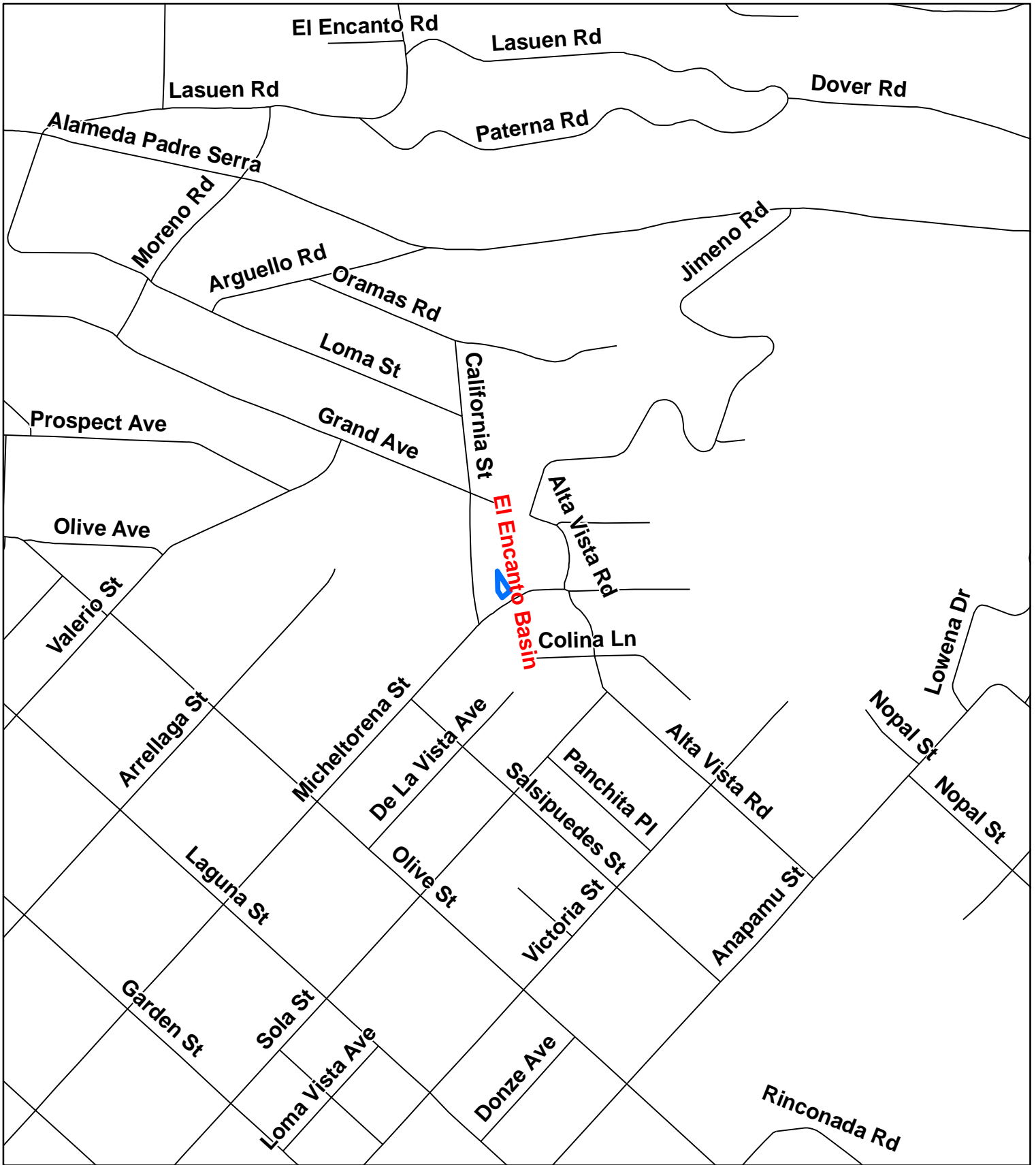
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El Encanto Basin



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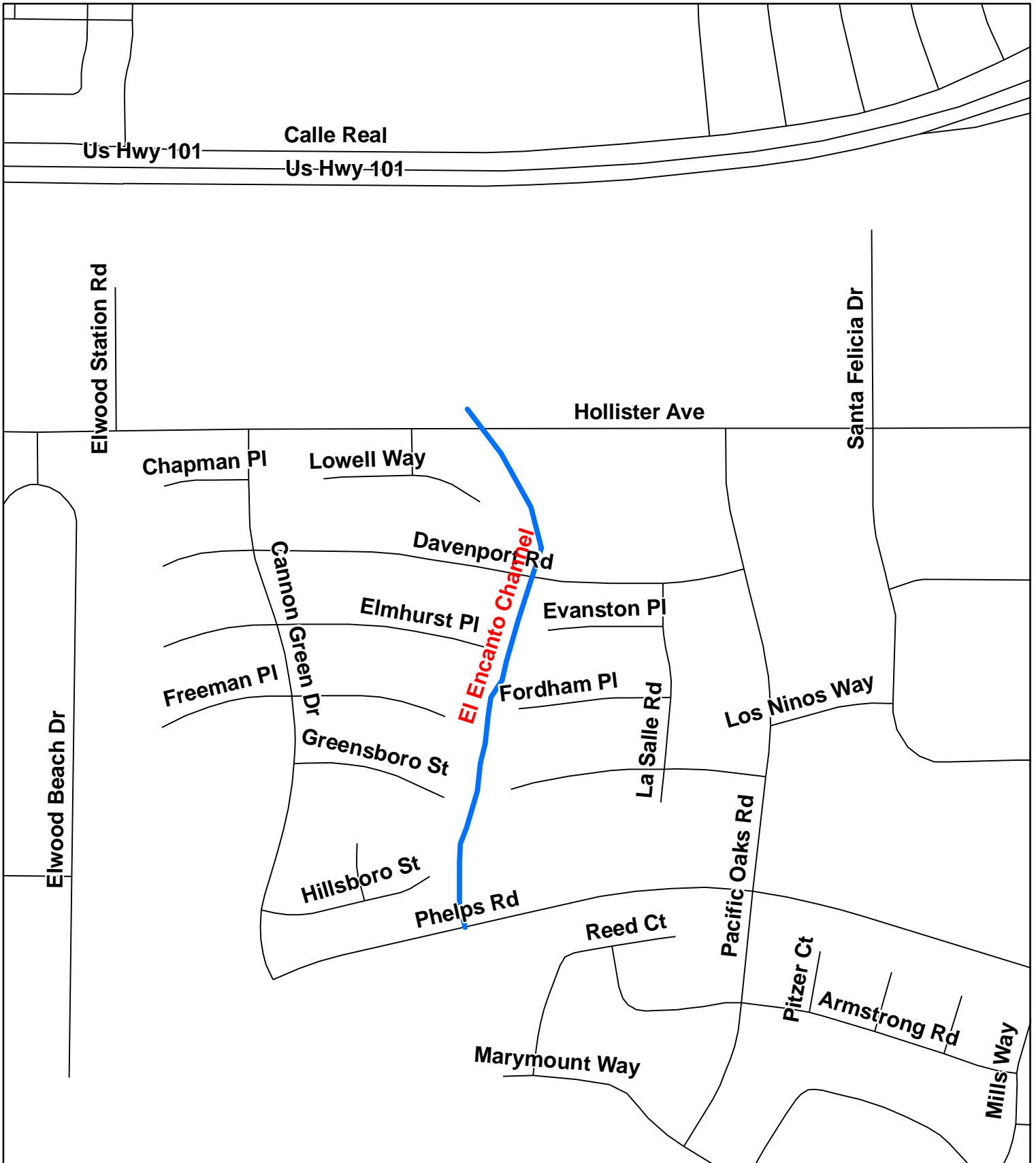
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El Encanto Channel



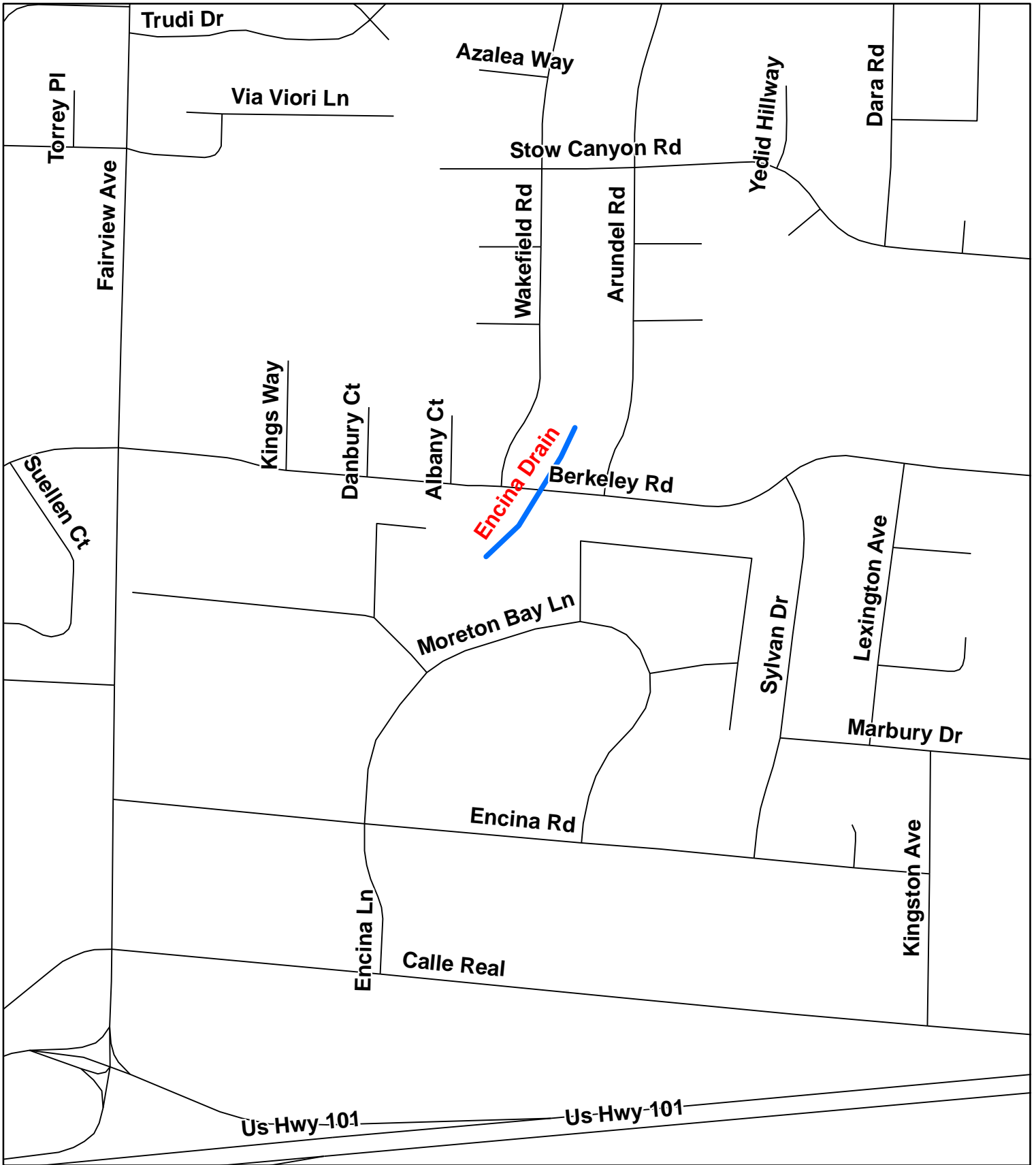
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Encina Drain



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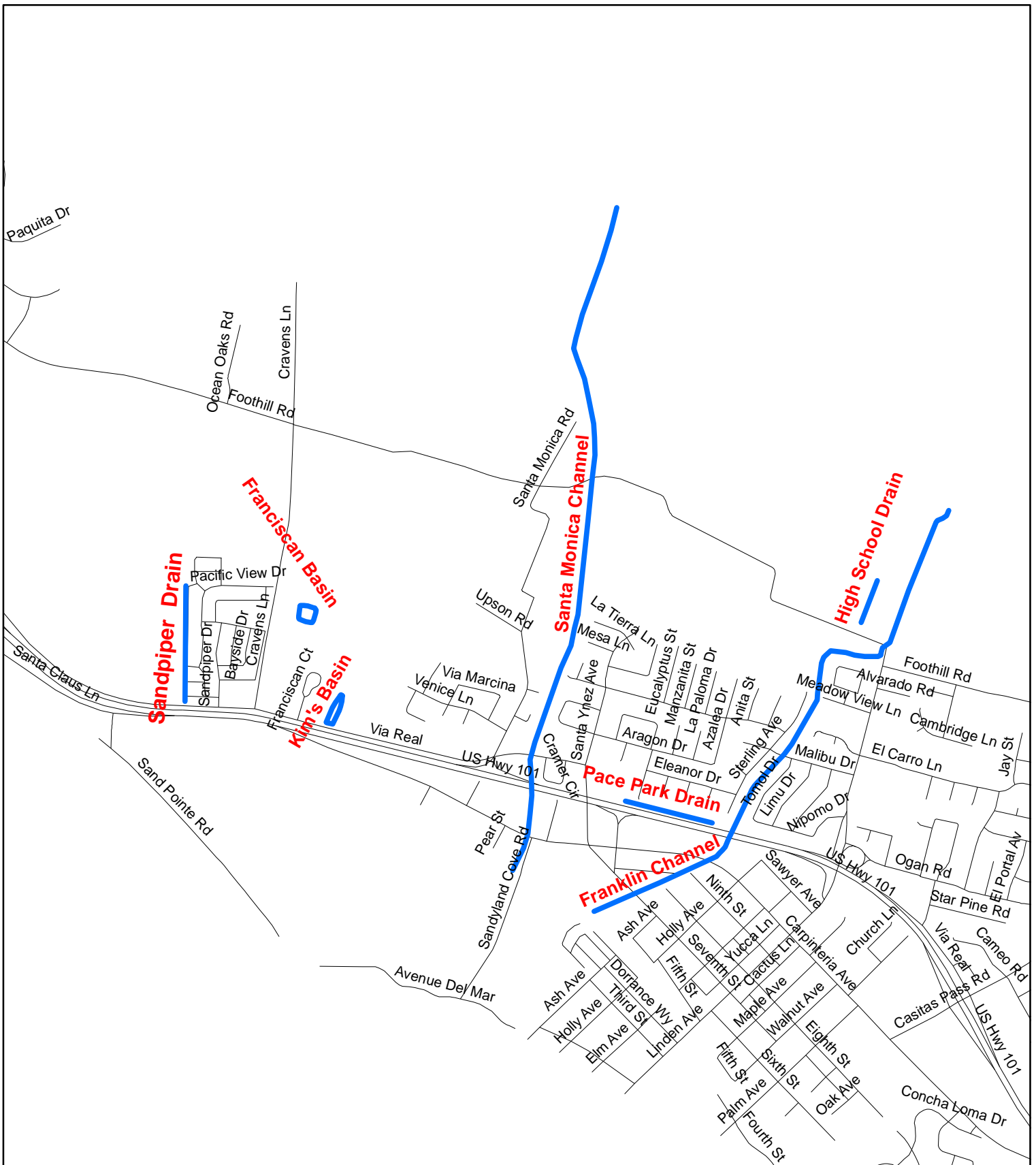
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Feet

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



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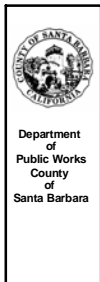
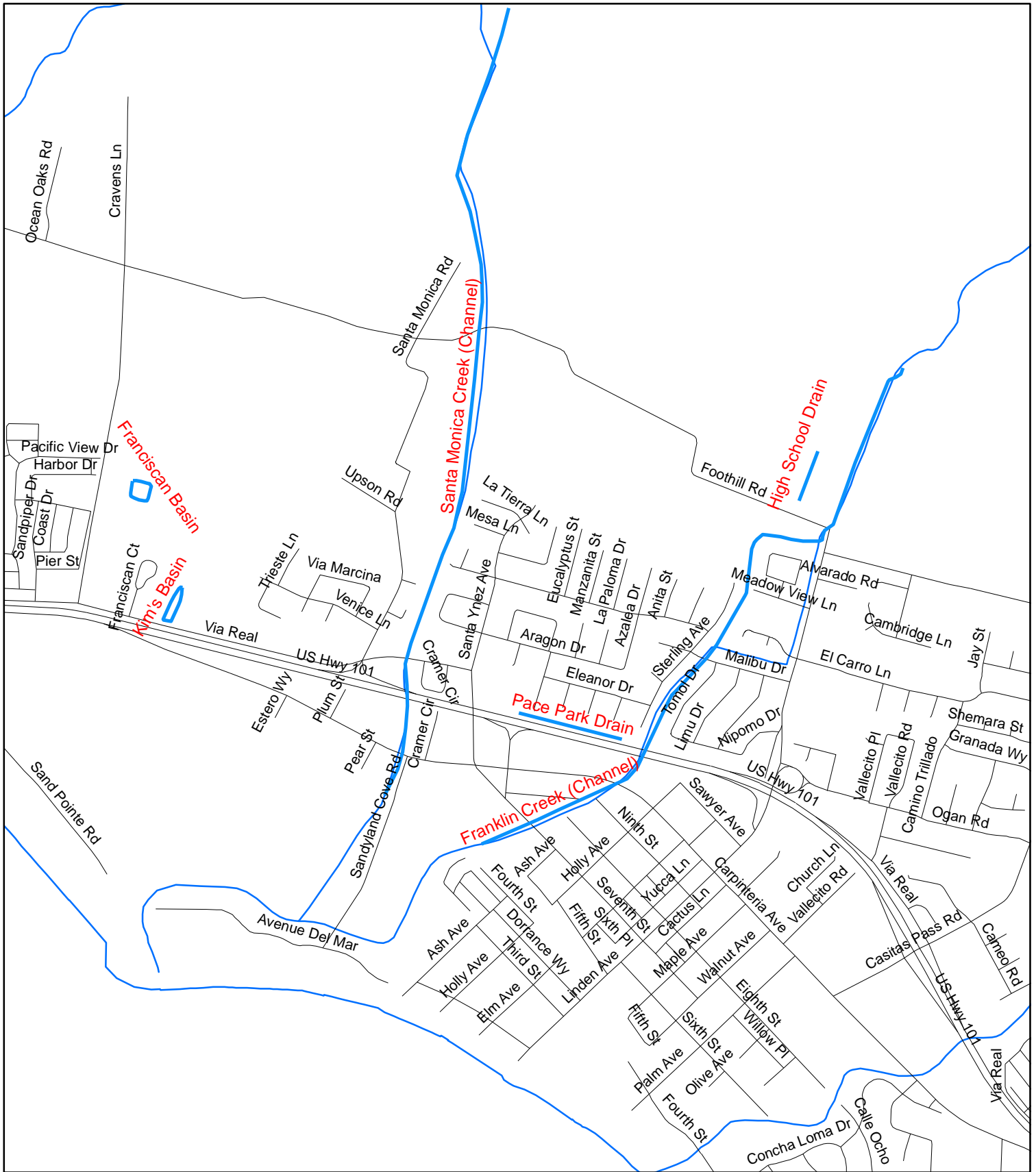


1,250 625 0 1,250
Coordinate System: State Plane, California Zone V NAD 983

Annual Routine Maintenance Plan
Fiscal Year 2011-2012

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.



**Franciscan Basin
Kim's Basin
Santa Monica Creek (Channel)
Franklin Creek (Channel)
High School Drain
Pace Park Drain**



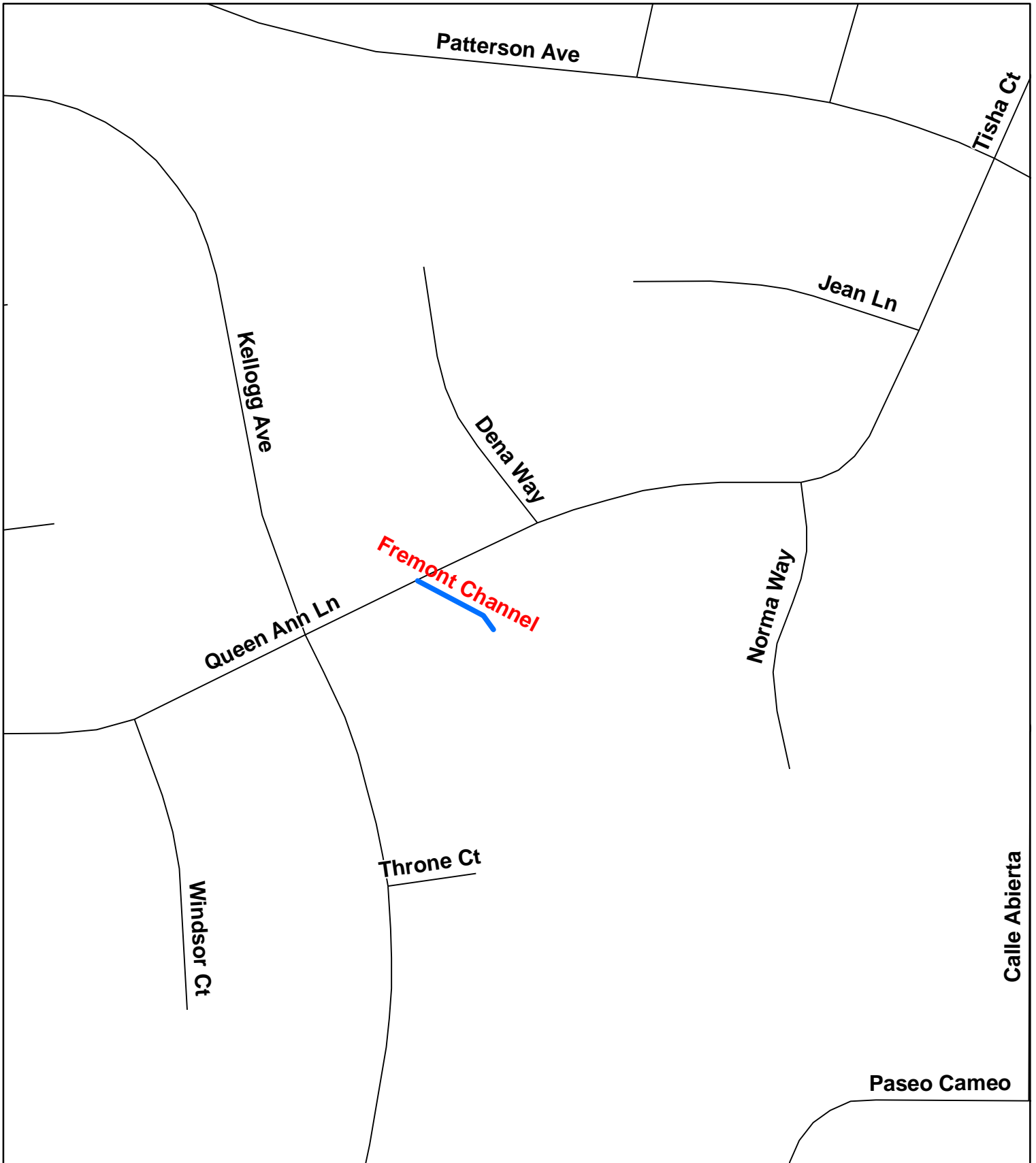
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Coordinate System: State Plane California Zone V NAD 1983

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Santa Barbara County, California

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Fremont Channel



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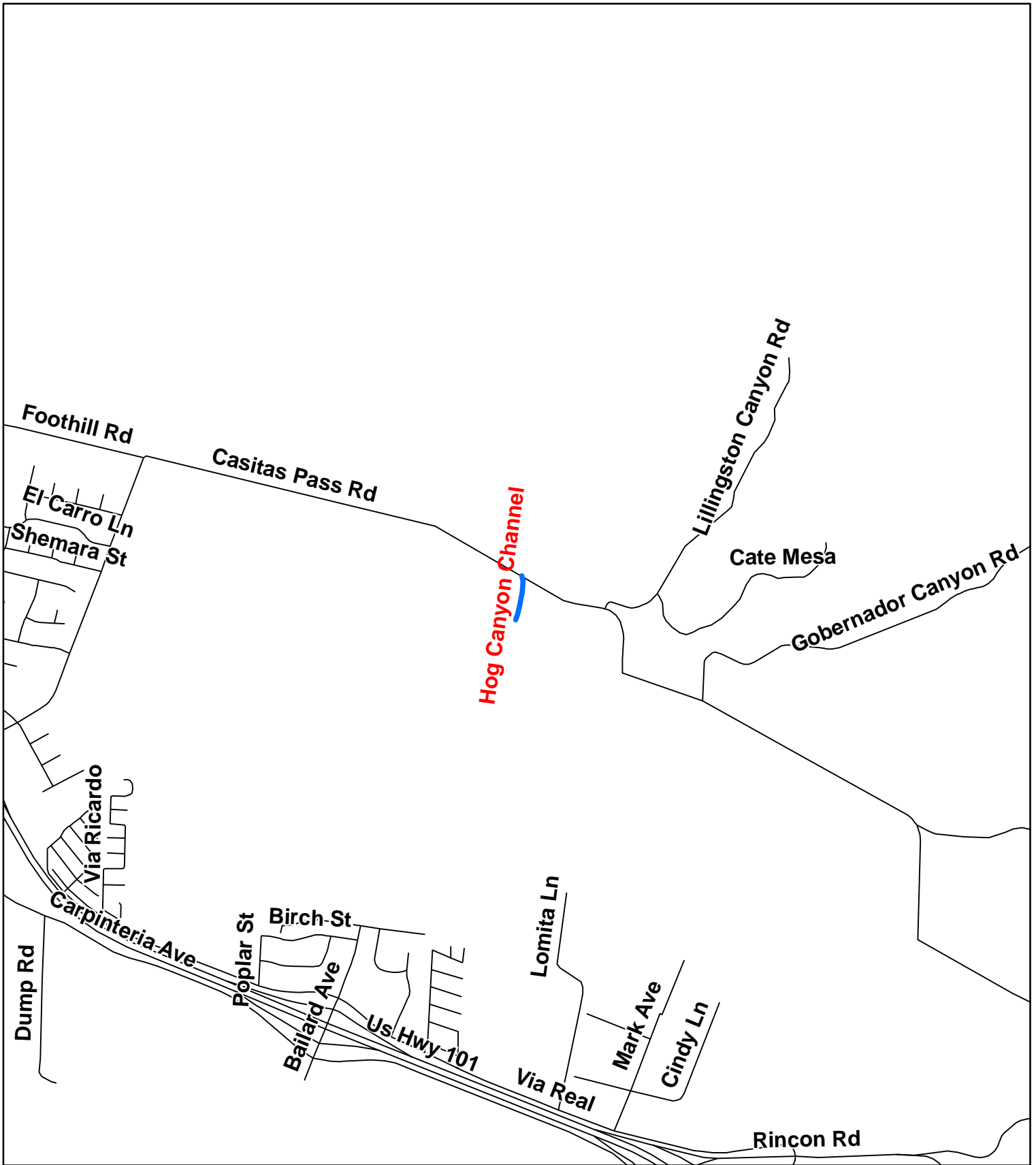


Coordinate System: State Plane - California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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Hog Canyon Channel



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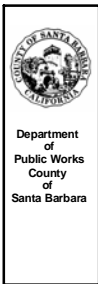
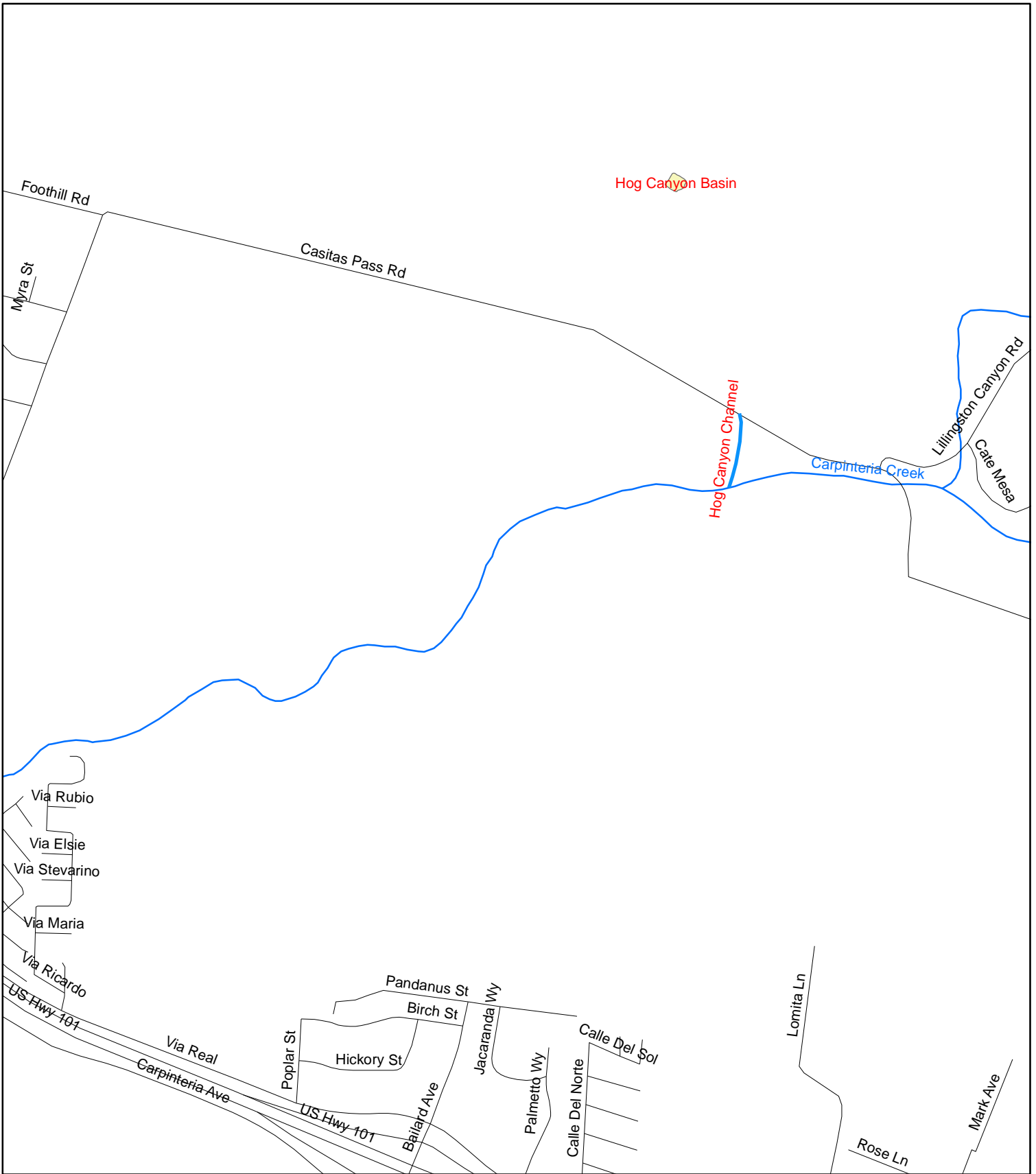
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Feet

Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

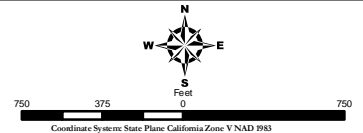
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Hog Canyon Channel Hog Canyon Basin



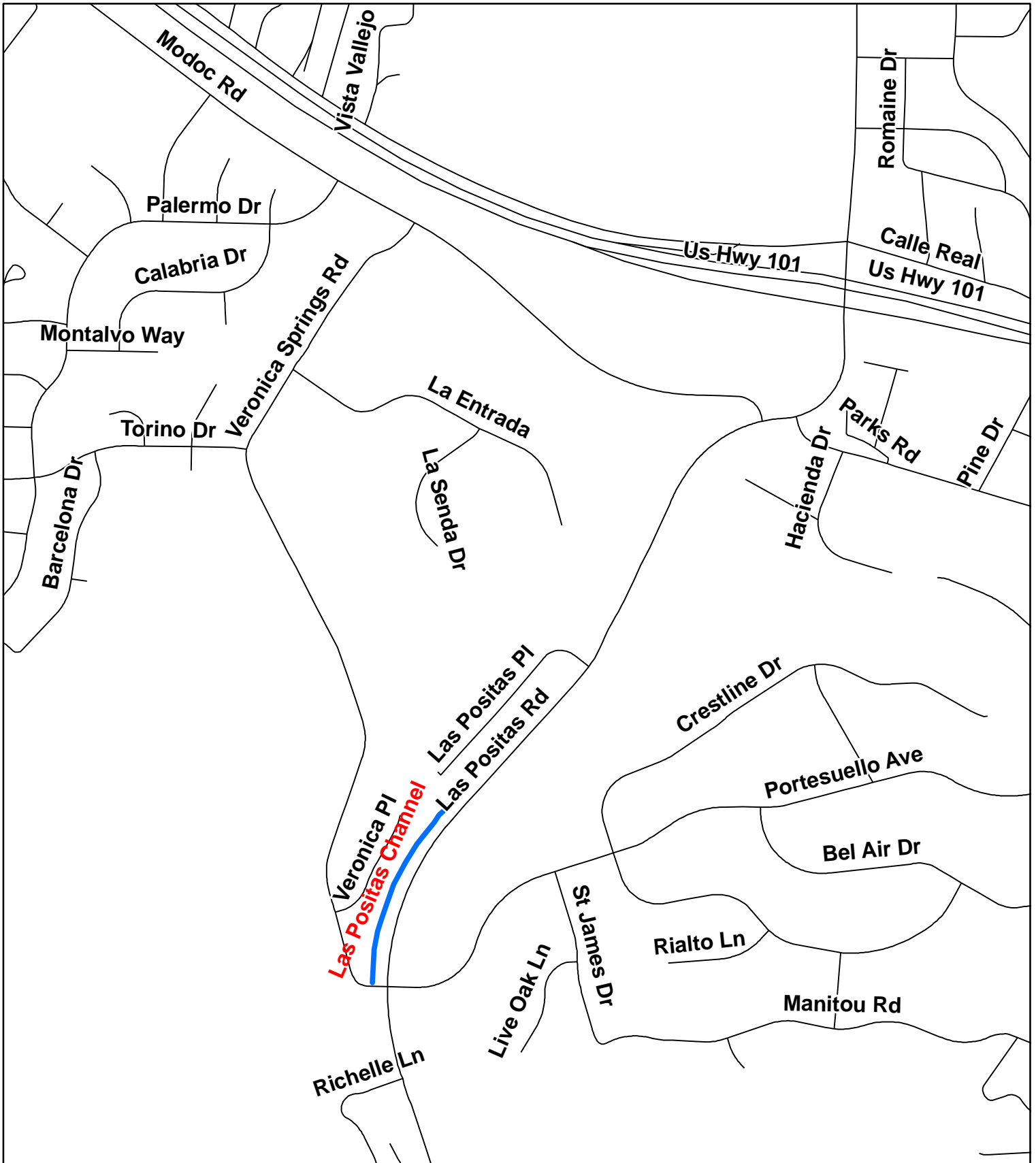
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Annual Routine Maintenance Plan

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Las Positas Channel



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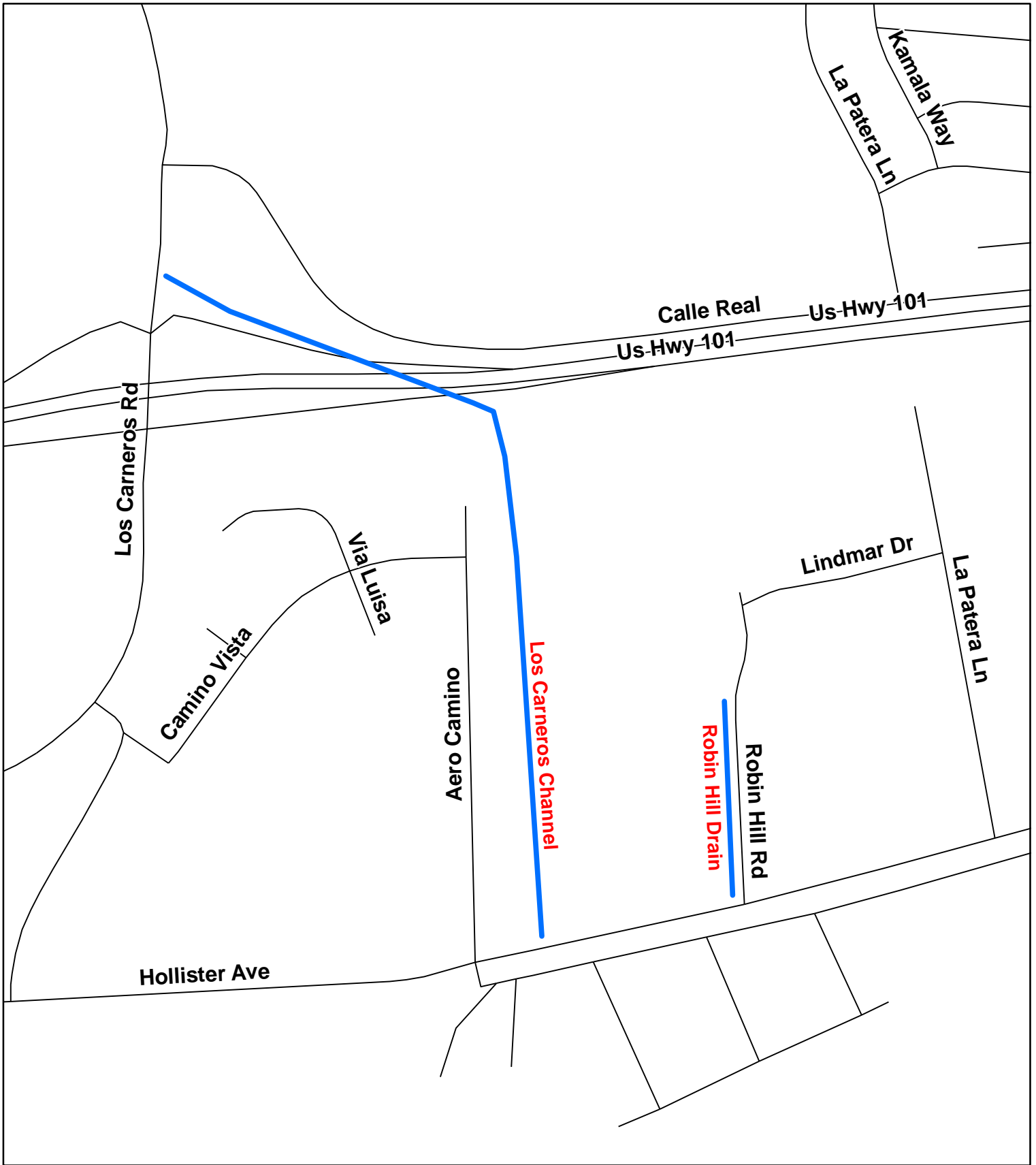
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Feet

Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

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Los Carneros Channel Robin Hill Drain



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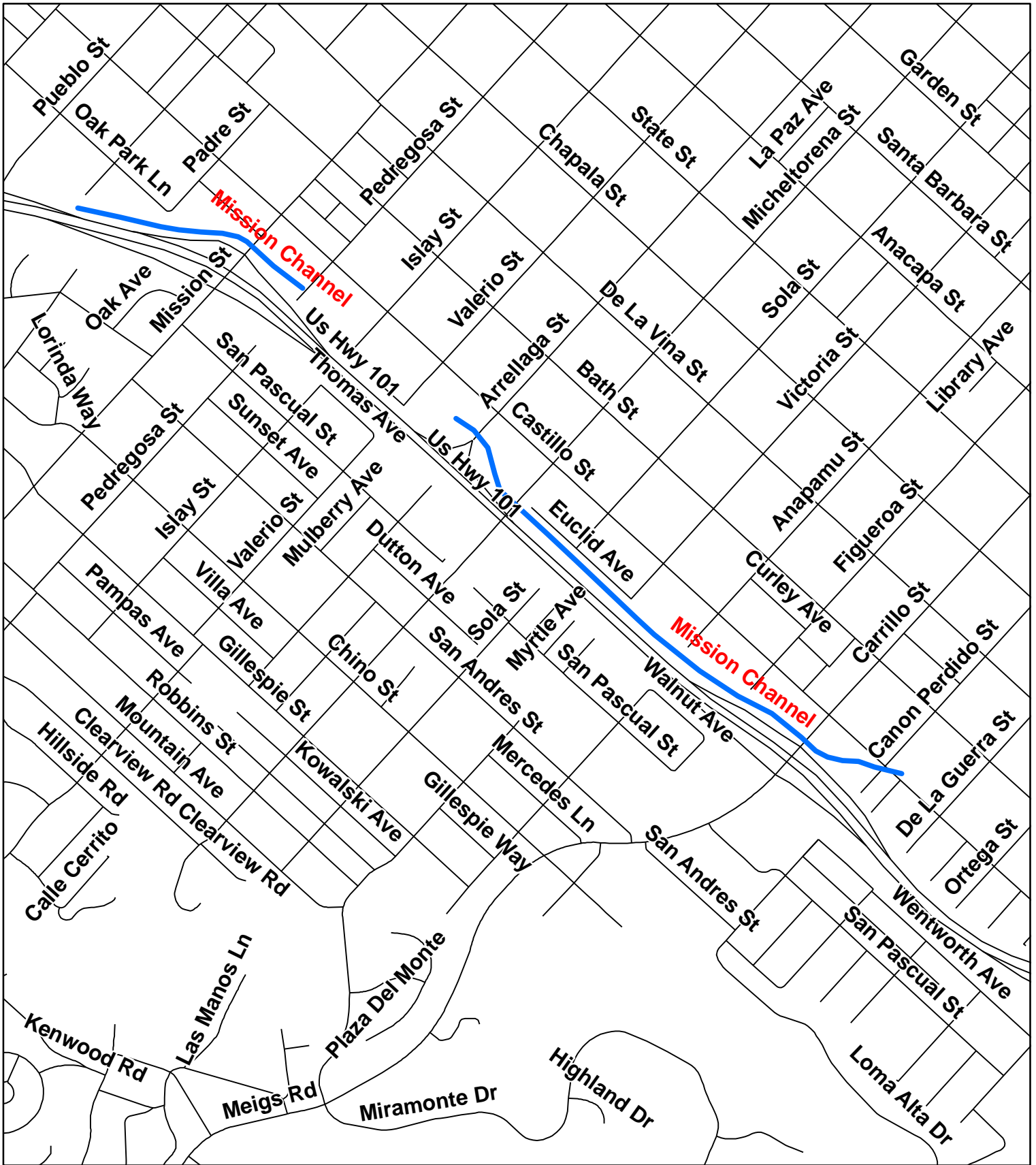
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Feet

Coordinate System: State Plane, California Zone V NAD 1983

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Mission Channel



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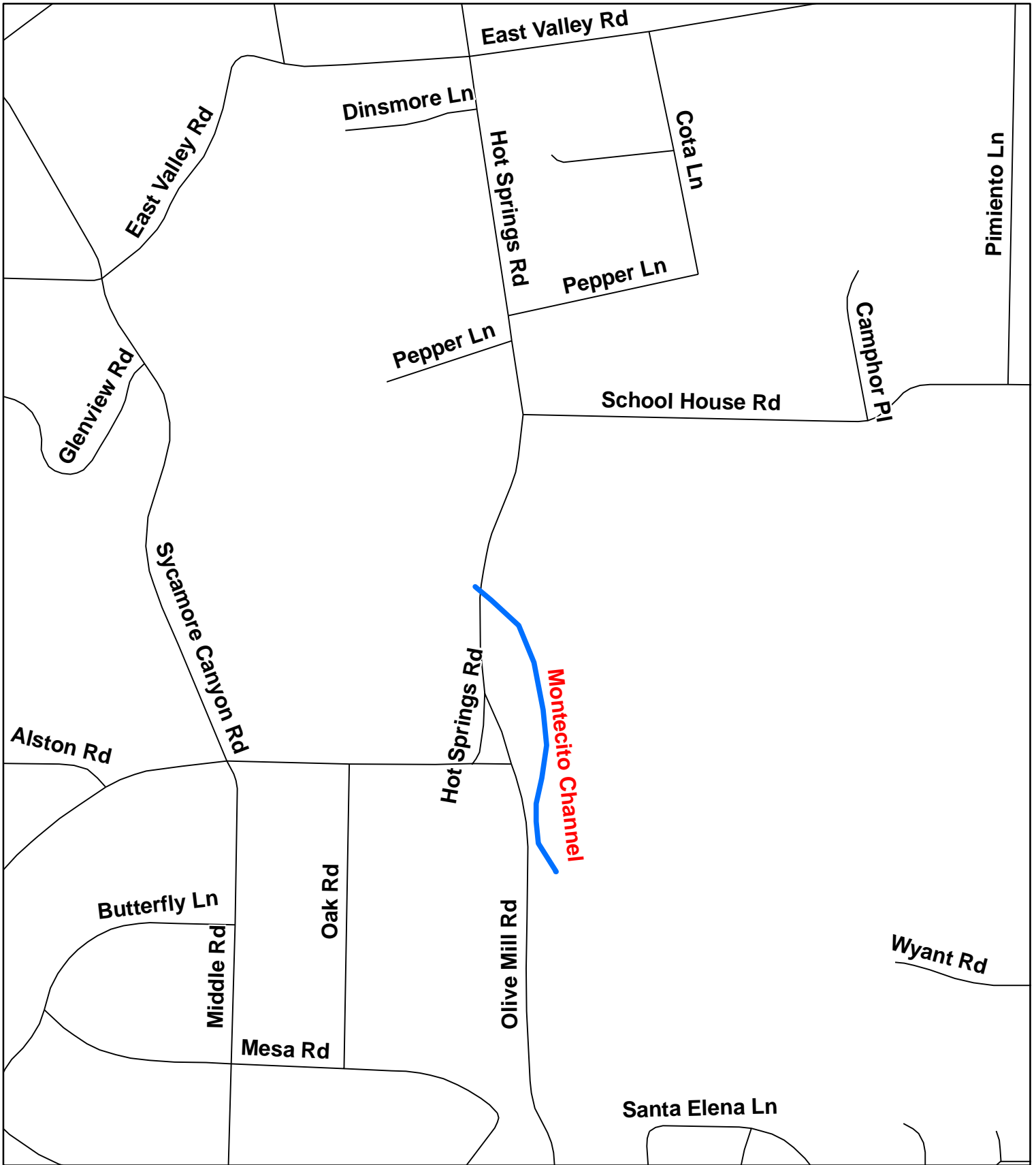


730 365 0 730
Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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Montecito Channel



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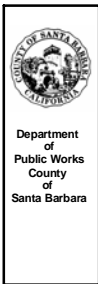
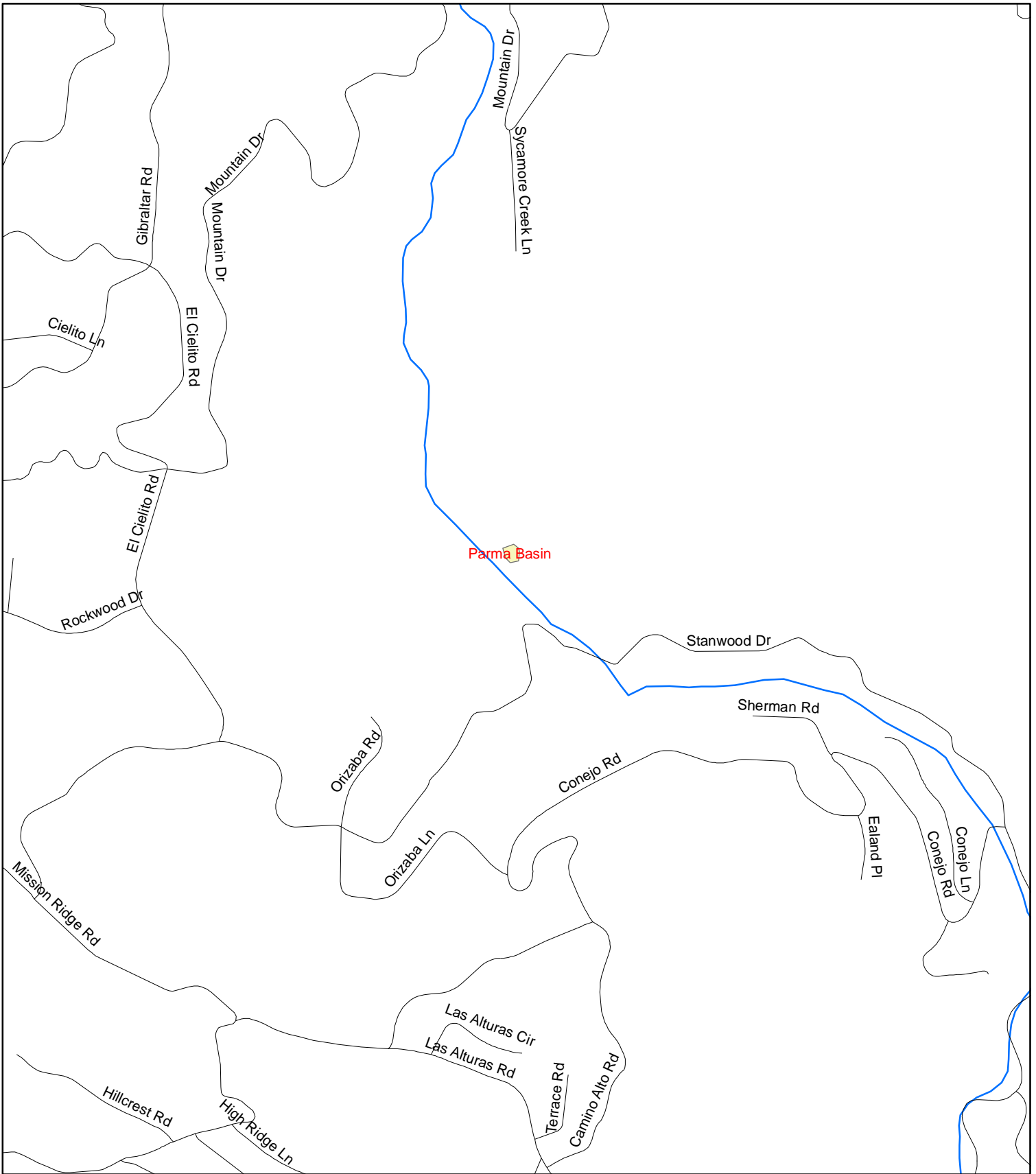
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Feet

Coordinate System: State Plane, California Zone V NAD 1983


Annual Routine Maintenance Plan

Santa Barbara County, California

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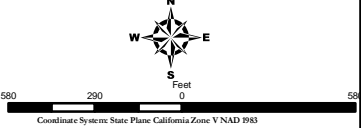


Parma Basin



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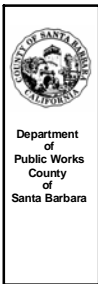
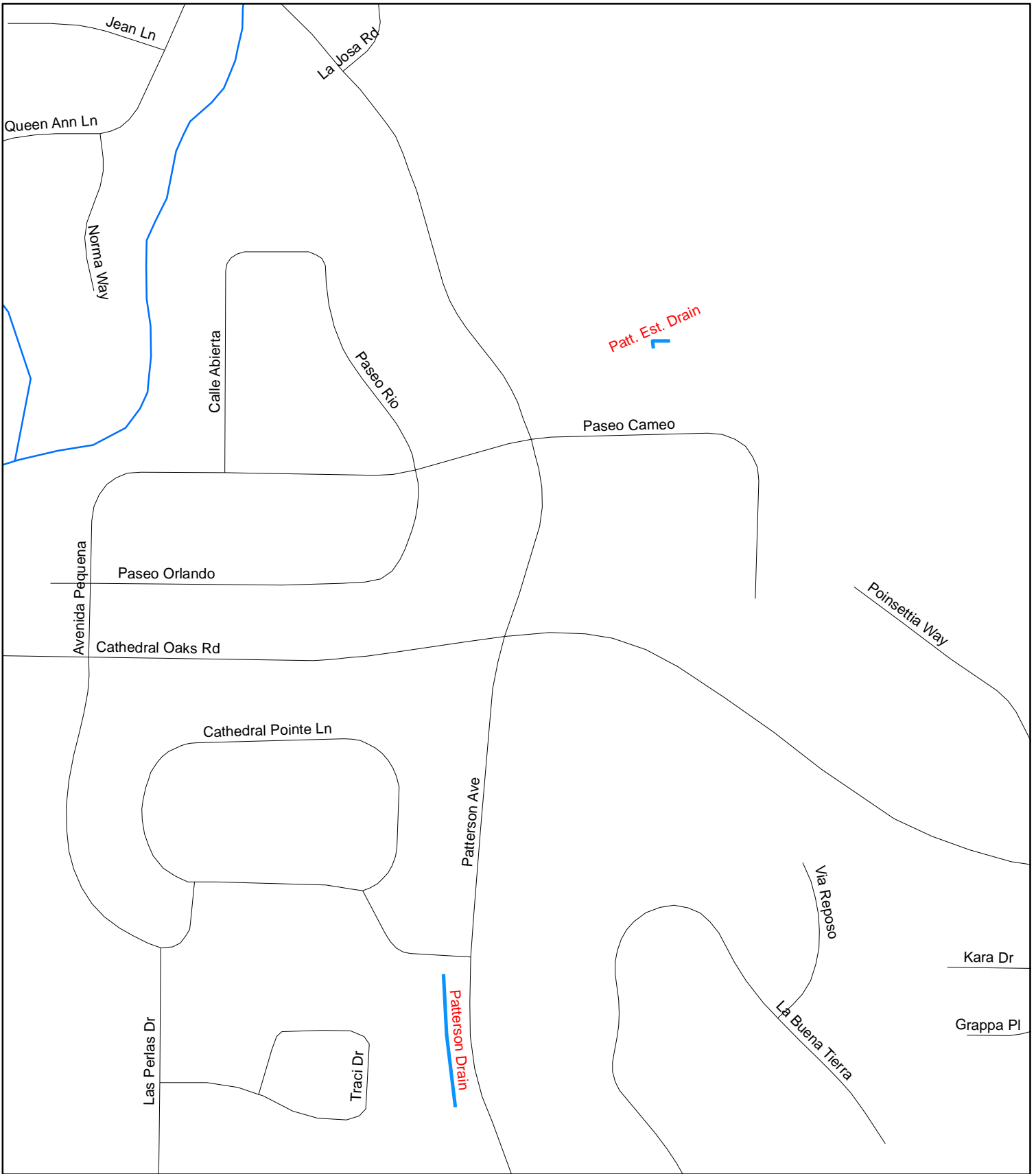


Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

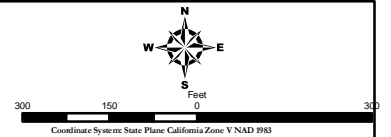
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Patterson Drain Patterson Estates Drain

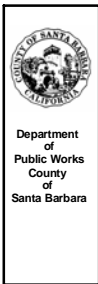
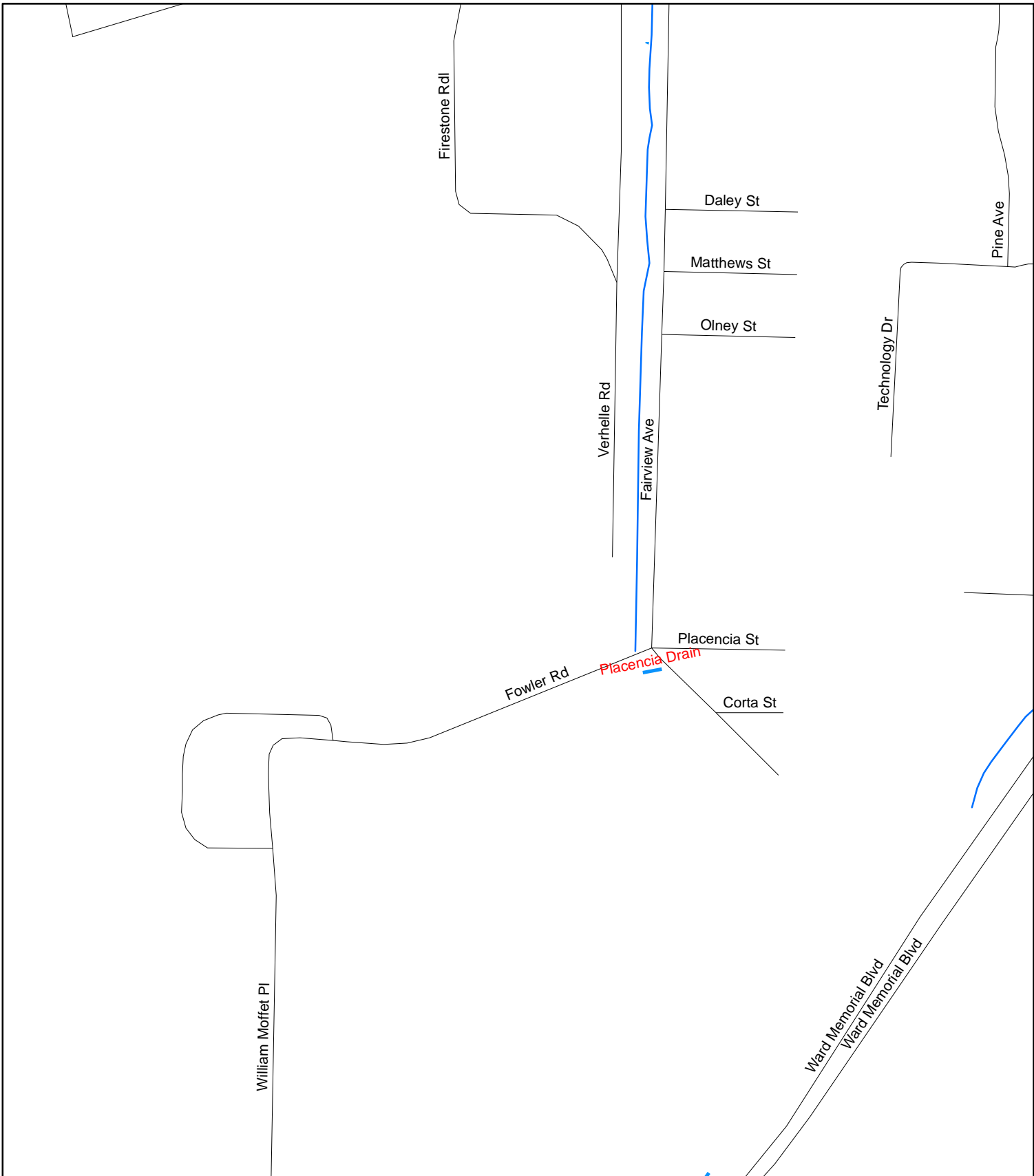


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Annual Routine Maintenance Plan

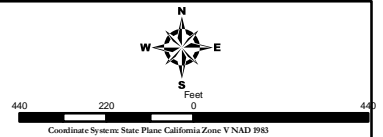
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Placencia Drain

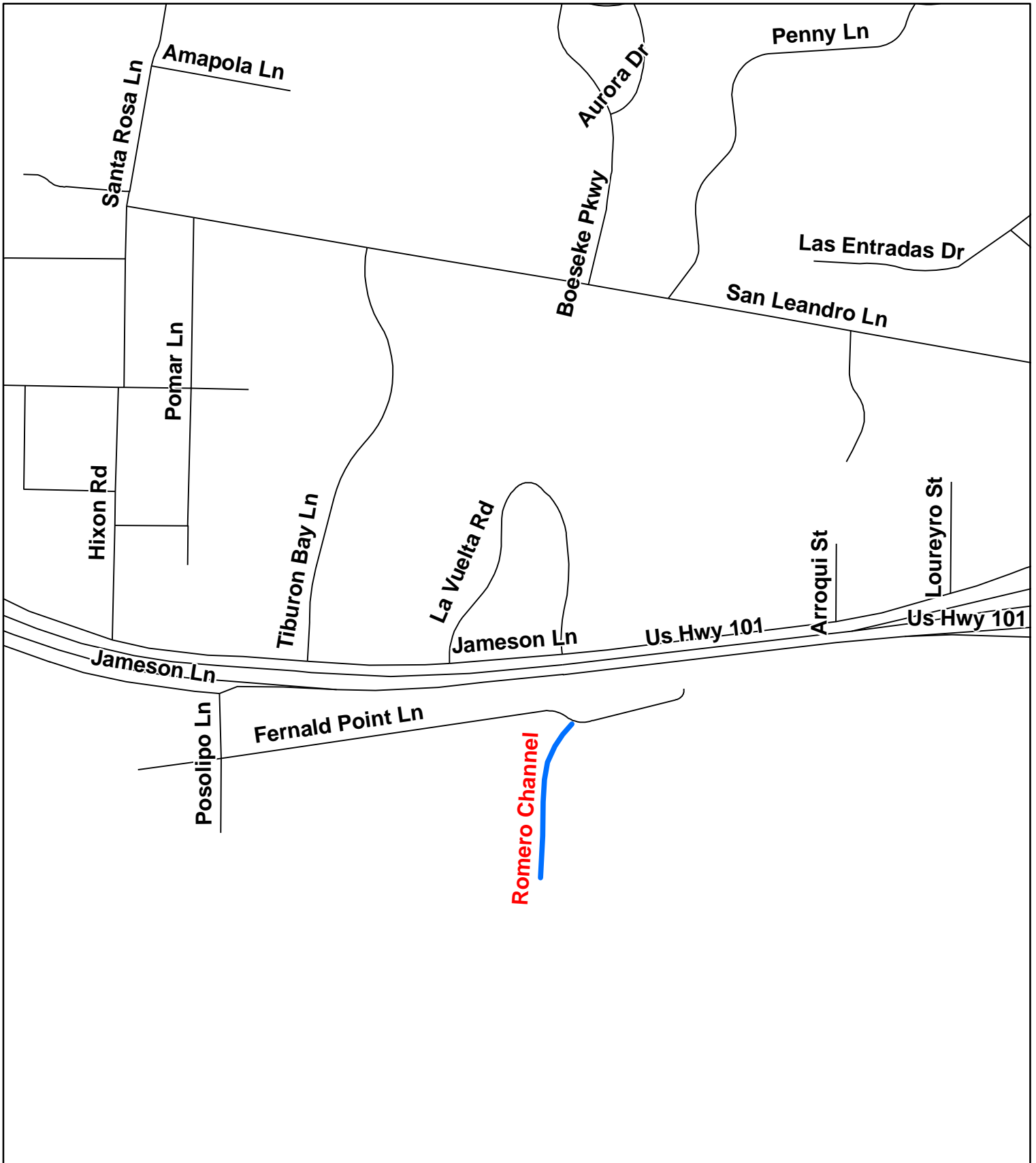


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Annual Routine Maintenance Plan

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Romero Channel



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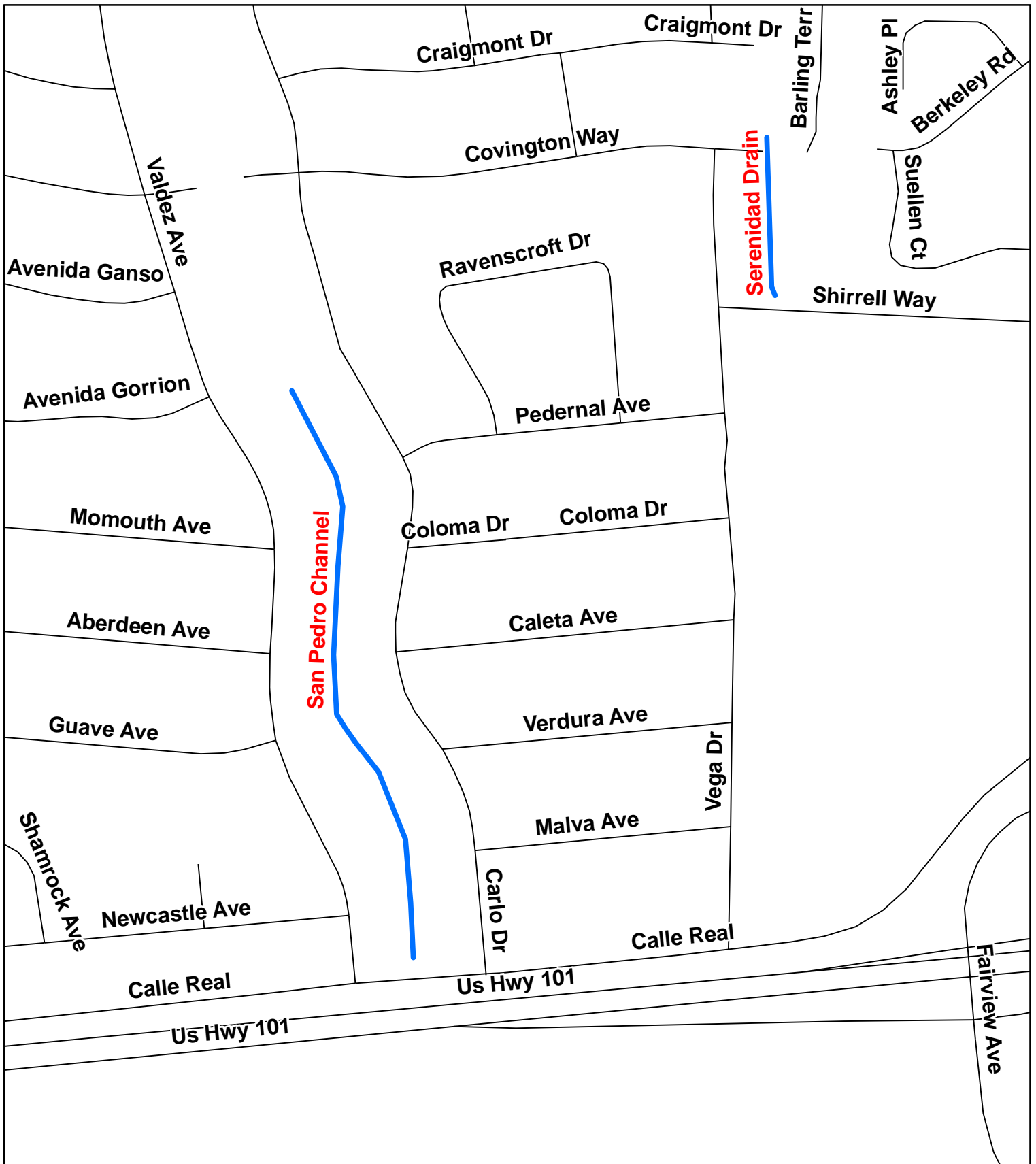
420 210 0 420
Feet

Coordinate System: State Plane, California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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San Pedro Channel Serenidad Drain



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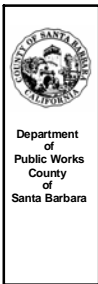


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Annual Routine Maintenance Plan

Santa Barbara County, California

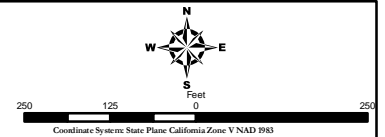
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Shirrell Drain Serenidad Drain

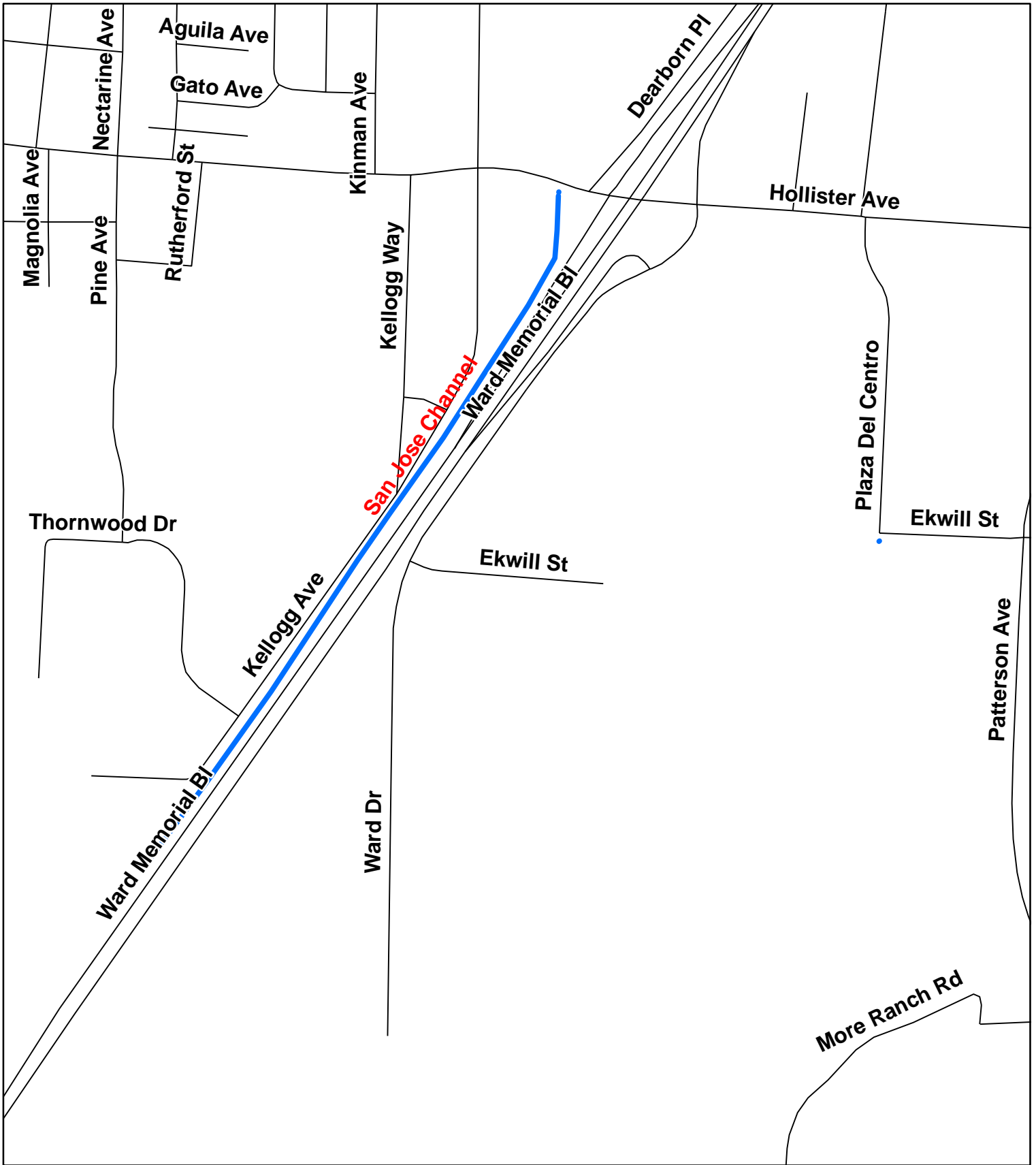


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San Jose Channel



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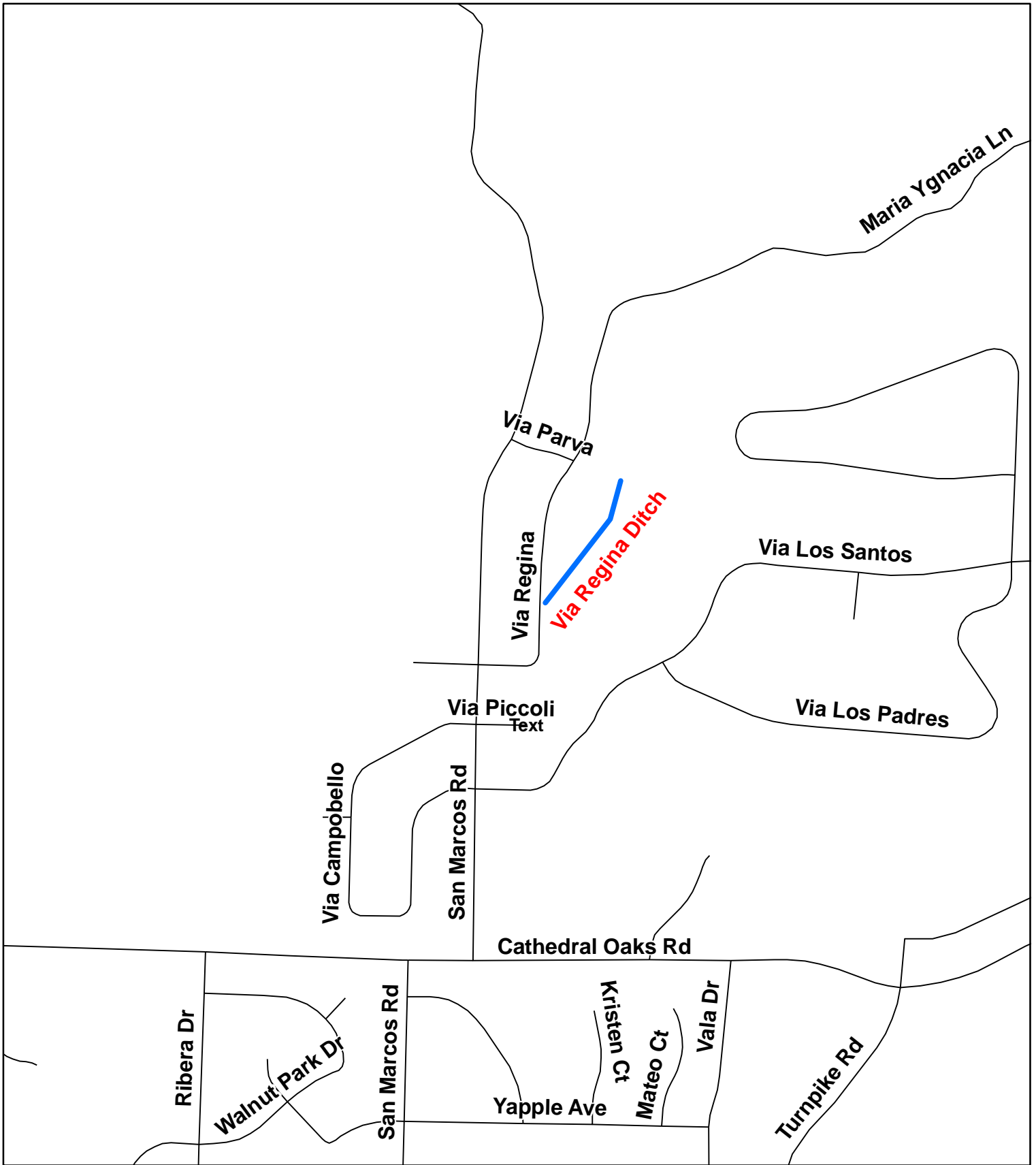
550 275 0 550
Feet

Coordinate System: State Plane, California Zone V NAD 1983

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Santa Barbara County, California

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Via Regina Ditch



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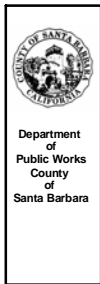
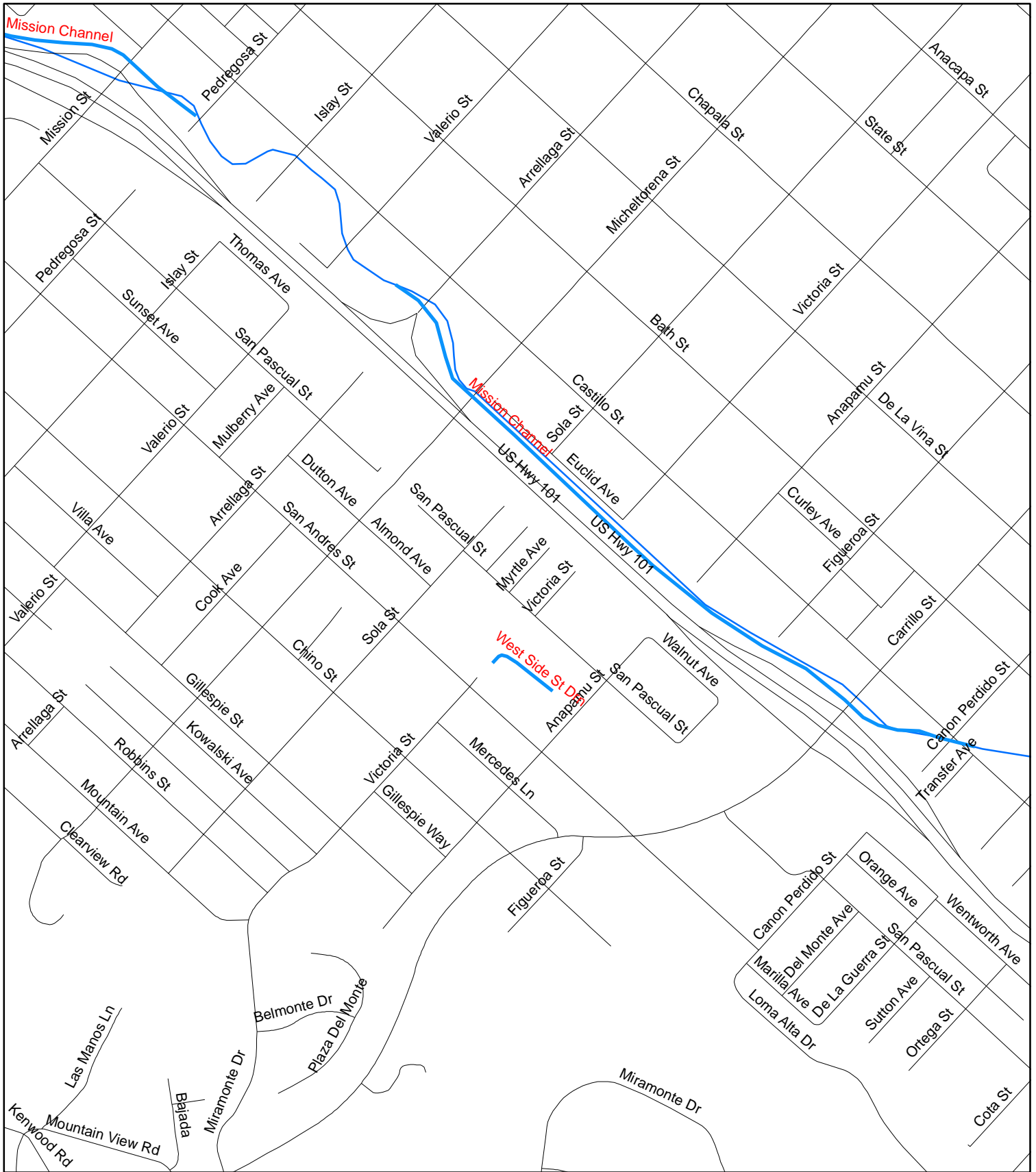
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Feet

Coordinate System: State Plane, California Zone V NAD 1983


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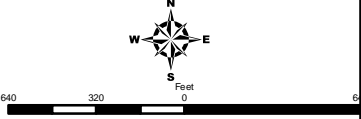


West Side Storm Drain



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Page 24



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Prepared By:
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Compiled by the Public Works Enterprise GIS.

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 28, 2018.

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	1650	0	0	-50
2008/2009	0	5,300	0	-50
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
2017/2018	20	0	0	4,830
2018/2019	0	0	0	4,830

Engineering Analysis:

There are many downed trees in various places along the channel. There are several public and private bridges along the course of the creek which are susceptible to plugging from this downed vegetation. Removal of downed trees as well as trimming back tree limbs hanging into the active channel is necessary to prevent plugging of bridges, to prevent local scour due to diversion of flow, and to prevent debris plugs from forming on the downed vegetation.

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

Project Description:

Sections 1-6

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

Section 7

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

Sections 8-12

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

Section 13

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

Section 14

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

Sections 15-34

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

Section 35

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

Sections 36-42

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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.

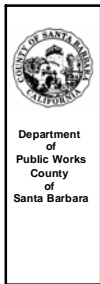
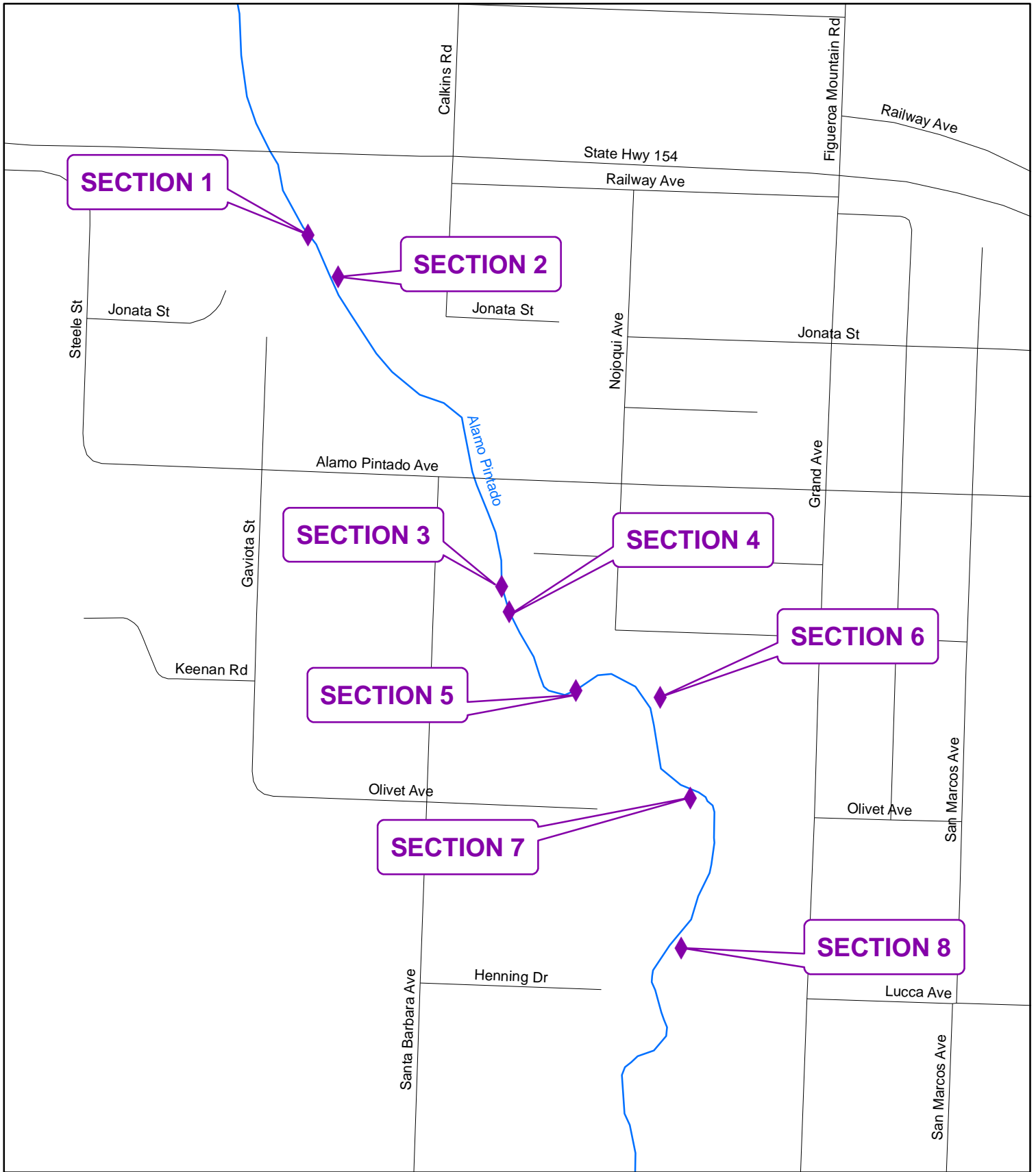
VASCULAR PLANT LIST
ALAMO PINTADO CREEK

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
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	Coyote Bush	N
ssp. consanguinea		
Calendula officinalis	Pot-Marigold	I
Centaurea solstitialis	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	Rugwort	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



Alamo Pintado - A

Legend

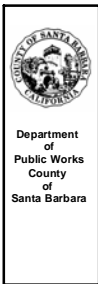
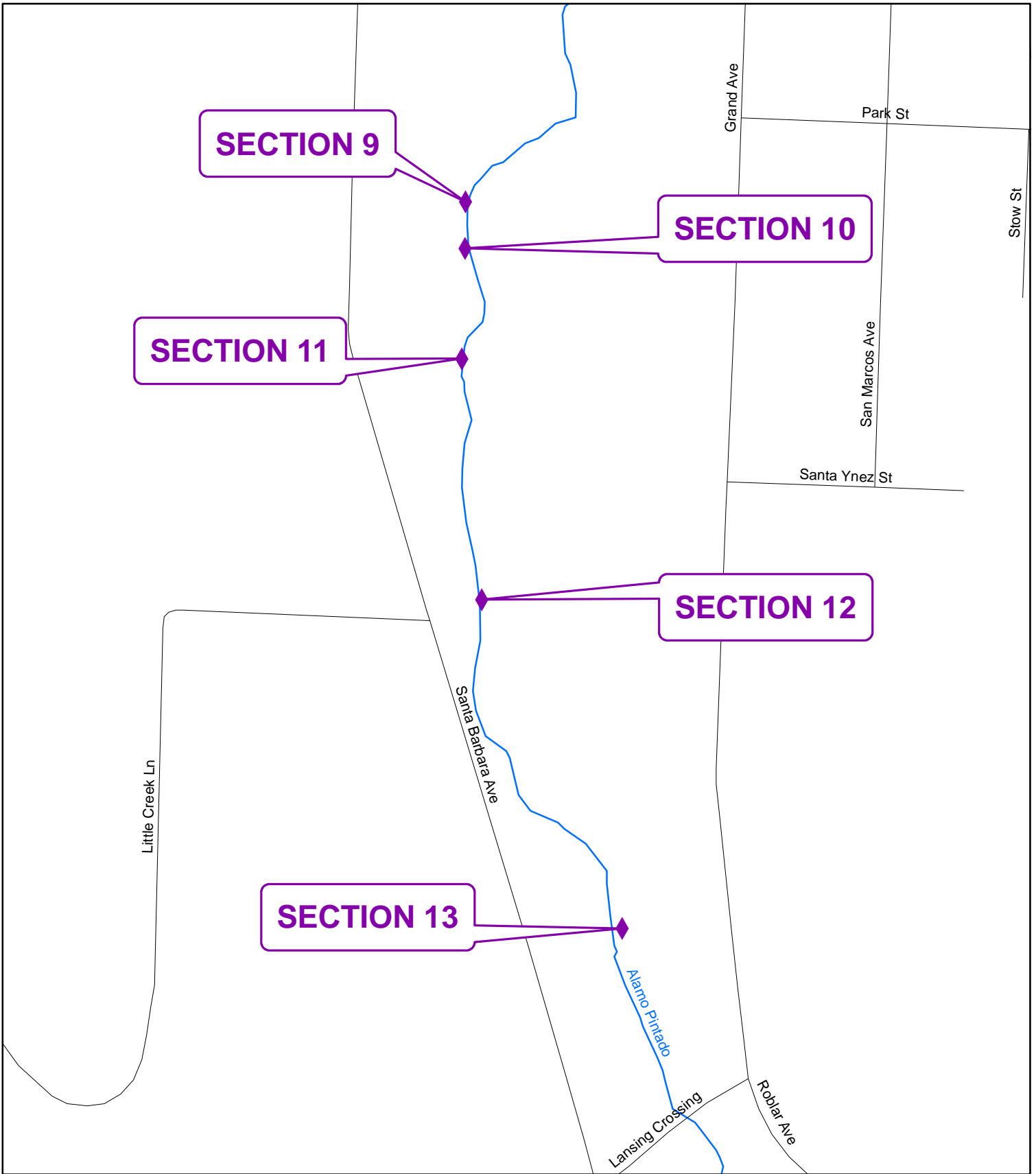
- ◆ Sites
- Lengths

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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



Alamo Pintado - B

Legend

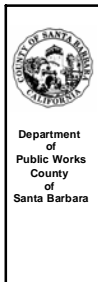
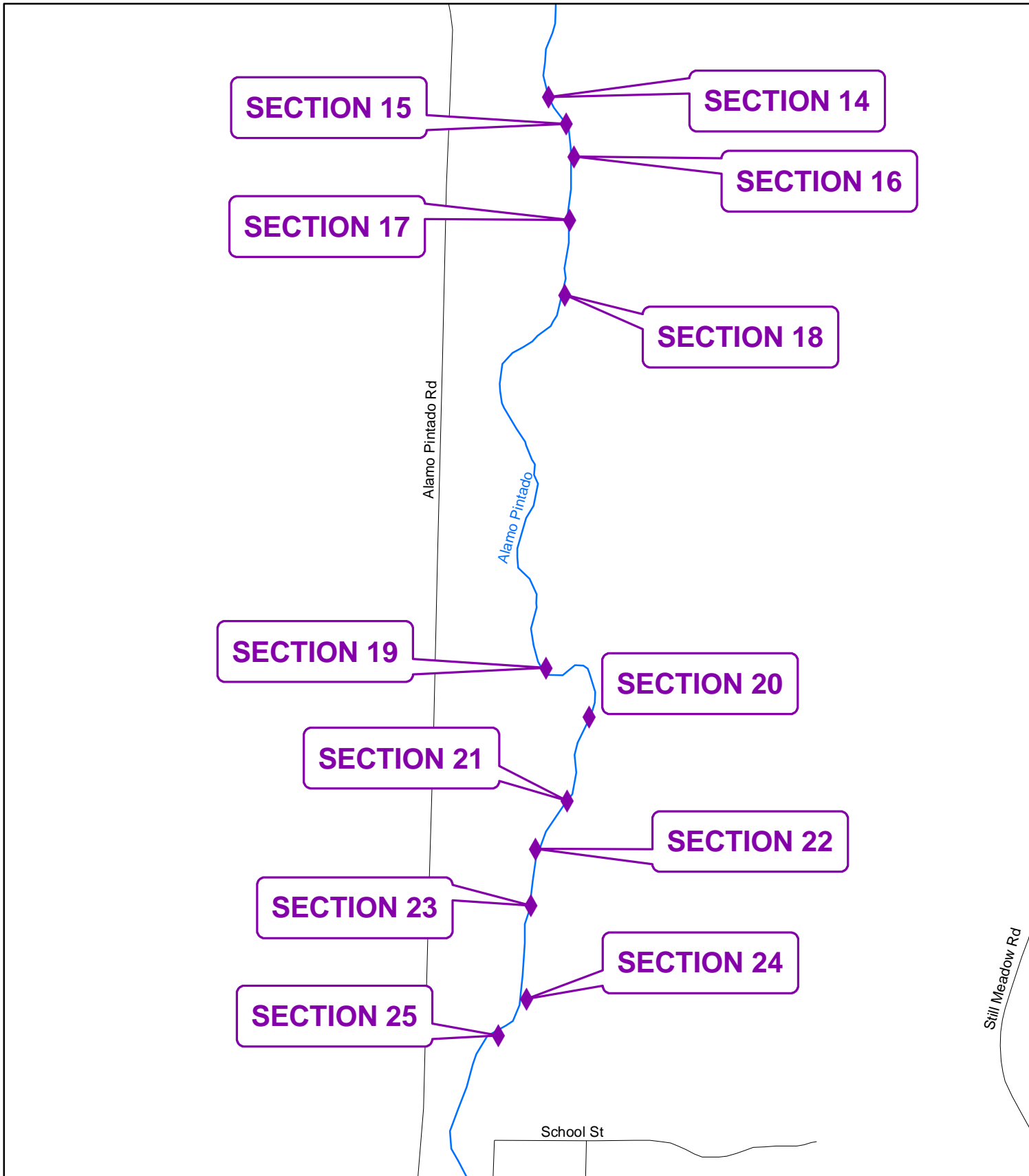
- ◆ Sites
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**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
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Alamo Pintado - C

Legend

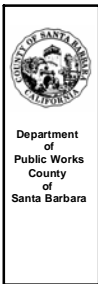
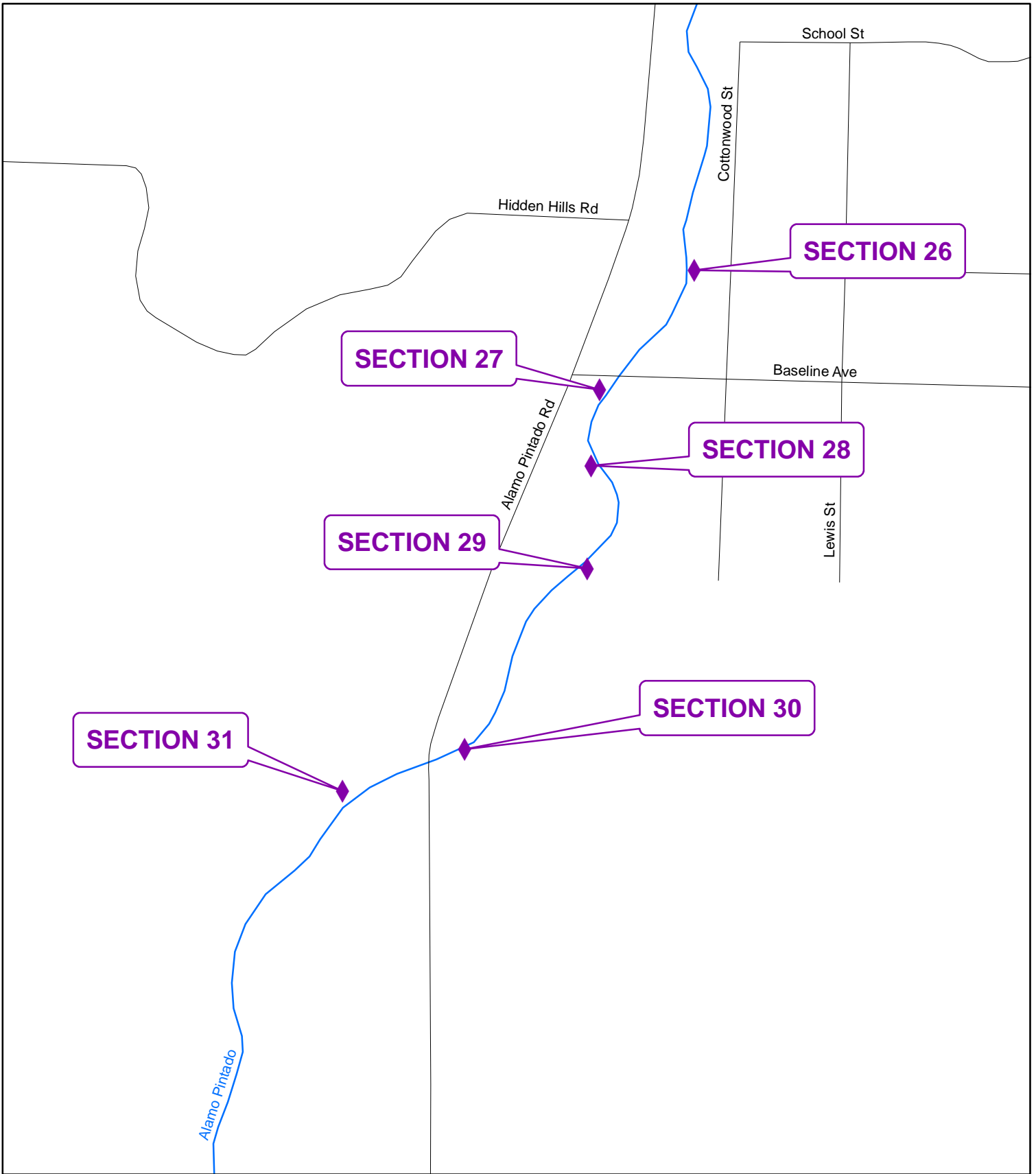
- ◆ Sites
- Lengths

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**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

Prepared By:
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Alamo Pintado - D

Legend

- ◆ Sites
- Lengths

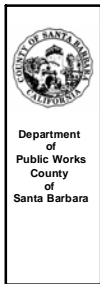
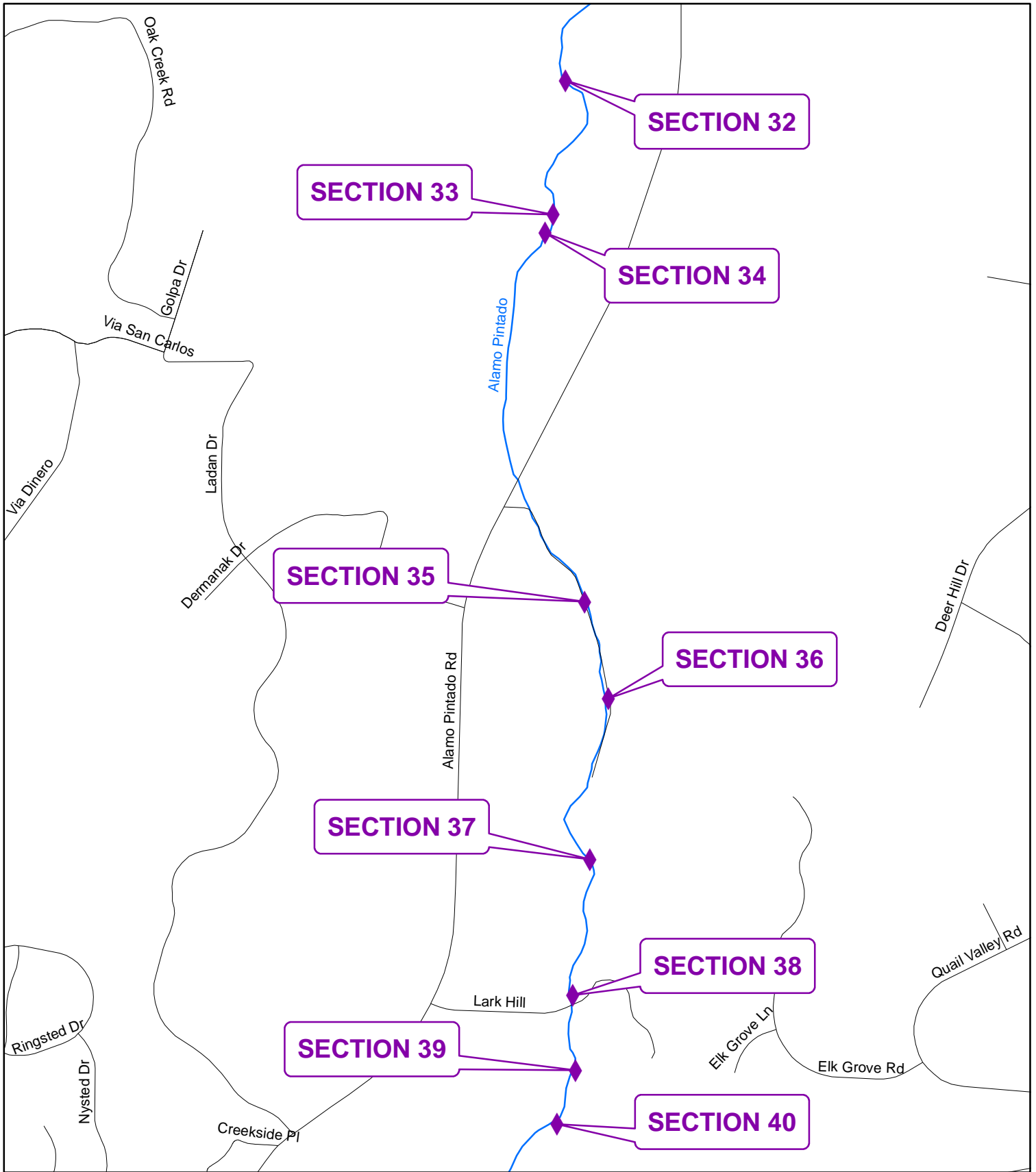
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325 162.5 0 325
Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
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Alamo Pintado - E

Legend

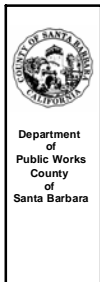
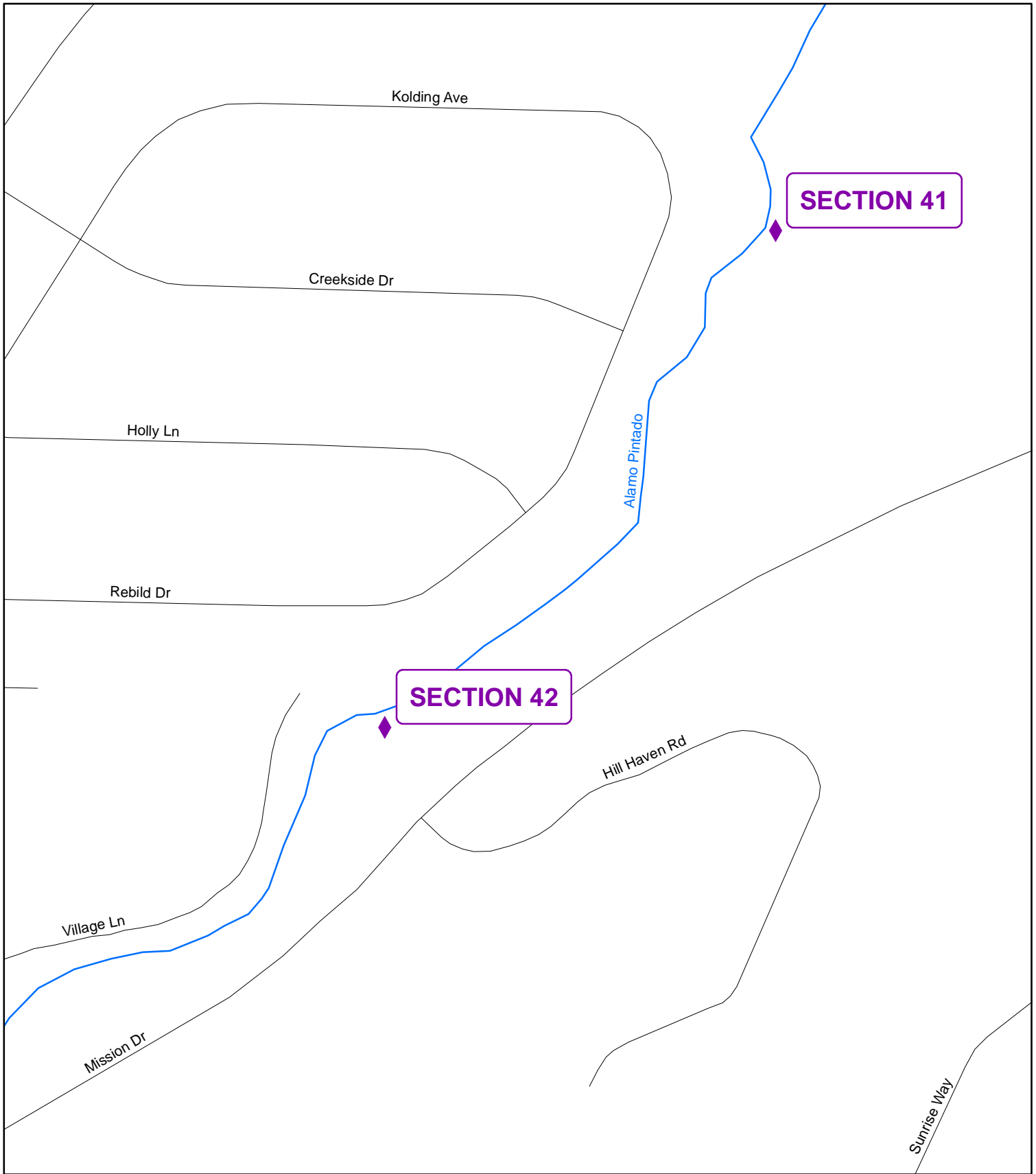
- ◆ Sites
- Lengths

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**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

Prepared By:
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Alamo Pintado - F

Legend

- ◆ Sites
- Lengths

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Alamo Pintado Creek



Section 1



Section 2

Alamo Pintado Creek



Mar 28, 2018 11:00 AM

Section 16



Mar 28, 2018 11:52 AM

Section 21

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

Location:

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

Setting:

Inspected on March 29, 2018.

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

The 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	0	-200
2018/2019	0	0	0	-200

Engineering Analysis:

The maintenance area of Cebada Canyon Channel drains culverts from La Purisma Road and a traffic roundabout on Highway 246. The Channel is low-gradient and tends to collect sediment and debris, which can plug these culverts. Low-hanging limbs and debris in the channel can further trap sediment and lead to debris plugs within the channel and downstream. Potential obstructions must be removed periodically or La Purisima Rd. and Hwy 246 will flood.

Project Description:

Section 1:

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

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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:

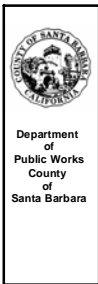
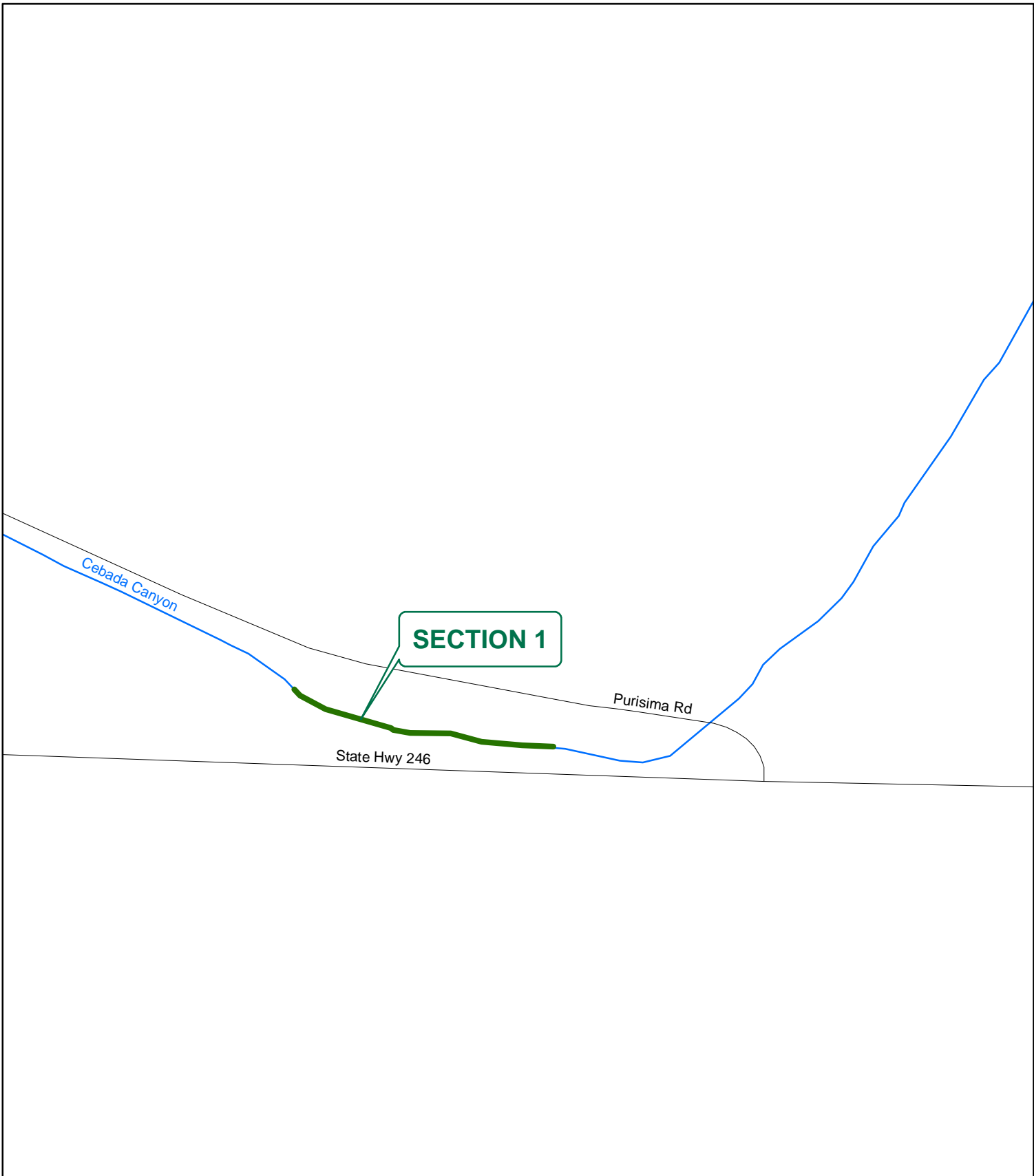
The project will take 2 days to complete.

**CEBADA CANYON CHANNEL
VASCULAR PLANT LIST**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
ASTERACEAE		
Artemisia californica	Calif. Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis pilularis	Coyote Bush	N
ssp. consanguinea		
Gnaphalium californicum	Pearly Everlasting	N
Lactuca serriola	Prickly Lettuce	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
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
Polypogon monspeliensis	Rabbitfoot Grass	I
PRUMULACEAE		
Angallis arvensis	Scarlet Pimpernel	I
ROSACEAE		
Rubus ursinus	Calif. Blackberry	N

SALICACEAE		
<i>Salix lasiolepis</i>	Arroyo Willow	N
URTICACEAE		
<i>Urtica holosericea</i>	Giant Nettle	N

* I = Introduced
N = Native



Cebada Canyon

Legend

- ◆ Sites
- Lengths

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325 162.5 0 325
Feet

Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Cebada Canyon



Mar 29, 2018 10:14 AM

Section 1

DAVIS CREEK ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARACOUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:

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

Setting:

Inspected on March 29, 2018.

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

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

Revegetation:

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

Davis Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2017/2018	4,800	6,000	16,300	11,500
2018/2019	600	0	0	10,900

Wildlife Survey:

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

Engineering Analysis:

As a public agency, the VVCSD provides approximately 2,000 acre-feet per year of potable water to approximately 7,000 residents of the Vandenberg Village community. Over many years, overhanging vegetation, downed and standing dead trees, and obstructive vegetation in the channel bottom has resulted in the accumulation of sediment through the maintenance reach to a point where creek capacity is greatly compromised in some areas. If water overtops the channel, the VVCSD facility and access road can flood and restrict access to the operations yard and wells that provide water to residents. If the drainage continues to become obstructed, it is likely that escaped water will flow down the access road and onto Hwy 1, presenting a safety concern for motorists.

Project Description:

Maintenance along Davis Creek will be implemented with BMPs to minimize impacts to riparian vegetation. Removal of live and dead obstructive vegetation, along with desilting portions of the corridor, is expected to provide enough blockage relief to allow the creek to flow more freely and flush some of the accumulated sediment out naturally.

Section 1:

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

Section 2:

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

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

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

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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

*Residual Impacts:

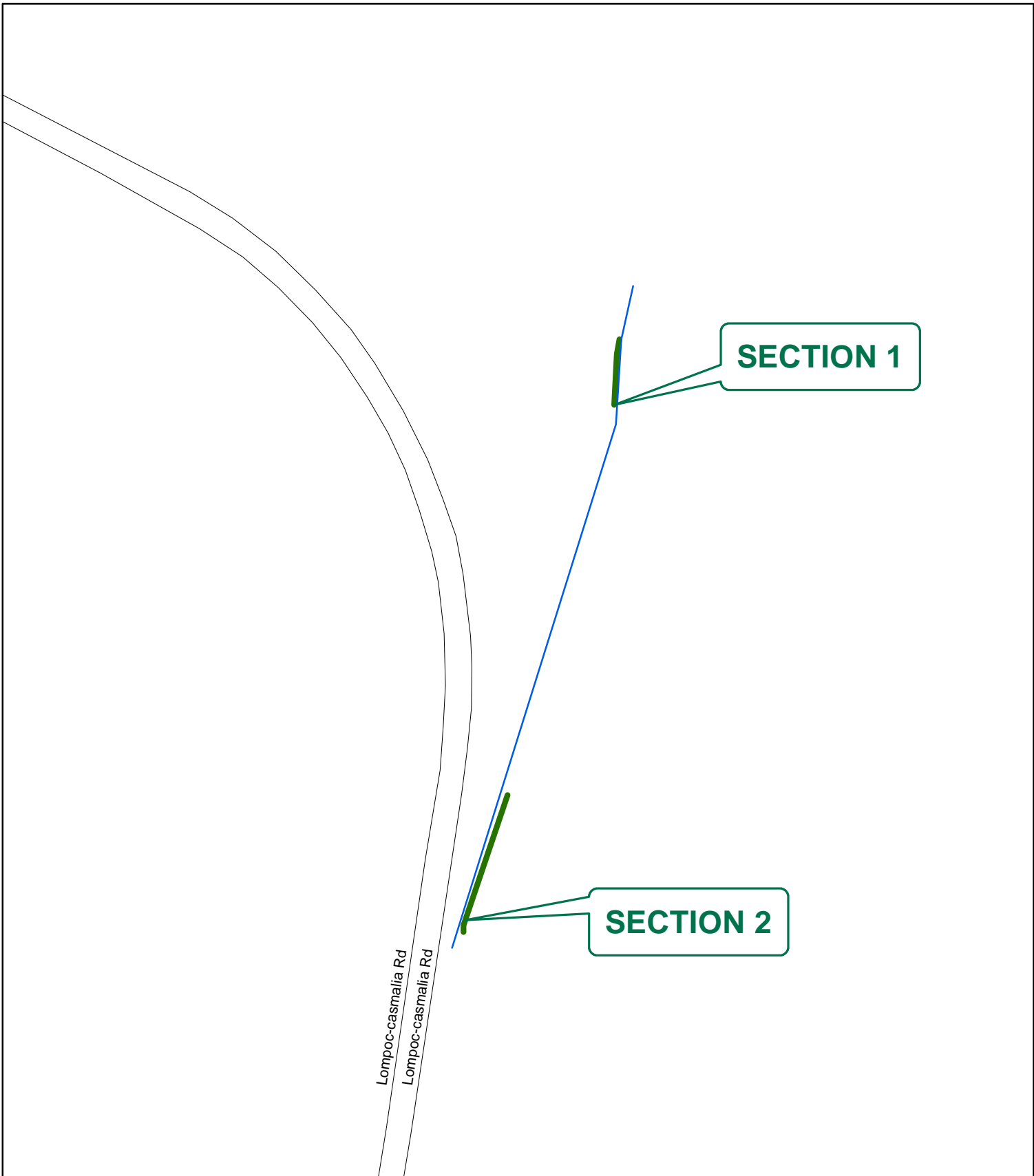
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

Project Specifics:

The project will take 5 days to complete.

**DAVIS CREEK
VASCULAR PLANT LIST**

Scientific Name	Origin	Common Name
<i>Populus trichocarpa</i>	Native	Black cottonwood
<i>Salix laevigata</i>	Native	Red willow
<i>Salix lasiolepis</i>	Native	Arroyo willow
<i>Baccharis salicifolia</i>	Native	Mule fat
<i>Frangula californica</i> ssp. <i>californica</i>	Native	Coffeeberry
<i>Lonicera involucrata</i>	Native	Twin berry
<i>Rubus ursinus</i>	Native	California blackberry
<i>Toxicodendron diversilobum</i>	Native	Poison oak
<i>Anagallis arvensis</i>	Introduced	Scarlet pimpernel
<i>Apium graveolens</i>	Native	Celery
<i>Artemisia douglasiana</i>	Native	Mugwort
<i>Bowlesia incana</i>	Native	Bowlesia
<i>Cardamine oligosperma</i>	Native	Bitter-cress
<i>Cerastium glomeratum</i>	Introduced	Mouse-eared chickweed
<i>Claytonia perfoliata</i>	Native	Miner's lettuce
<i>Conium maculatum</i>	Introduced	Poison hemlock
<i>Crassula connata</i>	Native	Pygmyweed
<i>Melilotus officinalis</i>	Introduced	Yellow sweet clover
<i>Nasturtium officinale</i>	Native	Common watercress
<i>Phacelia ramosissima</i>	Native	Branching phacelia
<i>Stellaria media</i>	Introduced	Chickweed
<i>Urtica dioica</i>	Native	Stinging nettle
<i>Veronica anagallis-aquatica</i>	Native	Water speedwell
<i>Elymus glaucus</i>	Native	Blue wildrye
<i>Juncus effusus</i>	Native	Bog rush
<i>Juncus phaeocephalus</i>	Native	Brown headed rush
<i>Polypogon monspeliensis</i>	Introduced	Annual beard grass
<i>Schoenoplectus californicus</i>	Native	California tule
<i>Sparganium eurycarpum</i>	Native	Bur-reed
<i>Typha domingensis</i>	Native	Narrowleaf cattail



SECTION 1

SECTION 2

Lompoc-casmalia Rd
Lompoc-casmalia Rd



Davis Creek



Legend
Lengths

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Annual Routine Maintenance Plan
Fiscal Year 2018-2019

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

Davis Creek



Section 1



Section 2

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

Location:

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

Setting:

Inspected on March 26, 2018.

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

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

Revegetation:

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

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
2017/2018	550	0	0	-35
2018/2019	TBD	0	0	TBD

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	0	0	0	-2300
2017/2018	1000	0	0	-2300
2018/2019	400	0	0	-2700

Wildlife Survey:

As described in the project description, maintenance will involve using equipment to desilt, mow, and remove obstructive vegetation to restore flow capacity. This type of maintenance has the potential to impact wildlife, particularly the California red legged frog.

The California red legged frog has been consistently detected in the Green Canyon drainages since 2004. The District assumes that red legged frogs may be present in any part of the Green Canyon drainages and implements mitigation measures and best management practices to protect the species. The District has developed a management strategy and special conditions through a Biological Opinion issued by the US Fish and Wildlife Service

No other sensitive species have been observed within this drainage. Impacts to red legged frogs and other species address in the Program EIR are expected to be less than significant with the incorporation of the proposed mitigation measures and monitoring conditions specified in the Biological Opinion.

Engineering Analysis:

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

Project Description:

Middle Green Canyon Channel

Section 1:

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

Section 2:

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

Section 3:

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

Section 4:

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

be desilted. This area has been maintained previously and the impacts have been tabulated for mitigation.

Section 5:

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

Section 6:

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

Section 7:

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

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

North Green Canyon Channel

Section 1:

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

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

Section 2:

This section is frequently inundated and colonized by dense cattail and bulrush. The District previously attempted an alternative maintenance strategy by only mowing the vegetation and alternating years of desilting. This year, thicket has become too dense to mow effectively; the District will spot-spray a central channel through the reach as needed to maintain a connected drainage pathway. Vegetation will be left in a strip at

the edge of the banks for wildlife habitat. This area has been maintained in previous years by desilting and mowing, and the impacts have already been tabulated for mitigation.

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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:

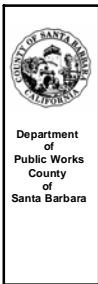
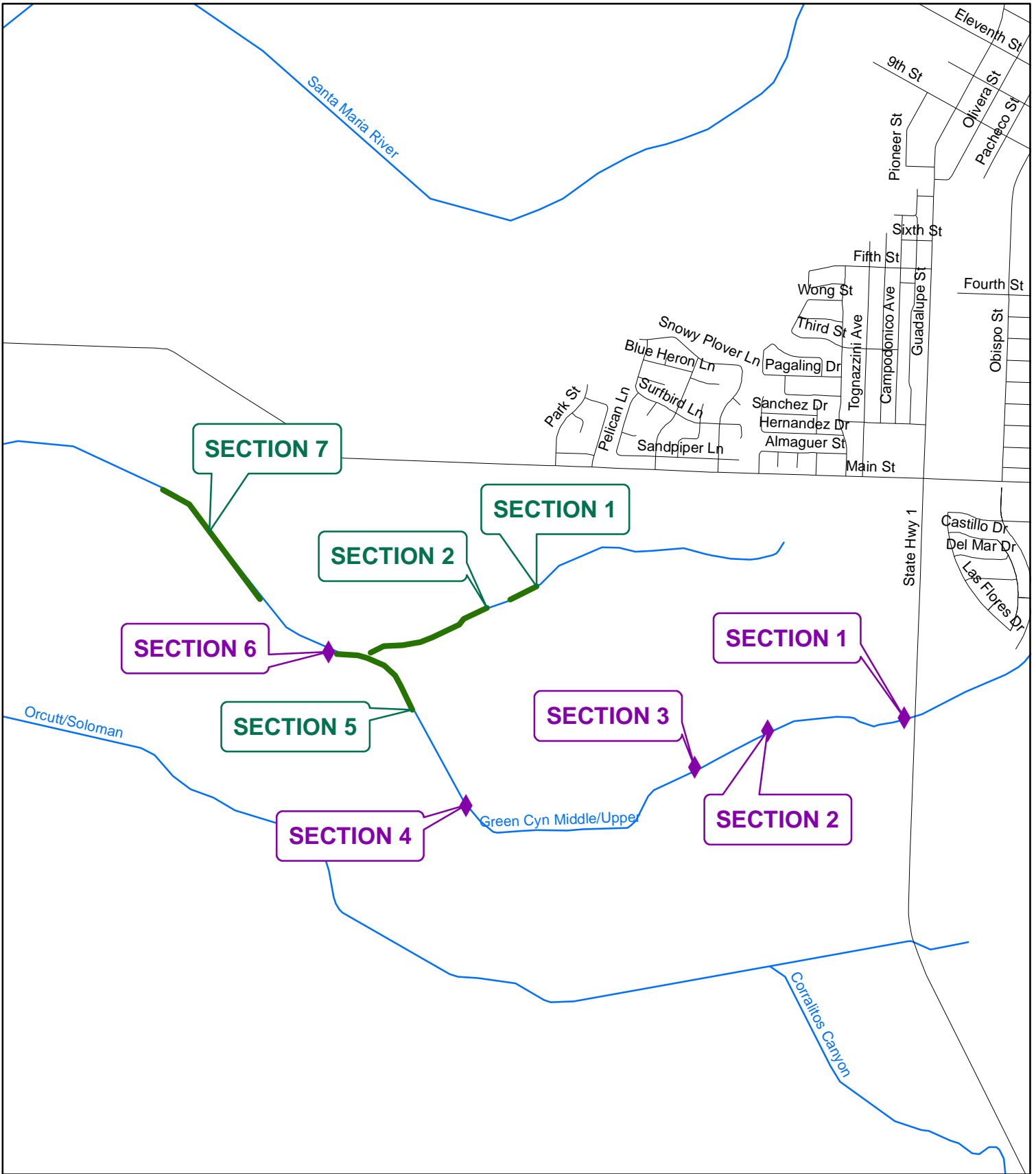
The Green Canyon Drainage projects will take 14 days to complete.

VASCULAR PLANT LIST
GREEN CANYON DRAINAGES

<u>SCIENTIFIC</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
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



Green Canyon Drainages

Legend

- ◆ Sites
- Lengths

PUBLIC WORKS ENTERPRISE GIS

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**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Coordinate System: State Plane California Zone V NAD 1983

Scale: 1,250 Feet

Green Canyon Ditches



Mar 26, 2018 11:47 AM

North Green Canyon - Section 1



Mar 26, 2018 11:43 AM

North Green Canyon - Section 2

Green Canyon Ditches



Middle Green Canyon - Section 1



Middle Green Canyon - Section 2

Green Canyon Ditches



Mar 26, 2018 10:45 AM

Middle Green Canyon - Section 3



Mar 26, 2018 10:54 AM

Middle Green Canyon - Section 4

Green Canyon Ditches



Middle Green Canyon - Section 6



Middle Green Canyon - Section 7

MISSION HILLS CHANNEL ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:

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

Setting:

Inspected on March 29, 2018.

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

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

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

Revegetation:

Mission Hills Channel				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2018/2019	0	0	0	0

Engineering Analysis:

Accumulated sediment is severely blocking the culverts through the basin and not allowing the flows in Mission Hills Channel to pass downstream. The basin must drain properly to protect homes and properties in the Mission Hills Subdivision. The downstream properties, including the water treatment plant, would be subject to overtopping flows or flows breaking out of the channel if the current over-filled channel is not excavated.

Project Description:

Section 1:

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

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

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

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

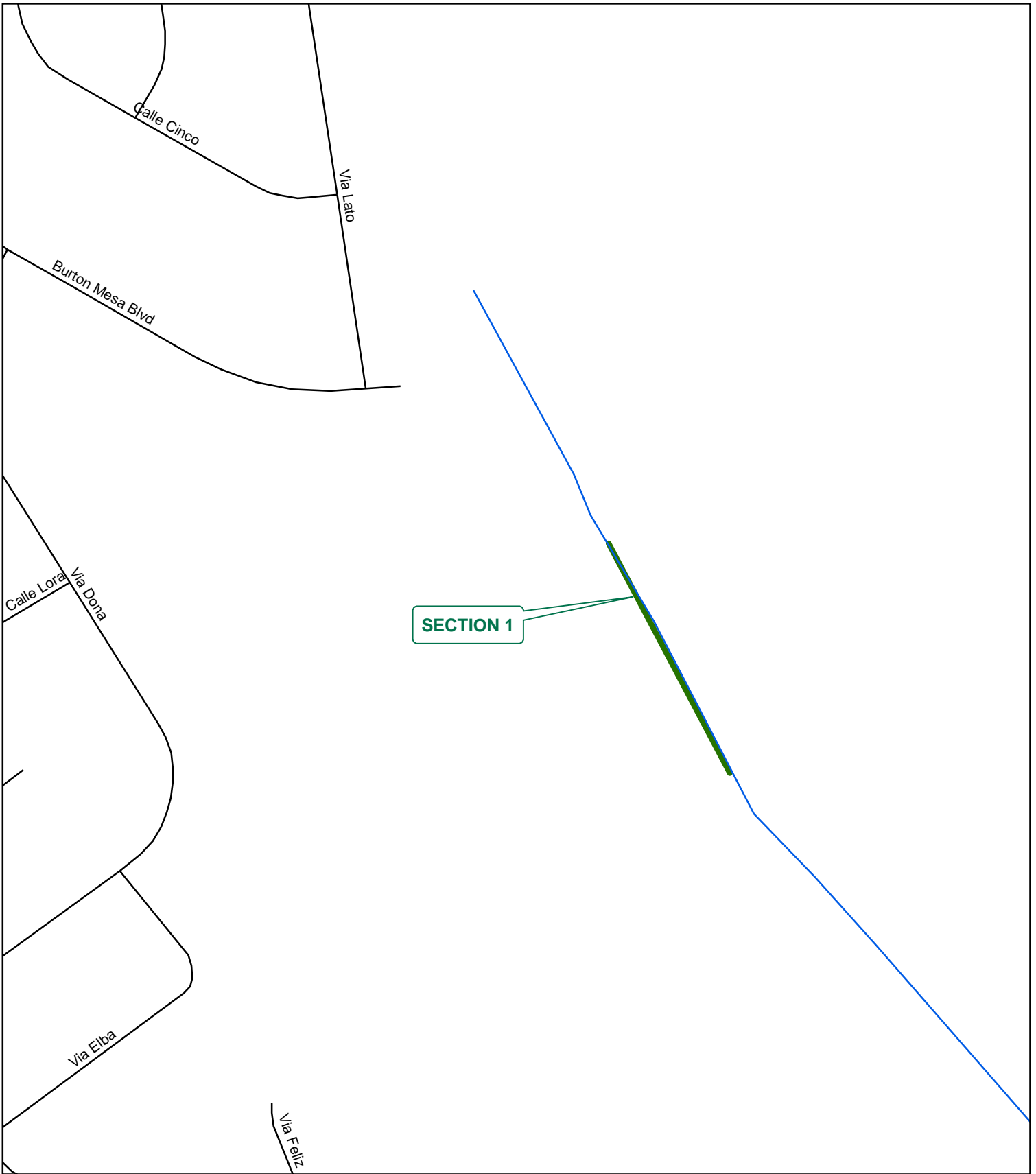
Resource	Impacts	Mitigation Measures*
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-B	H-1, H-6
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-C	H-1, B-2, W-6, W-7, W-4
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A	B-1, B-2, B-3
Fish, Aquatic Species, and Wildlife EIR sections 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:**

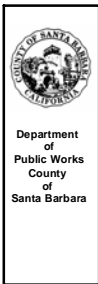
Incorporation of the above mitigation measures would reduce the impacts to all resource categories to less than significant levels.

Project Specifics:

The project will take 2 days to complete.




SECTION 1



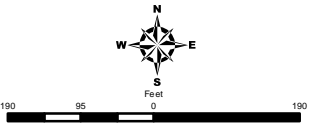
Mission Hills Channel

Legend

- Sites
- Lengths



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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Mission Hills Channel



Section 1

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 26 and April 5, 2018.

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

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

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	1760	0	0	-2105
2017/2018	0	0	0	-2105
2018/2019	0	0	0	-2105

Wildlife Survey:

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

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

Engineering Analysis:

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

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

Project Description:

Section 1:

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

Sections 2-3:

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

Section 4:

This site has a tangled thicket of debris and woody material in the creek channel. The debris plug will be cut and broken apart to remove the obstruction. Maintenance in these sections will not result in impacts to native vegetation.

Sections 5-6

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

Sections 8-9

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

Section 10

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

Section 11

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

Section 12

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

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

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

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

Laguna Sanitation Facility

Section 13-14:

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

Section 15:

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

Section 16:

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

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

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

Section 17:

Extreme caution will be used to avoid the overhead powerlines at this location

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

Approximately 45 cubic yards of material will be removed. The sediment will be placed over the adjacent dirt access road and allowed to dry for several days, and then graded and compacted back over the dirt road.

As the material is scooped out of the culvert, the operator will allow water to drain out of the bucket for several seconds before releasing the material over the road bed. The District Biologist will monitor the work for RLF. The existing water quality at this location is extremely turbid from ag runoff, unstable soil, and cattle in the adjacent fields and in the creek itself. The area is bare soil, muddy water, and clumps of non-native watercress. The work will not result in impacts to native vegetation.

Section 18:

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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 15 days to complete.

VASCULAR PLANT LIST
ORCUTT- SOLOMON CREEK

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
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
Cirsium 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	Coast Goldenbrush	N
ssp. verniodes		
Lactuca serriola	Prickly Lettuce	I
Picris echioides	Ox Tongue	I
Sencio blochmaniae	Blochman's	I
	-Groundsel	
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	Heliotrope	N
var. oculatrum		
BRASSICACEAE		

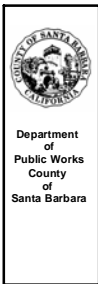
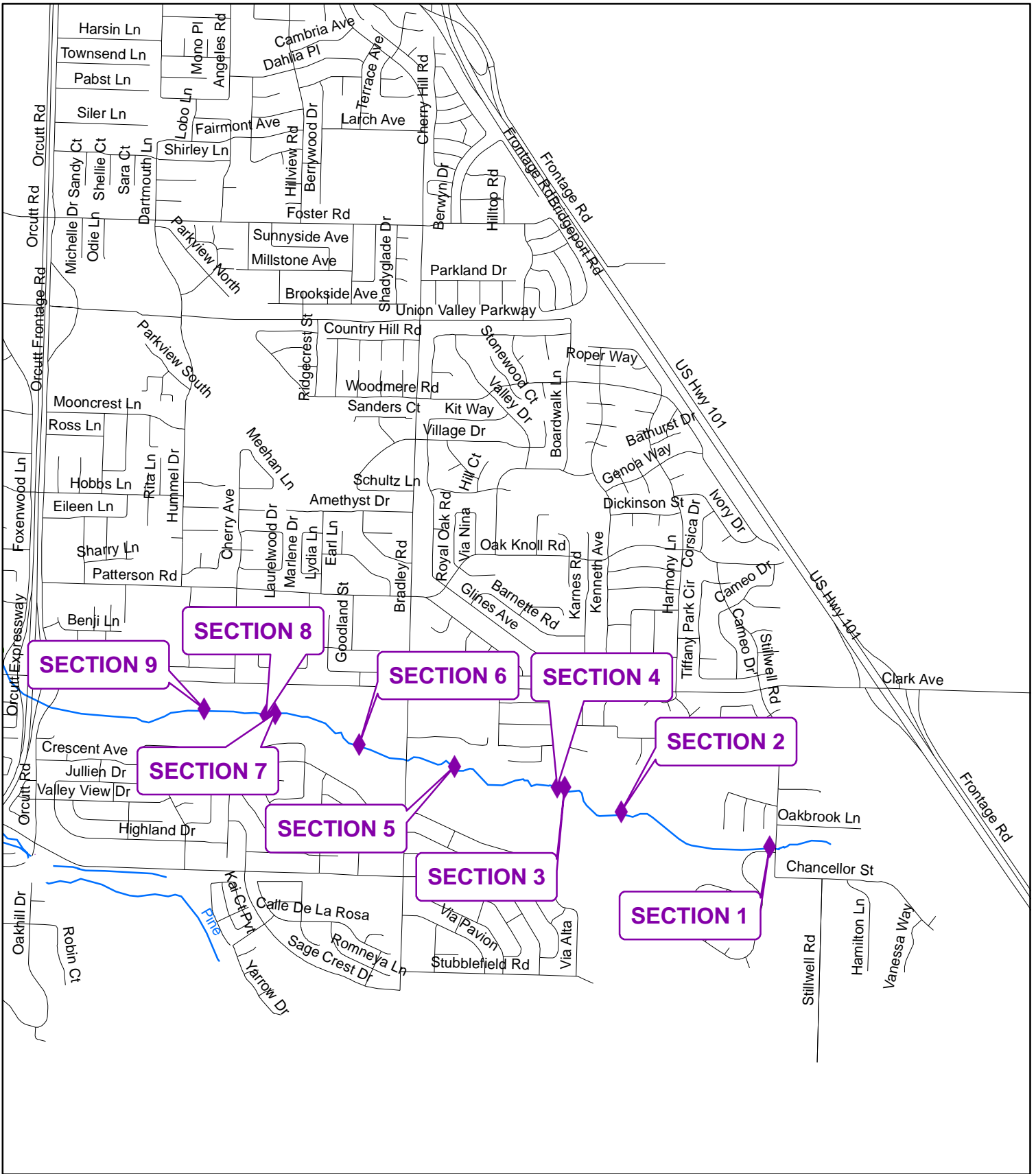
Brassica nigra	Black Mustard	I
Brassica campestris	Field Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturium -aquaticum	Watercress	I
CACTACEAE		
Opuntia sp.	Beavertail Cactus	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CARYOPHYLLACEAE		
Spergularia st.	Sand Spurrey	I
CHENOPDIACEAE		
Artiplex 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			
	<i>Malva parviflora</i>	Cheeseweed	I
ONAGRACEAE			
	<i>Epilobium adenocaulation</i>	Willow-Herb	N
PLANTAGINACEAE			
	<i>Plantago major</i>	Common Plantain	I
POACEAE			
	<i>Agrostis stolonifera</i>	Redtop	I
	<i>Cynodon dactylon</i>	Bermuda Grass	I
	<i>Digitaria sanguinalis</i>	Crab grass	I
	<i>Echonochoa crusgalli</i>	Barnyard Millet	I
	<i>Lolium perenne</i>	Italian Ryegrass	I
	<i>Piptatherum miliaceum</i>	Rice grass	I
	<i>Polypogon monspeliensis</i>	Rabbitfoot Grass	I
POLEMONIACEAE			
	<i>Microsteris gracilis</i> spp. <i>gracilis</i>	Microsteris	N
POLYGONACEAE			
	<i>Polygonum arenastrum</i>	Common Knotweed	I
	<i>Polygonum lapathifolium</i>	Willow Smartweed	N
	<i>Polygonum punctatum</i>	Dotted Smartweed	N
	<i>Rumex crispus</i>	Curly Dock	I
	<i>Rumex fueginus</i>	Golden Dock	I
	<i>Rumes hymenosephalus</i>	Wild Rhubarb	I
PORTULACEAE			
	<i>Portulaca oleraceae</i>	Purslane	I
PRUMULACEAE			
	<i>Angallis arvensis</i>	Scarlet Pimpernel	I
ROSACEAE			
	<i>Poentilla egedii</i>	Silverweed	
	<i>Rubus ursinus</i>	Calif. Blackberry	N
SALICACEAE			
	<i>Salix exigua</i>	Narrowleaf Willow	N
	<i>Salix lasiolepis</i>	Arroyo Willow	N

SCROPHULARICEAE			
Mimulus guttatus	Marsh Monkey		N
	-Flower		
Scrophularia californica	Figwort		N
SOLANACEAE			
Solanum nodiflorum	Small-Flowered		I
	-Weed		
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



Orcutt Soloman Creek - A

Legend

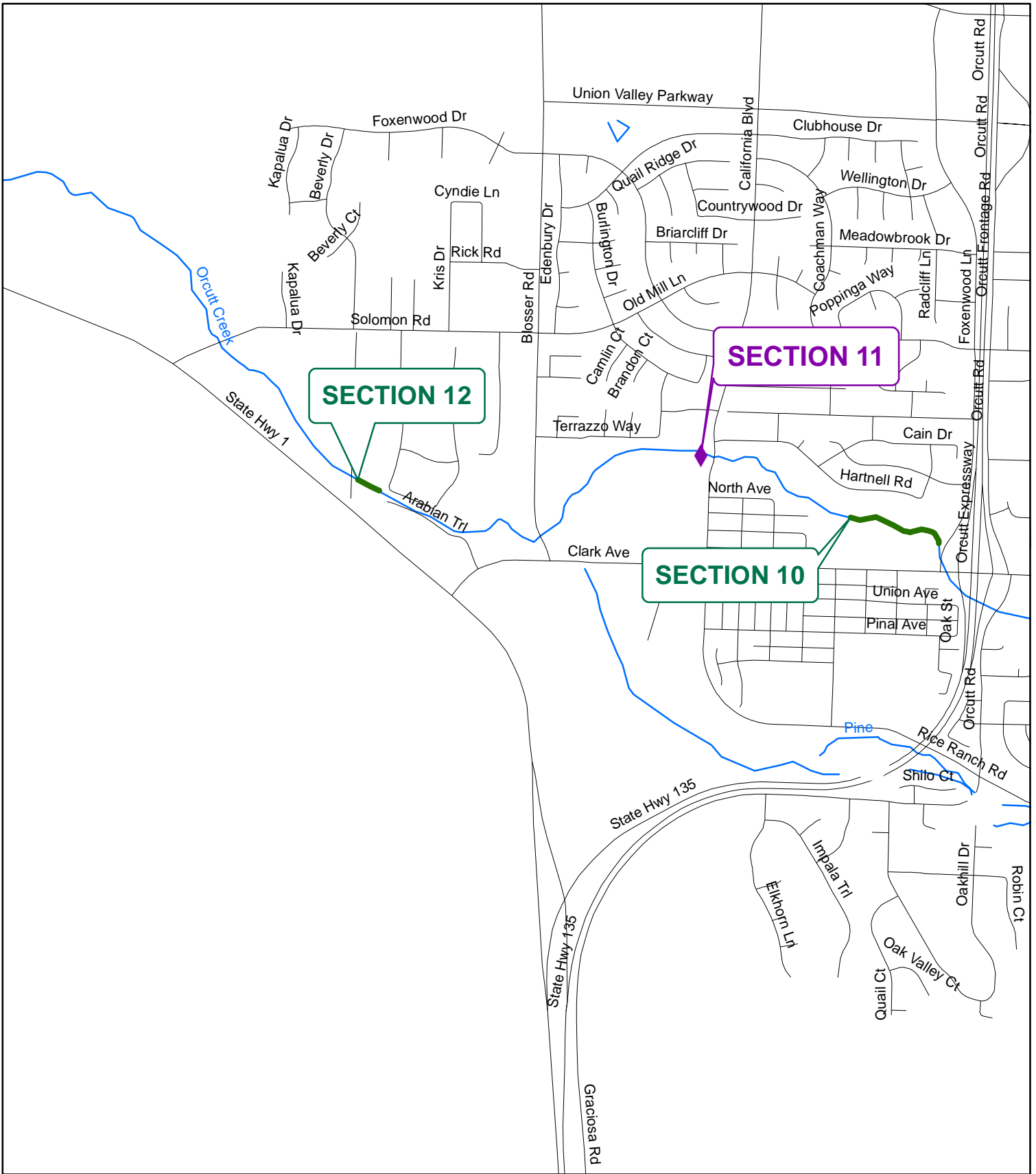
- ◆ Sites
- Lengths

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
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Orcutt Soloman Creek - B

Legend

- ◆ Sites
- Lengths

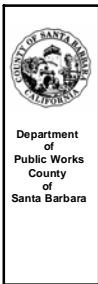
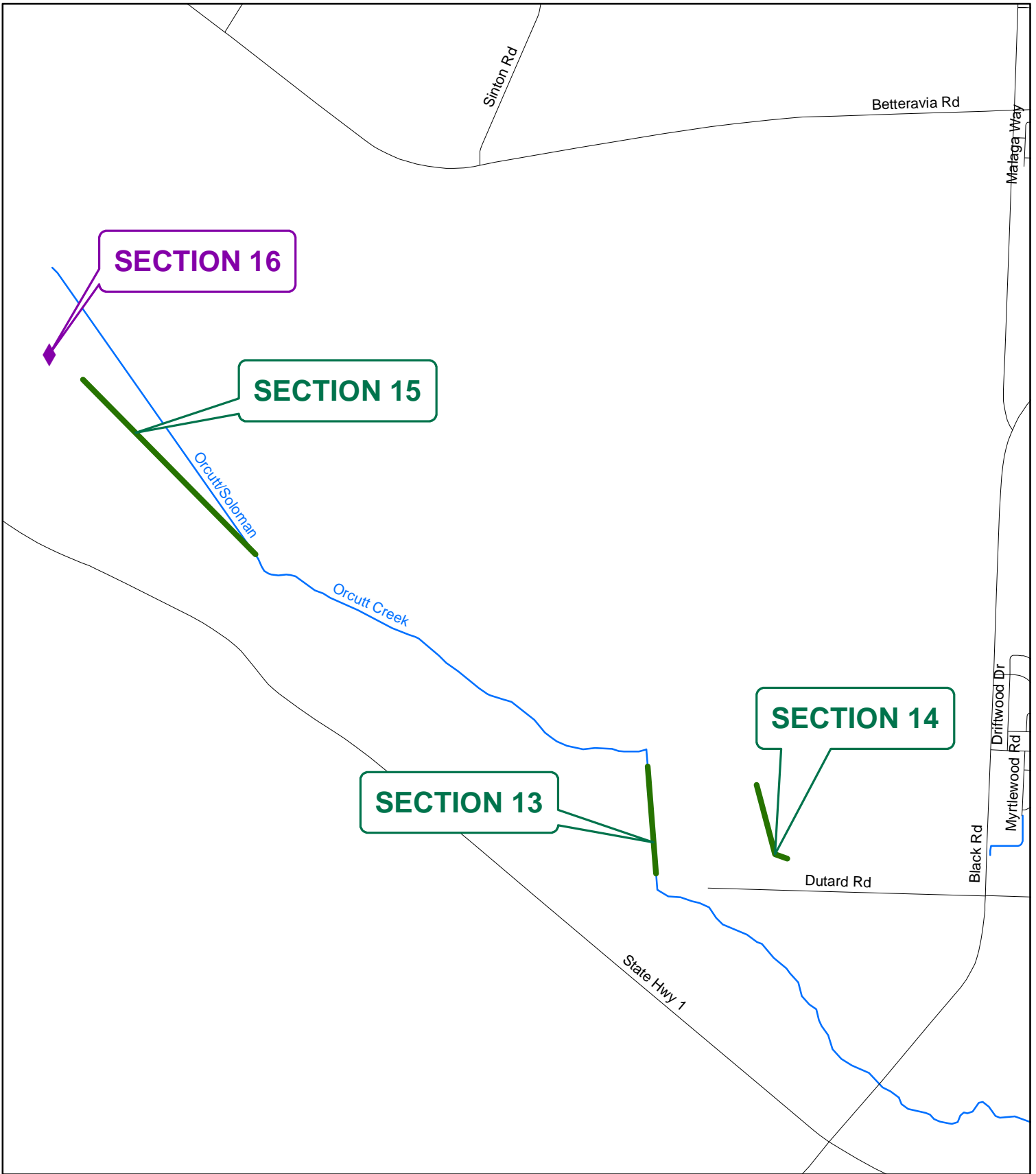
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1,100 550 Feet 0 1,100

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

Prepared By:
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Orcutt Soloman Creek - C

Legend

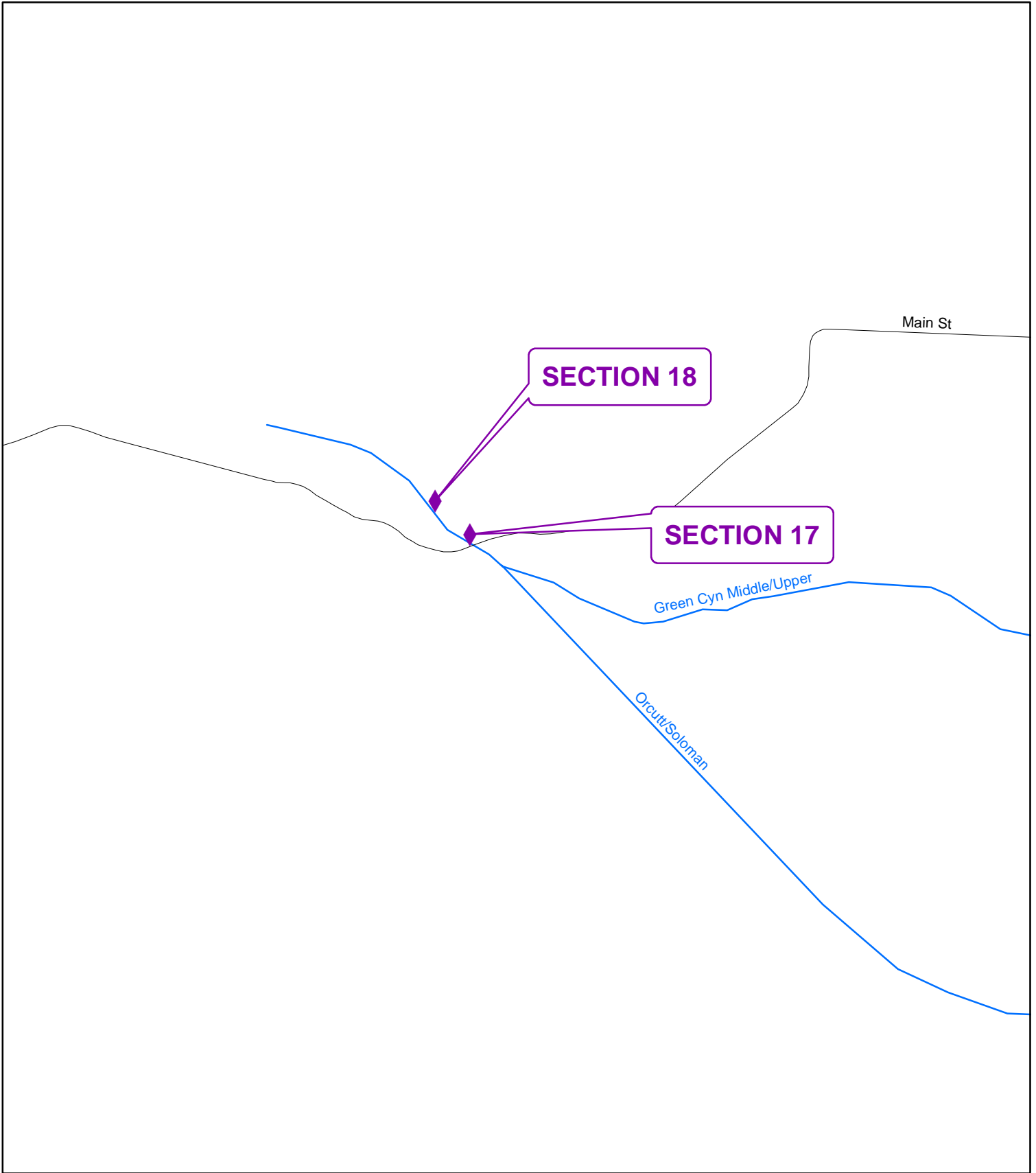
- Sites
- Lengths

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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Orcutt Soloman Creek - D

Legend

- Sites
- Lengths

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Orcutt Soloman Creek



Apr 5, 2018 9:42 AM

Section 1



Apr 5, 2018 12:11 PM

Section 10

Orcutt Soloman Creek



Section 14



Section 15

Orcutt Soloman Creek



Section 17

RODEO-SAN PASCUAL DRAINAGES MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA FLOOD CONTROL ROUTINE MAINTENANCE

Location:

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

Setting:

Inspected on March 29, 2018.

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

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

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

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

Revegetation:

Since the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District has been tracking and reporting the impacts and associated restoration on creeks included in each Annual

Routine Maintenance Plan. The following table is being included in the Annual Routine Maintenance Plan addenda to more easily display and track the District’s restoration efforts.

Rodeo-San Pascual Channel				
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	1000	1000	0	-1000
2007/2008	500	1500	0	-1500
2010/2011	0	1500	0	-1500
2011/2012	0	1500	1500	0
2012/2013	70	0	100	30
2014/2015	0	0	0	30
2018/2019	0	0	0	30

Engineering Analysis:

Rodeo/San Pascual Channel and basin were built by the Soil Conservation Service to manage flows and sediment across the lower Lompoc Valley and maintenance of this facility is essential in providing flood protection to thousands of acres of agriculture. This basin periodically fills with sediment and must be desilted prior to the next rainy season. Removing the accumulated sediment in a staged approach will allow the majority of the basin to remain outside of the impact area and will also allow the retention of ponded water (red-legged frog habitat) within the basin during the project.

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

Project Description:

Section 1:

Desilting Rodeo-San Pascual Basin: The first step of the project will be to reduce the amount of water in the basin and allow the sediment to dry out. Water will be diverted from each incoming channel via a temporary sandbag or soil dam. A flexible pipe will capture water from the dam and lead around the basin to the outlet channel. After the diversions are in place, water will flow around the basin and the sediments will start to dry. Water diversion will continue in this manner for 7 to 21 days, allowing water to percolate out of the sediment and maintaining habitat for aquatic organisms.

As was successfully performed in 2010, at one corner of the basin a temporary settling pit will be excavated first. This pit will allow standing water to drain into one smaller location, providing refuge for aquatic organisms and further allowing sediments to dry out. After the sediment has dried for several days, the settling pit will be excavated further, then the basin will be allowed to dry further for 1-2 additional weeks. This will encourage any remaining wildlife to move upstream, downstream, or into the settling basin where the District Biologist will perform capture and relocation. When sediments are dry enough, excavation will begin.

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

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

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

Section 2

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

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:

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

Resource	Impacts	Mitigation Measures*
Hydrology EIR sections 5.1.2, 5.1.3	H-D	H-1, H-2, H-3, H-4
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-D	H-1, B-2, W-1, W-3, W-4,
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-A, WRR-C, WRR-D,	B-1, B-2
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-I	B-1, B-2, B-3, B-5, B-6, H-1, W-1
Air Quality EIR sections 5.5.2, 5.5.3	AQ-A	A-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 3 weeks to complete.

VASCULAR PLANT LIST
RODEO-SAN PASQUAL CREEK AND BASIN

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
EQUISETACEAE		
<i>Equisetum telematia</i>	Giant Horsetail	N
ANACARDIACEAE		
<i>Toxicodendron diversilobum</i>	Poison Oak	N
APIACEAE		
<i>Conium maculatum</i>	Poison Hemlock	I
<i>Foeniculum vulgare</i>	Fennel	I
ASTERACEAE		
<i>Achillea millefolium</i>	Yarrow	N
<i>Artemisia californica</i>	Calif. Sagebrush	N
<i>Artemisia douglasiana</i>	Mugwort	N
<i>Baccharis gutinosa</i>	Mulefat	N
<i>Baccharis pilularis</i>	Coyote Bush	N
<i>ssp. consanguinea</i>		
<i>Cirsium vulgare</i>	Bull Thistle	I
<i>Carduus pycnocephalus</i>	Italian Thistle	I
<i>Gnaphalium californicum</i>	Pearly Everlasting	N
<i>Lactuca serriola</i>	Prickly Lettuce	I
<i>Picris echioides</i>	Ox Tongue	I
<i>Venegasia carpesoides</i>	Canyon Sunflower	N
<i>Xanthium spinosum</i>	Spiny Cocklebur	I
BRASSICACEAE		
<i>Brassica nigra</i>	Black Mustard	I
<i>Raphanus sativus</i>	Wild Radish	I
<i>Rorippa nasturium</i>		
<i>-aquaticum</i>	Watercress	I
CAPRIFOLIACEAE		
<i>Sambucus mexicana</i>	Elderberry	N
<i>Lonicera involucrata</i>	Twinberry	N
EQUISETACEAE		
<i>Equisetum telmateia</i>	Horsetail	N

FABACEAE			
Lupinus sp.	Lupine		N
Melilotus indicus	Yellow Sweet Clover		I
Vicia benghalensis	Vetch		I
FAGACEAE			
Quercus agrifolia	Coast Live Oak		N
MALVACEAE			
Malva parviflora	Cheeseweed		I
MYRTACEAE			
Eucalyptus sp.	Eucalyptus		I
ONAGRACEAE			
Epilobium adenocaulation	Willow-Herb		N
POACEAE			
Avena fatua	Wild Oaks		I
Bromus diandrus	Ripgut Grass		I
Oryzopsis sp.	Rice grass		I
Polypogon monspeliensis	Rabbitfoot Grass		I
PRUMULACEAE			
Angallis arvensis	Scarlet Pimpernel		I
RANUNCULACEAE			
Clematis ligusticifolia	Creek Clematis		N
RHAMNACEAE			
Rhamnus californica	Coffeeberry		N
ROSACEAE			
Heteromeles arbutifolia	Toyon		N
Rubus ursinus	Calif. Blackberry		N
SALICACEAE			
Populus trichocarpa	Black Cottonwood		N
Salix lasiolepis	Arroyo Willow		N
SCROPHULARICEAE			
Mimulus cardinalis	Scarlet Monkey -Flower		N
Scrophularia californica	California Figwort		N

SOLANACEAE

Solanum douglasii

Douglas Nightshade

N

URTICACEAE

Urtica holosericea

Giant Nettle

N

VERBENACEAE

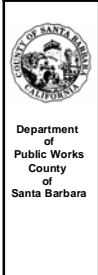
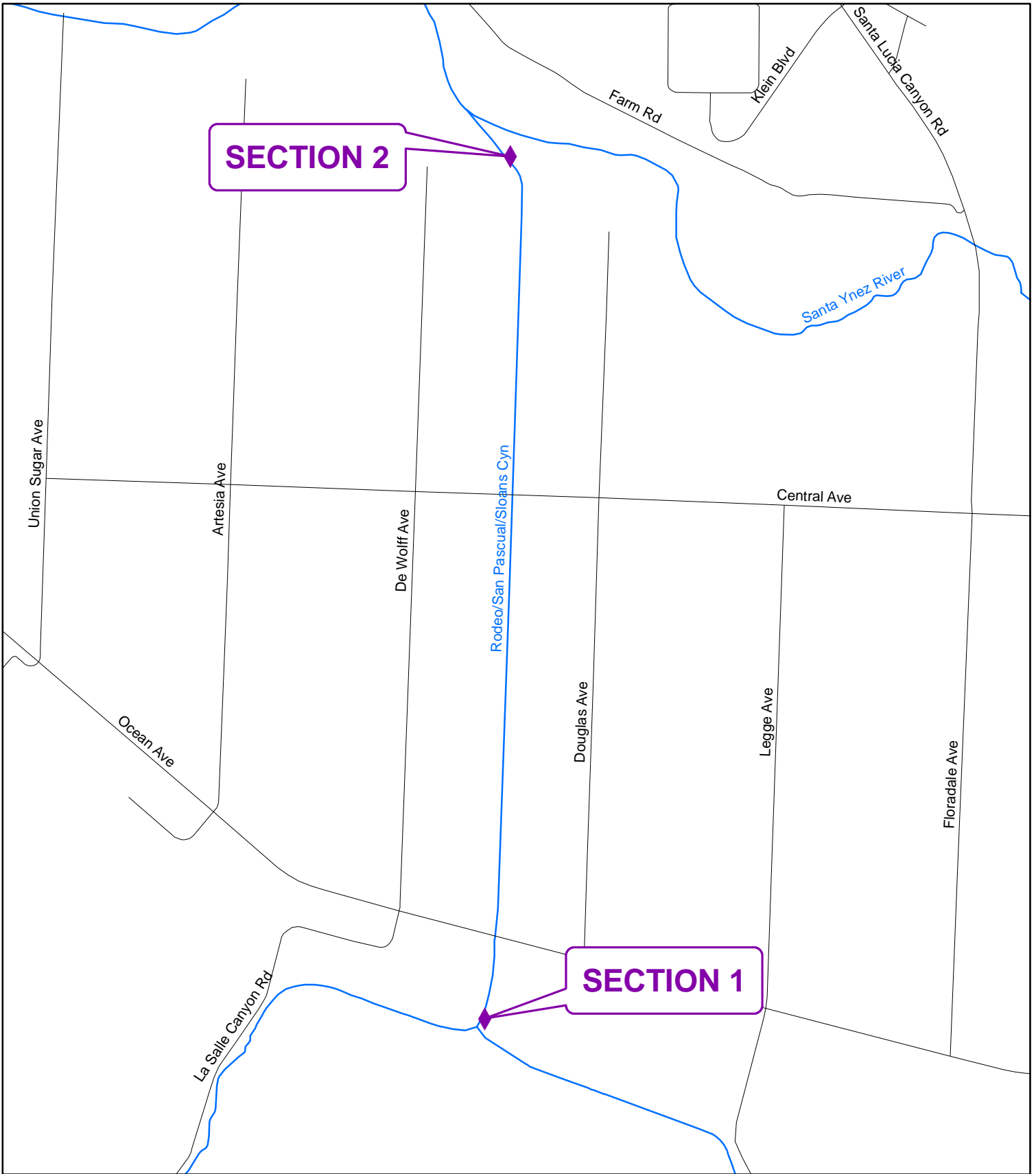
Verbena lasiotachys

Verbena

N

* I = Introduced


N = Native




**Rodeo - San Pascual
Basin and Channel Outlet**

Legend

- Sites
- Lengths



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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Rodeo – San Pascual Basin and Channel Outlet



Mar 29, 2018 10:39 AM

Section 1



Mar 29, 2018 10:56 AM

Section 2

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 April 5, 2018.

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

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

Abex Channel is a combination of concrete-lined and earthen ditch that is located adjacent to the Santa Maria Airport and is a tributary to Airport Ditch. The Santa Maria Airport property is located to the south and west, industrial buildings and a large paved lot are located to the north. The earthen portion of this channel is located at the confluence with Airport Ditch and is approximately 500 feet long. The remaining length of Abex Ditch (upstream of the earthen portion) is concrete lined, travels amongst industrial and office buildings located northeast of the airport, and contains poor habitat for any native plants or animals. Portions of the concrete-lined channel are underground within culverts. The District typically performs maintenance tasks only in the earthen segment of Abex Channel. This reach often becomes colonized with patches of cattail and bulrush which constrict the flow capacity of the drainage. Adjacent vegetation is mostly weedy species such as wild radish, black mustard and telegraph weed along the banks. The District installed approximately 4,000 square feet of native riparian vegetation along 300 linear feet of the south bank in 2005.

Revegetation:

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

Santa Maria Airport Channel				
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	3000	1000	3400	3310
2014/2015	200	0	0	3110
2015/2016	0	0	0	3110
2016/2017	0	0	0	3110
2017/2018	0	0	0	3110
2018/2019	0	0	0	3110

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	0
2016/2017	0	0	0	0
2017/2018	0	0	0	0
2018/2019	0	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. Red legged frogs were observed in the wetted portions during surveys in 2003 and maintenance monitoring in 2005. In dryer years, RLF are generally not detected in the channel.

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

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

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

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

Engineering Analysis:

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

Project Description:

Airport Channel

Section 1:

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

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

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

Section 2:

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

Section 3:

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

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

Section 4:

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

Abex Channel

Section 1:

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

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

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

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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.

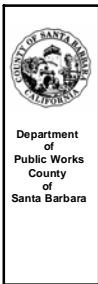
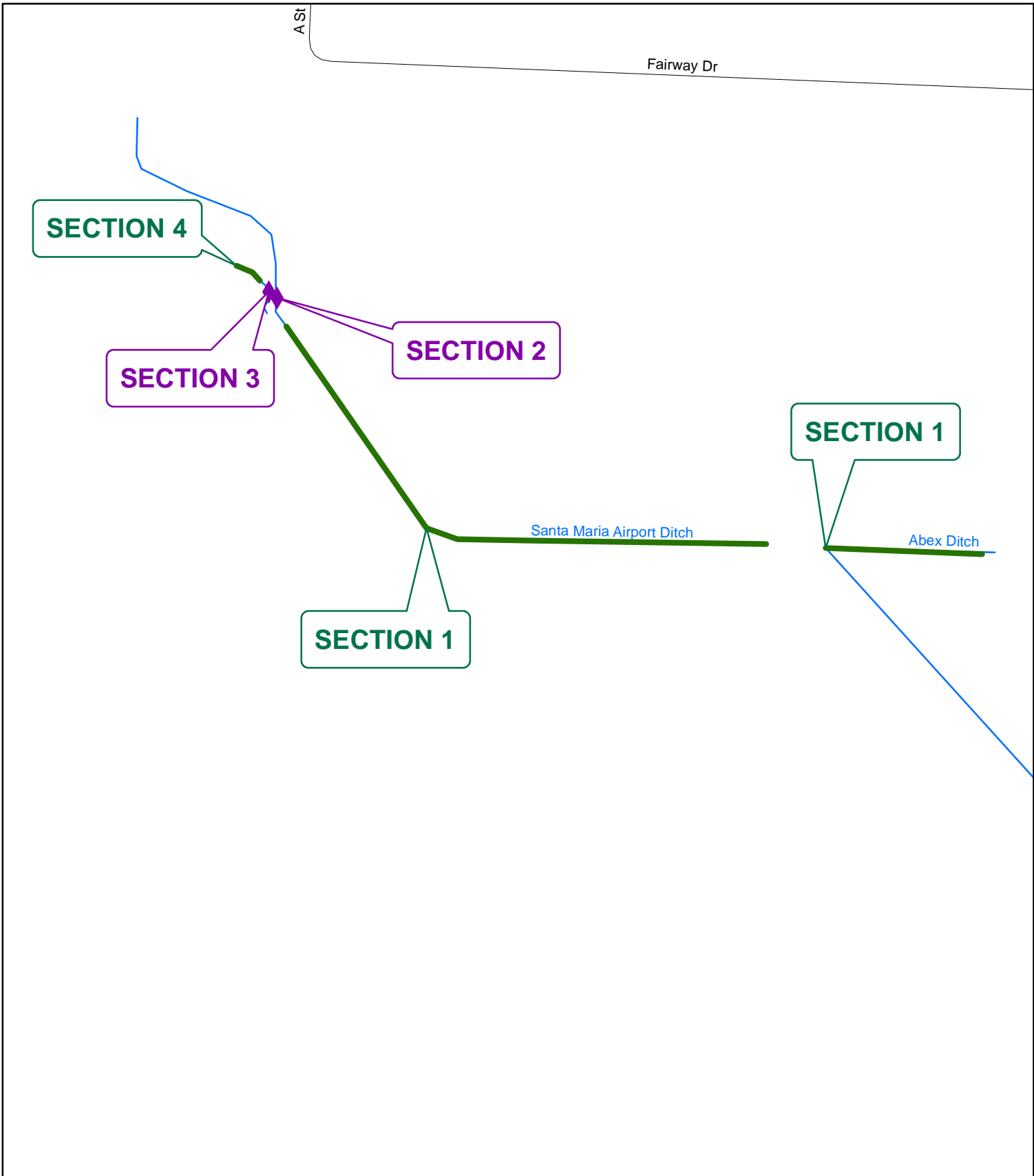
VASCULAR PLANT LIST
SANTA MARIA AIRPORT/ABEX CHANNELS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
ANACARDIACEAE		
Schinus molle	Pepper Tree	I
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Baccharis pilularis	Coyote Bush	N
ssp. consanguinea		
Carduus phonocephalus	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	Common Rush	N
var. brunneus		
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




**Santa Maria Airport/
ABEX Channels**

Legend

- Sites
- Lengths



This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and 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.



Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Santa Maria Airport / ABEX Ditches



ABEX Section 1



Santa Maria Airport Section 2

Santa Maria Airport / ABEX Ditches



Santa Maria Airport Section 3



Santa Maria Airport Section 4

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, 2018.

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

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

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

Revegetation:

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

Santa Maria River				
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	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 Cert72,150ft ² , 1.7ac	0 2.3 acre	0 0	1.15 -1.7
2011/2012	Annual Plan Cert.....800 ft ² 34210WQ17 CertN/A	0 0	0 0	1.14 -1.7
2012/2013	Annual Plan Cert.....325 ft ² 34210WQ17 CertN/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	0	0	1.4ac**
2017/2018	400	0	0	1.4ac
2018/2019	0	0	0	1.4ac

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

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

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

Over the years the District has allowed and encouraged growth of willows and shrub/scrub vegetation in the river channel, especially along the toe of the levee. From Fugler Point, where the levee starts, to the terminus at Highway 1 in Guadalupe, the levee system encompasses approximately 4,100 acres of land of which nearly 1,800 acres are covered by varying densities of the shrub/scrub type of habitat. The vegetated areas have various densities of natives such as mulefat, bush lupine, sandbar willow, coyote bush, mugwort, and a variety of nonnatives including wild radish, pearly everlasting, malva, black mustard, bromes, and morning glory, to

name just a few. The Army Corps of Engineers has agreed that this vegetation that has been allowed to colonize the channel can be used as mitigation acreage for the temporal disturbance during pilot channel construction and other maintenance-related impacts. . This type of habitat is of relatively low quality; the diversity, density and wildlife habitat is essentially identical between the areas to be cleared and the colonized vegetation on the adjacent terraces. In contrast, disturbance in higher-quality willow woodland has historically been mitigated by the District through compensatory restoration sites with new plantings.

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

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

Engineering Analysis:

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

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

Project Description:

Section 1:

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

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

The District crew proposes to maintain the existing trench by spot-spraying the center of the channel to minimize encroaching vegetation and obstructions. Spot-spray every 4-6 weeks during summer and fall will prevent the need for further more aggressive weed treatments and excavation. Spot-spray will be limited the center channel so that the edges of the toe and banks

can remain for wildlife habitat. Spot-spray will not occur in Feb/March/April during RLF breeding season.

Section 2:

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

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

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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

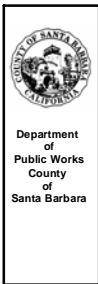
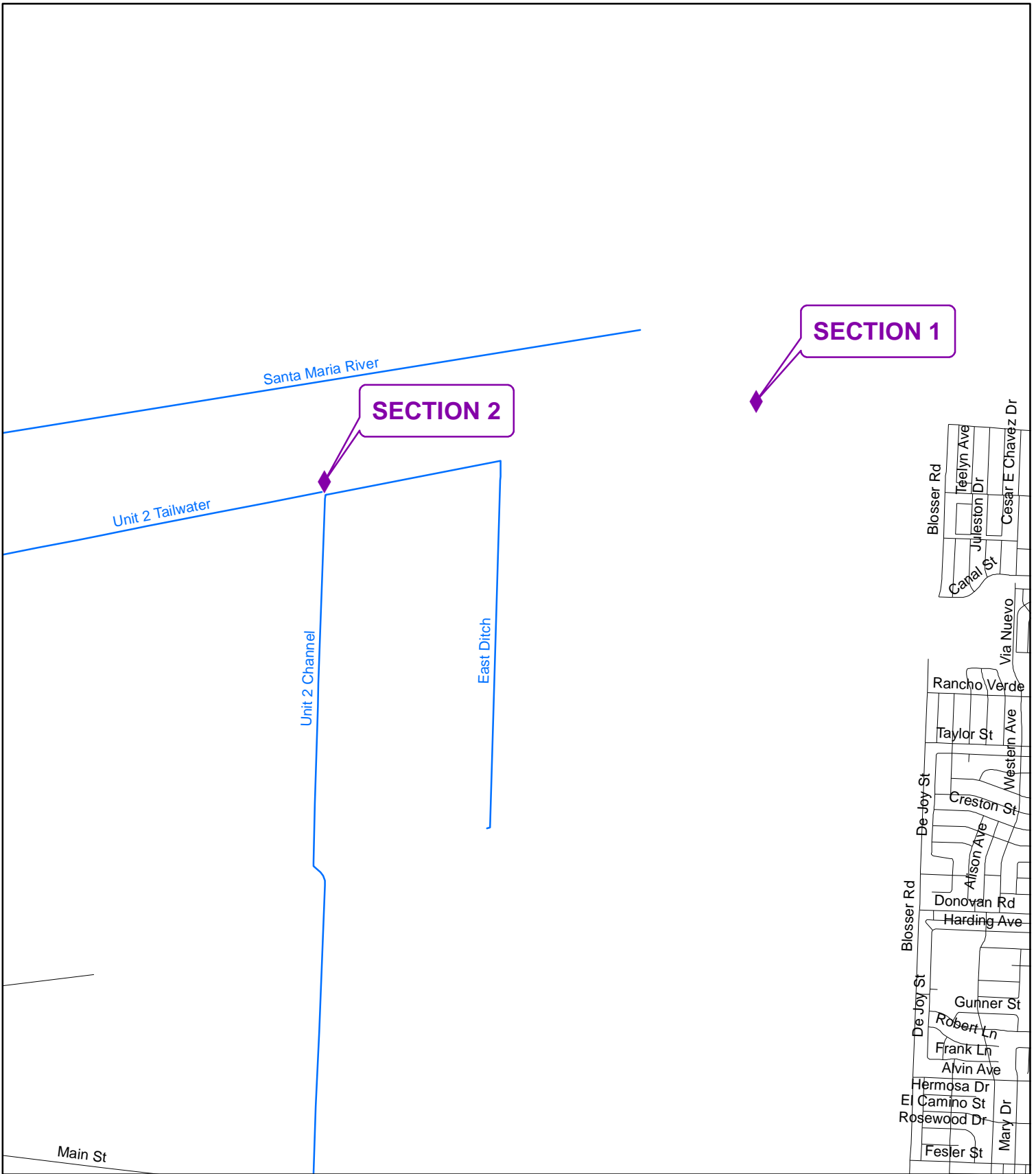
<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
ANACARDIACEA		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis douglasii	Marsh Baccharis	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			
	<i>Rosa californica</i>	Wild Rose	N
	<i>Rubus ursinus</i>	California Blackberry	N
SALICACEAE			
	<i>Populus fremontii</i>	Fremont Cottonwood	N
	<i>Salix lasiolepis</i>	Arroyo Willow	N
	<i>Salix exigua</i>	Sandbar Willow	N
SCROPHULARIACEAE			
	<i>Mimulus guttatus</i>	Marsh Monkey Flower	N
	<i>Minimus guttatus</i>	Monkey Flower	N
	<i>Veronica angallis-aquatica</i>	Speedwell	N
SOLANCEAE			
	<i>Nicotiana glauca</i>	Tobacco Tree	I
URTICACEAE			
	<i>Urtica holosericea</i>	Giant Nettle	N
VERBENACEAE			
	<i>Verbena lasiostachys</i>	Verbena	N

* I = Introduced


N = Native



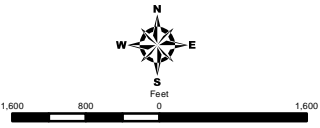
Legend

◆ Sites

Santa Maria River



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.



Annual Routine Maintenance Plan
Fiscal Year 2018-2019

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

Santa Maria River



Section 1



Santa Maria Airport Section 2

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

Setting:

Inspected on March 30 and April 12, 2017. Due to the Thomas Fire this project was unable to be completed in 2017 and will be carried over to the 2018/19 Annual Plan.

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

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

The riparian vegetation contains well developed, multi successional stages of willow riparian woodland and also areas of specimen cottonwood and sycamore trees. The understory is densely vegetated almost to the point of being impenetrable. Understory vegetation consists of large stands of California blackberry, clematis, poison oak, elderberry, stinging nettle and nightshade while the flow areas of the river are dominated by young willows intermixed with areas of cattail and bulrush. The District will be removing willows and will not disturb the more complex understory areas.

Revegetation:

After a 100'-wide clearing project in December 1997/January 1998, the District implemented 18 acres of restoration along the Santa Ynez River in three separate locations to compensate for the 16 acres of riparian vegetation that was removed. One location is just upstream of H-Street along the south side of the river in a fallow field, another site was located at Riverbend Park near Rucker Road on the south side of the river and the third site was located beginning just upstream of Riverbend Park. The proposed maintenance is within the same areas that were last cleared in 1998 therefore no additional restoration is proposed for this project.

Wildlife Survey:

The Santa Ynez River has the highest quality riparian habitat of any other drainage system throughout Santa Barbara County and several listed species are either known to historically or currently occur at least nearby the proposed project reach. The California red-legged frog is known to occur and breed in parts of the project reach.

The overall project length stretches approximately 1400 feet up and downstream from the confluence with Rodeo-San Pascual outlet. The California Natural Diversity Database (CNDDDB) shows historical observations of steelhead trout and red legged frog in the project region. The river is designated as critical habitat for southern California steelhead, willow flycatchers are historically known to nest within the river corridor but not within the project reach. The least Bell's vireo is known to nest in the upper Santa Ynez River drainage and was heard within the lower Lompoc Valley (outside of the current proposed project), in the late 1980s.

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

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

Engineering Analysis:

As described in the 2001 Updated Routine Maintenance PEIR, the objectives for clearing obstructive vegetation within the Santa Ynez River is to maintain a 100-foot wide swath (or its equivalent in two swaths with a minimum width of 30 feet for each swath) along the project reach with non-obstructive vegetation in order to allow sufficient

channel capacity for certain flood flows. The last time vegetation was cleared within the river at this location was during the 2011/2012 Maintenance Season and since that time vegetation has regrown and is obstructing flow areas. Over time the 100'-wide channel has been reduced. In order to restore capacity through this area and allow floodwaters to enter and flow through the Santa Ynez River, the District will clear an average of 50' of obstructive vegetation along the length of the channel.

Project Description:

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

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

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

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

Section 1:

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

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

Section 2:

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

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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

(continued)

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

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

(continued)

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

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

(continued)

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

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

(continued)

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

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

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

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

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

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

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

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

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

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

Habit abbreviations:

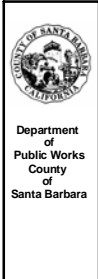
AH = Annual herb; BH = Biennial herb; PH = Perennial herb; AG = Annual grass; PG = Perennial grass;
V = Vine; S = Shrub; T = Tree

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,



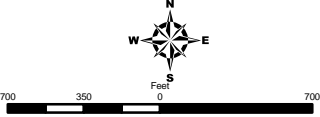
Legend

- █ Lengths
- █ Reveg

Santa Ynez River



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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Santa Barbara County, California

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

Santa Ynez River



Section 1

UNIT II, UNIT II TAILWATER, EAST, AND WEST MAIN CHANNELS ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:

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

Setting:

Inspected on March 26, 2018.

West Main Street Channel:

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

Unit II Channel:

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

Unit II Tailwater Channel:

Unit II Tailwater Channel is an unlined, trapezoidal channel that carries highly turbid irrigation and storm water runoff from agricultural fields south of the Santa Maria River. The channel trends westward for about 1.5 miles parallel to the Santa Maria River Levee and discharges into the river just east of Bonita School Road. Dirt access roads run parallel to the channel on both sides. Vegetation within the bottom of the channel is relatively sparse and the banks of the channel are vegetated with weedy species such as black mustard, wild radish, cheeseweed and annual grasses. There are no trees along this drainage, except occasional willows isolated at the intersection with Bonita School Road. Water level is highly variable and can vary from 2-plus feet deep to completely dry, depending upon the surrounding crops and irrigation schedules.

East Channel:

The segment of East Channel that is maintained by the District is a 2-mile portion of the ditch that runs parallel to the Santa Maria River on the south side of the levee. The East Channel runs along agricultural fields and drains into Unit II, then through the levee via culvert. Vegetation in the bottom of the channel is relatively sparse due to infrequent flow; the banks are vegetated with weedy species such as black mustards, wild radish, cheeseweed, and annual grasses. There are no trees along this ditch. Water flow is highly variable and depends on runoff from the surrounding crops. Most of the year, East Ditch is dry.

Revegetation:

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

Maintenance proposed in Unit II Channel, Unit II Tailwater Channel and West Main Channel will result in small patches of temporal impacts to native vegetation. Restoration within these channels is not reasonable because they are agriculture 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
2016/2017	0	0	0	-450
2017/2018	0	0	0	-450
2018/2019	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, regularly since 2003. Red legged frogs have not been found in East Channel, but this drainage completely dries in most years and minimal maintenance (and surveys) has been performed.

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

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

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

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

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

Burrowing owls may forage along the adjacent slopes and banks of the channel, but the species does not inhabit the wetted channel or riparian vegetation. Burrowing owls prefer sparsely vegetated dry slopes and hilltops. Vegetation maintenance such as mowing and desilting obstructive vegetation is limited to time periods outside burrowing owl nesting. Mowing is generally compatible with burrowing owl. All work is proposed in late summer and fall, outside of the burrowing owl nesting season.

Engineering Analysis:

The Unit II/West Main Channel system, including Unit II Tailwater channel and East Channel are engineered drainages designed to convey storm flows from the City of Santa Maria and adjacent agricultural areas. Reduction in capacity as a result of excessive vegetation and/or sedimentation subjects the surrounding areas to frequent flooding. It is necessary to maintain the proper gradient throughout the system to ensure that water reaches the Santa Maria River. In fact, portions of this system are in a leveed section, which is required to make the necessary gradient to the river. Overflows from this leveed section could have devastating results. The Santa Maria River valley is very flat and all of the drainage courses south of the levee and into the river are prone to sedimentation. Vegetation in the channel bed aggravates this situation. Sediment accumulation in these drainages can severely impede flows toward the Santa Maria River Levee and into the river. If the sediment is not removed, flows from the ditches will not flow into the river and will accumulate on the south side of the levee resulting in flooding of adjacent prime farmlands. In addition, sedimentation or vegetative debris can wedge open the levee flap gates. In such a case, flows from the river could back-flow through the gates and further add to flooding on the landward side of the Levee.

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

Project Description:

West Main Channel:

Section 1:

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

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

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

Section 2:

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

Sections 3:

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

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

Unit II Channel:

Section 1:

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

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

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

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

Section 2:

The east bank of this reach has not been maintained in the past few seasons, as part of an effort to leave half of the channel undisturbed for wildlife. In 2018, this bank has become densely populated with weedy growth and sediment bars have collected at the lower toe of the bank. The project in 2018 will involve swapping the maintenance work to the east bank and leaving the west bank undisturbed.

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

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

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

Unit II Tailwater:

Section 1:

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

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

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

Section 2:

This section of the channel is a shallow ag ditch that has accumulated sediment. The depth and capacity of the channel is constrained due to excess sediment. The District will desilt a length approximately 100 ft long, 5 ft wide and 3 ft deep using a Gradall excavator stationed along the existing access road. Approximately 55 cubic yards of

material will be removed from the channel. The material will be placed behind the machine on the access road. Some of the excavated material may be re-used at Unit 2 channel fill and groom potholes and erosion pockets.

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

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

East Ditch:

Section 1:

East Ditch will be mowed for the entire length. Additionally, the District will spot spray woody weeds along the centerline of the drainage ditch to keep an unobstructed pathway for flow. One edge of the channel will 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.

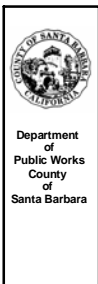
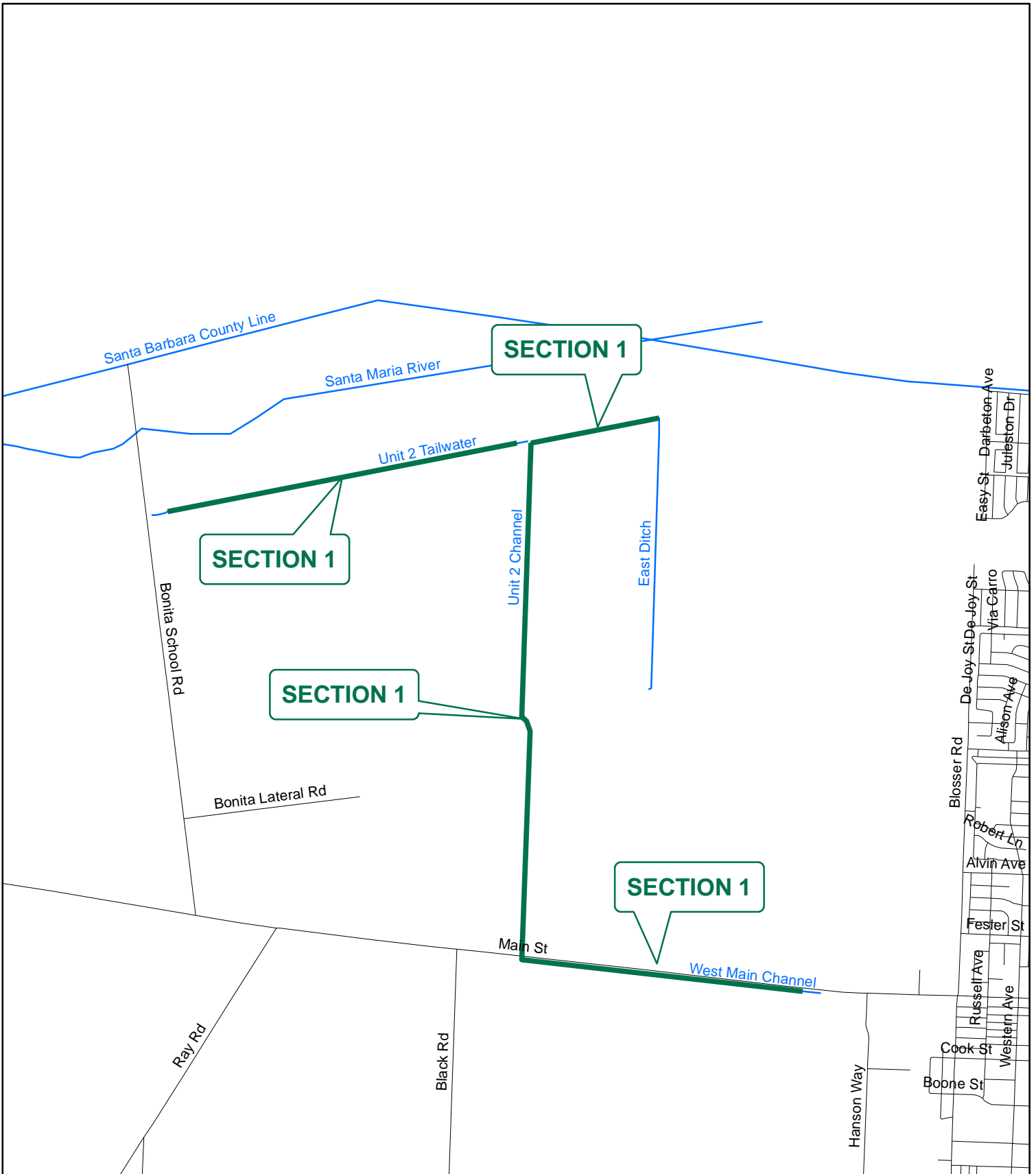
VASCULAR PLANT LIST
Unit II/West Main, East and Unit II Tailwater Channels

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
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
Rippa nasturium -aquaticum	Watercress	I
CHENOPODIACEAE		
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		
<i>Salix lasiolepis</i>	Arroyo Willow	N
TYPHACEAE		
<i>Typha</i> sp.	Cattail	N
URTICACEAE		
<i>Urtica holosericea</i>	Giant Nettle	N

* I = Introduced

N = Native



Legend

 Lengths

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



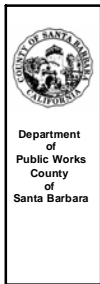
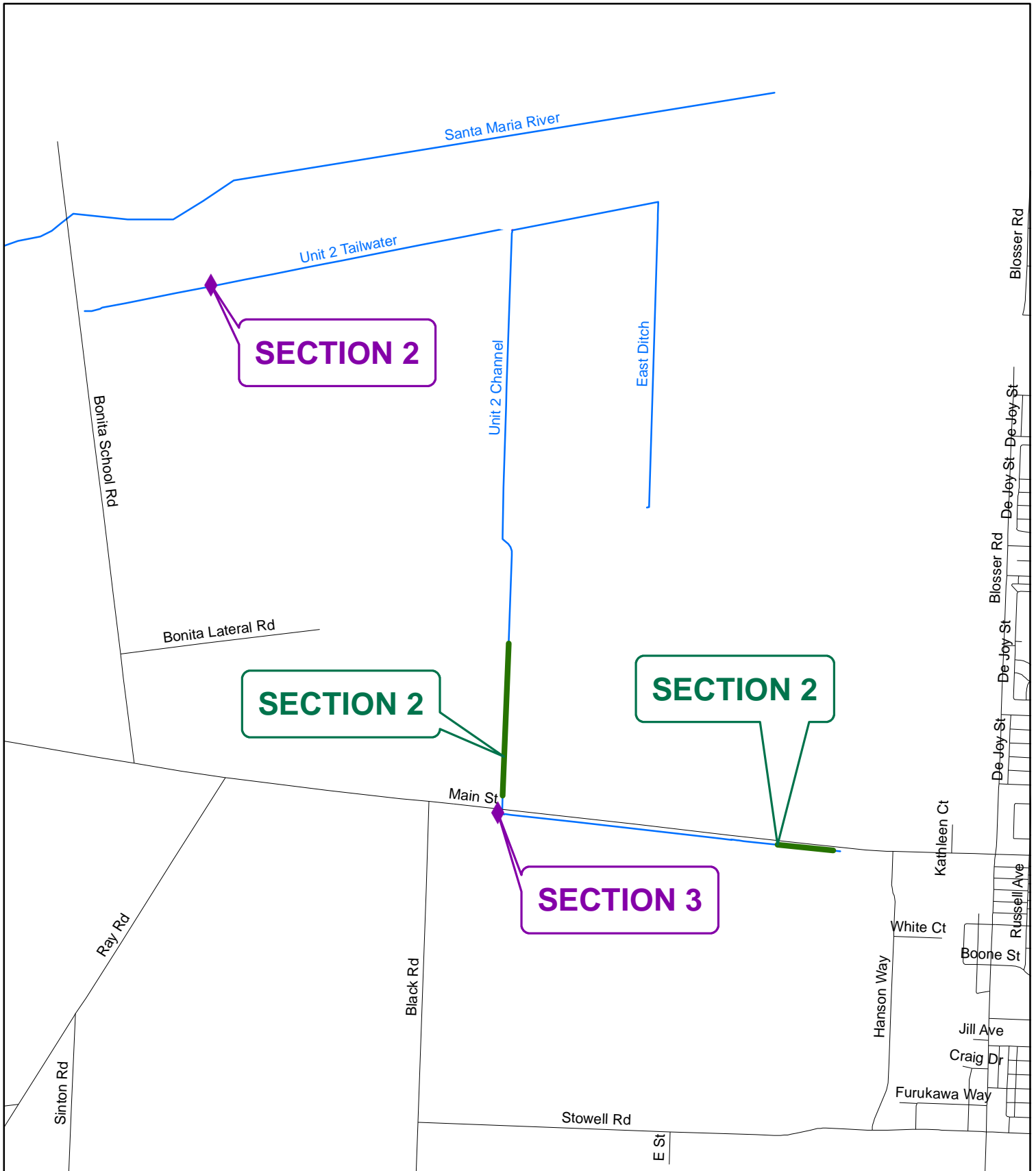
This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages 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.



**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

Santa Barbara County, California

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



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

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.

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Coordinate System: State Plane California Zone V NAD 1983

Scale: 1,900 Feet

Unit 2 Ditches



Mar 26, 2018 9:22 AM

West Main Channel - Section 2



Mar 26, 2018 9:32 AM

West Main Channel - Section 3

Unit 2 Ditches



Mar 26, 2018 9:39 AM

Unit 2 – Section 2



Mar 26, 2018 10:22 AM

Unit 2 Tailwater – Section 2

ZANJA DE COTA CREEK ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:

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

Setting:

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

Revegetation:

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

Zanja de Cota				
Annual Plan Year	New Temporal Impacts to Native Vegetation (square feet)	Proposed Restoration (square feet)	Restoration Implemented (square feet)	Surplus Restoration (square feet)
2012/2013	100	0	0	-100
2015/2016	150	0	250*	0
2017/2018	50	0	50*	0

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

Engineering Analysis:

Zanja de Cota is a very narrow and shallow drainage that passes through the back yards of many residences as well as through culverts and bridges within the community of Santa Ynez. Most of the drainage flows directly through the back yards of residential areas and is approximately 5' wide. Obstructive vegetation impedes flows and adds to the debris load generated during high runoff. Vegetation can plug bridges, downstream culverts, and divert flows out of the

narrow/shallow channel and cause flooding to adjacent properties. Removing obstructive vegetation and debris from the active channel can reduce the potential for flooding.

Project Description:

Section 1:

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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

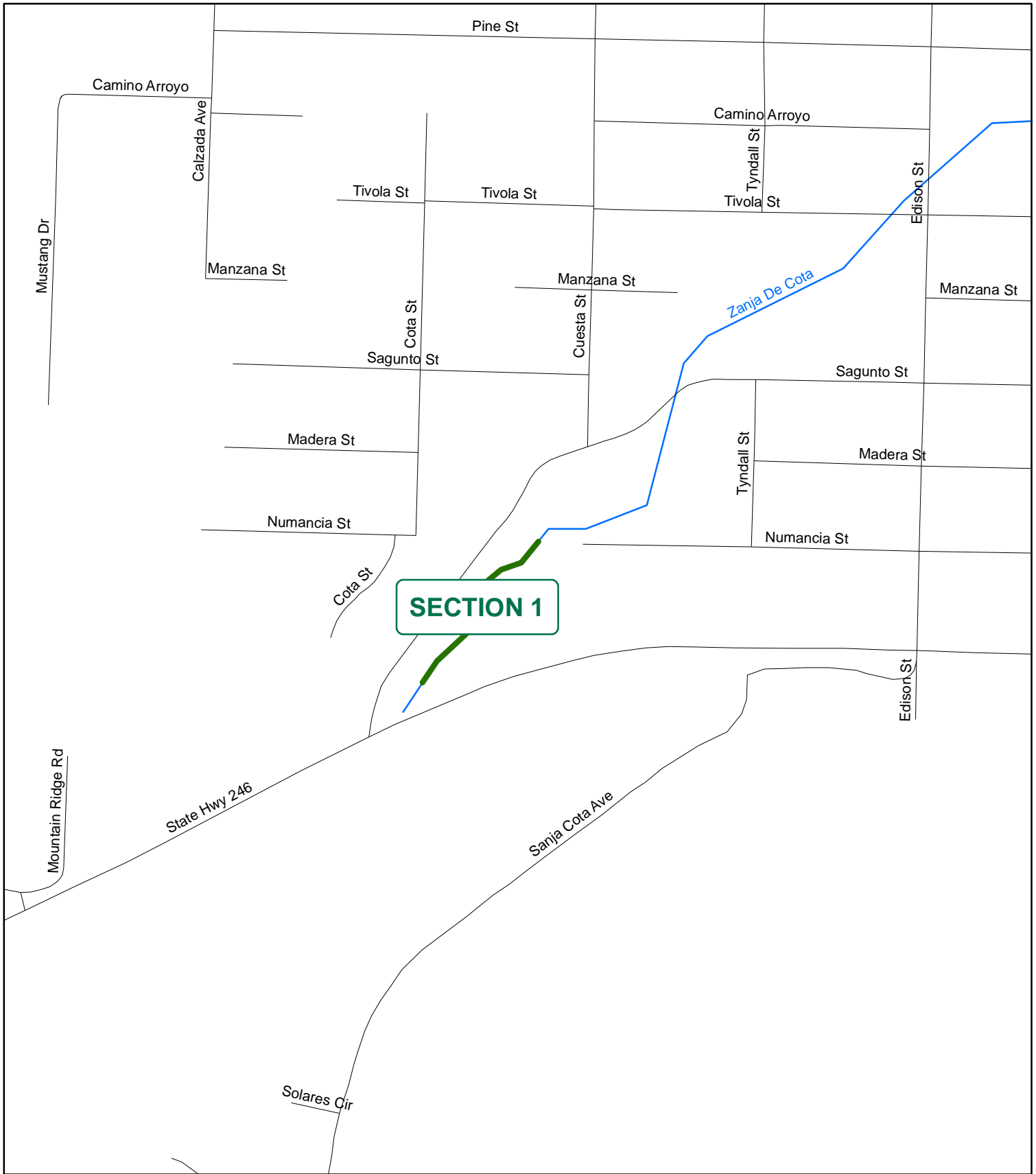
Project Specifics:

The project will take 4 days to complete.

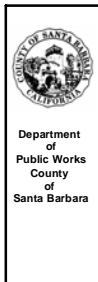
**ZANJA DE COTA CREEK
VASCULAR PLANT LIST**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
AMARANTHACEAE		
Amaranthus sp.	Amaranth	I
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
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
Silybum marianum	Milk Thistle	I
Xanthium strumarium	Cocklebur	I
BRASSICACEAE		
Brassica nigra	Black Mustard	N
Raphanus sativus	Wild Radish	I
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		
Eucalyptus globulus	Blue Gum	I
POACEAE		
Avena fatua	Wild Oats	I

Bromus diandrus	Ripgut Grass	I
Hordeum sp.	Hordeum	I
ROSACEA		
Rubus ursinus	California Blackberry	N
Rubus armeniacus	Himalayan Blackberry	I
SALICACEAE		
Salix laevigata	Red Willow	N
Salix exigua	Sandbar Willow	N
Populus balsamifera	Black Cottonwood	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I



SECTION 1

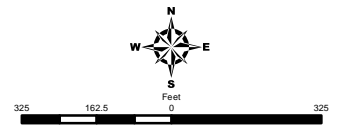


- Legend
-  Sites
 -  Lengths

Zanja de Cota Creek



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Annual Routine Maintenance Plan
Fiscal Year 2018-2019

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

Zanja De Cota Creek



Section 1

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

Location:

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

Setting:

Inspected on April 2, 2018.

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

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

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

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

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

The District's Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width,

including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel. The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper, and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

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

Revegetation:

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

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

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	30	0	0	1,090
2017/2018	0	0	0	1,090
2018/2019	0	0	0	1,090

*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:

A down willow limb will be removed from the channel.

Section 2:

A down willow limb will be removed from the channel.

Section 3:

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

Section 4:

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

Section 5:

A down willow limb will be removed from the channel.

Section 6:

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

Section 7:

A down willow will be removed from the active channel.

Section 8:

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

Section 9:

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

Section 10:

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

Section 11:

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

Section 12:

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

Section 13:

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

Section 14:

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

Section 15:

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

Section 16:

A down willow and eucalyptus limb will be removed from the active channel.

Section 17:

Willow branches from the left bank are projecting into the active channel and will be limbed.

Section 18:

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

Section 19:

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

Arundo Removal (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 sixth year of the effort and new arundo removal work will focus on the areas downstream of Veronica Springs Road. Re-vegetation and re-treatment of arundo resprouts will occur in areas where arundo has already been removed (primarily from Veronica Springs Road to Cliff Drive).

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

Impact Analysis and Mitigation Measures:

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

Impacts:

Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance

Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:

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

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

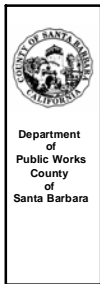
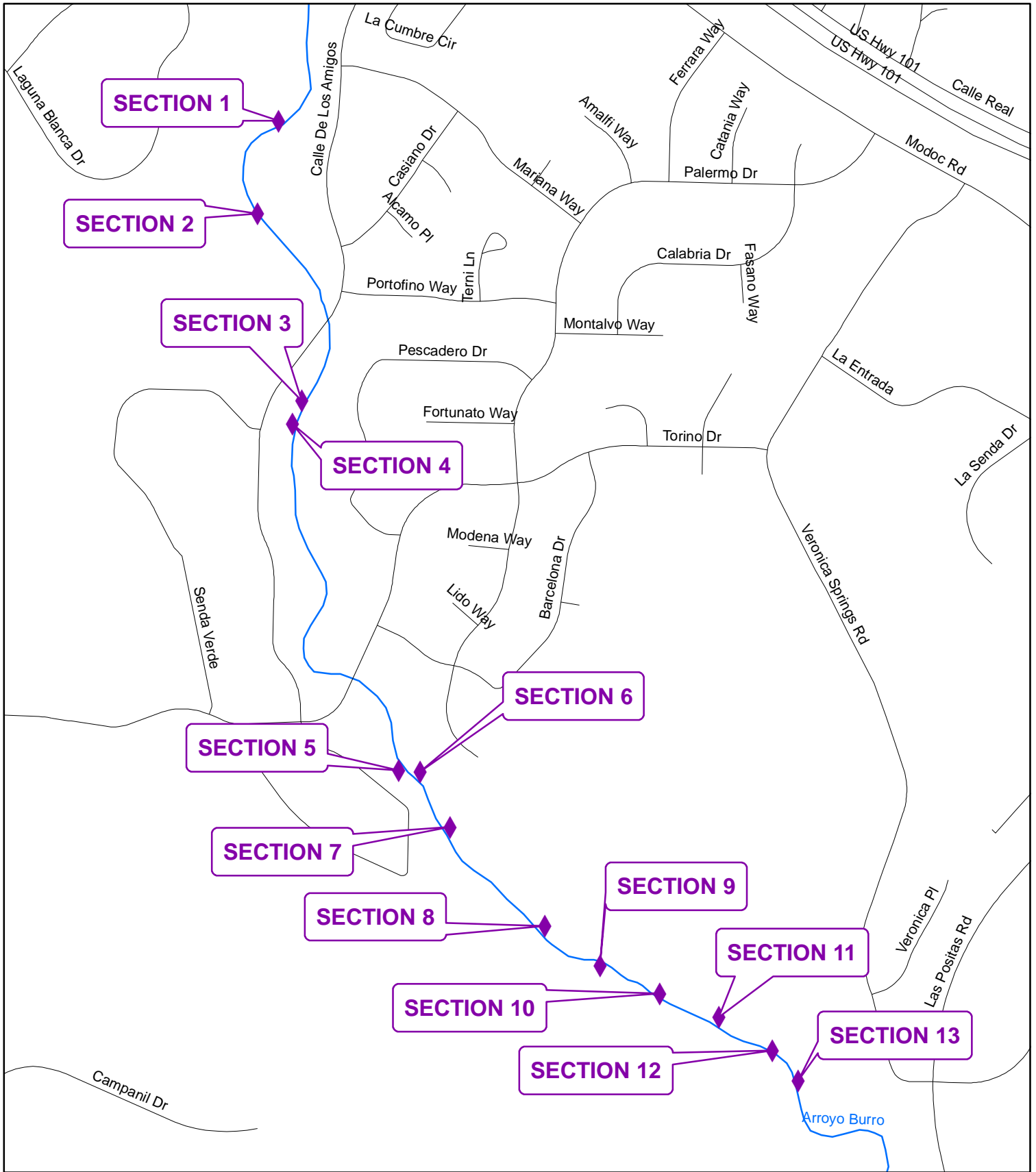
VASCULAR PLANT LIST
ARROYO BURRO CREEK

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN</u>
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	Coyote Bush	N
ssp. consanguinea		
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	Watercress	I
-aquaticum		
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	Rippgut Grass	I
Cortaderia atacamensis	Pampas Grass	I
Oryzopsis miliacea	Rice Grass	I
Polypogon interruptus	Beard Grass	I

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

* I - Introduced
N - Native



Arroyo Burro Creek-A

Legend

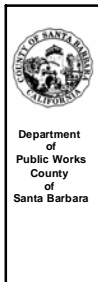
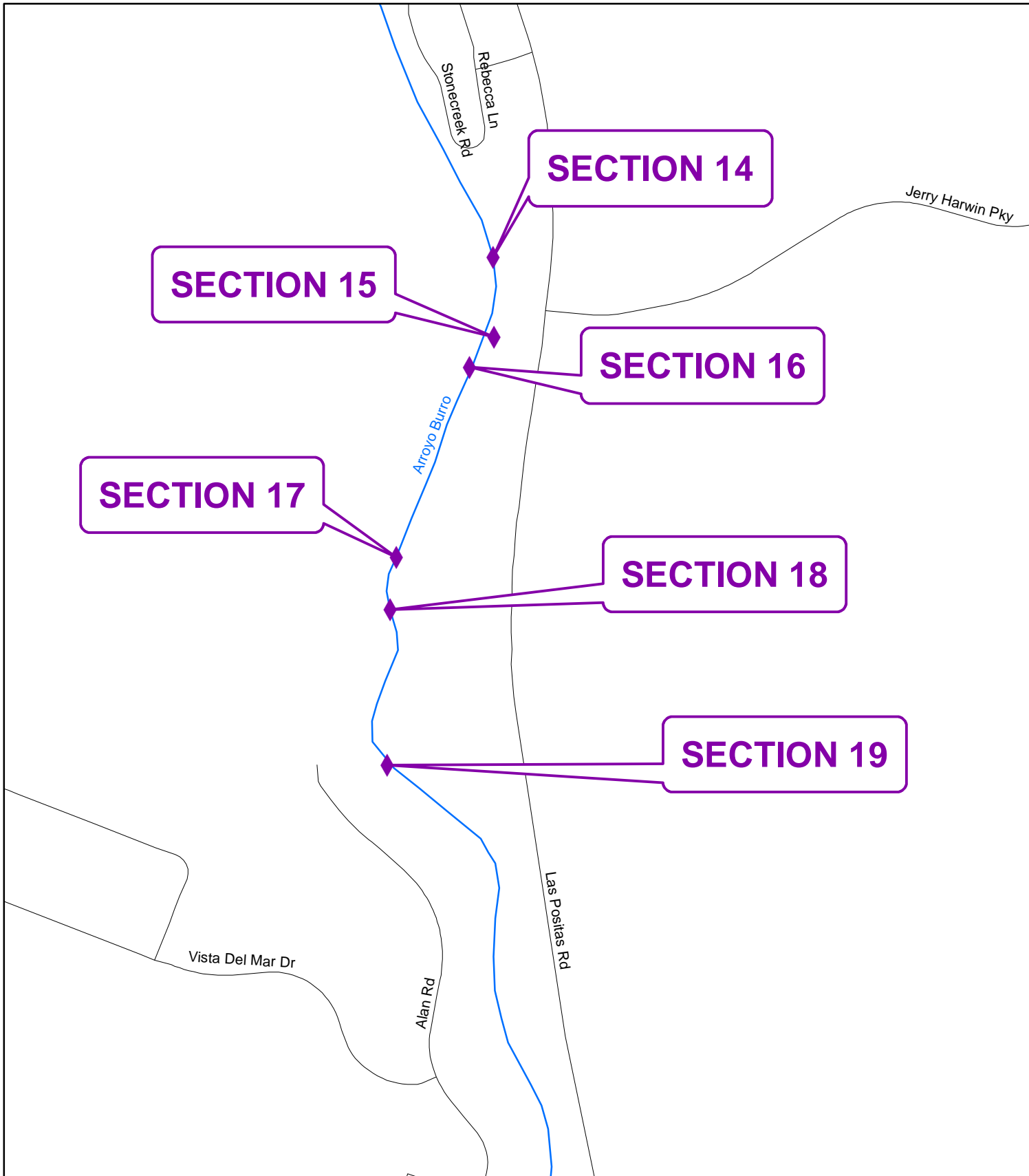
◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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



Arroyo Burro Creek-B

Legend

◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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

Arroyo Burro Creek



Section 8



Section 11

Arroyo Burro Creek



Section 12



Section 16

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

Location:

The project begins upstream of Hollister Avenue and ends just upstream of Vieja Drive.

Setting:

Inspected on April 2, 2018.

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

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

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

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

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

Revegetation:

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

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

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

Engineering Analysis:

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

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

Project Description:

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

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

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

Mitigation: Limbing trees results in the trimming of limbs and therefore does not remove whole living trees or shrubs therefore, the District is not required to, and does not mitigate for limbing

with riparian restoration. The District also does not provide restoration as mitigation for down trees, broken branches, or dead trees. All sections that use these terms will not have any restoration as mitigation associated with them. The District's Maintenance Program incorporates other mitigation measures to reduce limbing impacts to a less than significant level.

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

Section 1

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

Section 2

A down 24"DBH by 35' sycamore will be removed from the channel.

Section 3

A down willow will be removed from the channel.

Section 4

A down willow will be removed from the channel.

Section 5

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

Section 6

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

Section 7

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

Section 8

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

Impact Analysis and Mitigation Measures:

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

Impacts:

Impacts identified for this project have been taken directly from the Impact Summary Table of the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Only the impacts that apply to this project are included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project

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

Mitigation Measures:

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

Resource	Impacts	Mitigation Measures*
Hydrology EIR sections 5.1.2, 5.1.3	H-A, H-E	H-1
Water Quality EIR sections 5.2.2, 5.2.3	WQ-A, WQ-B, WQ-C, WQ-D, WQ-E	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, WRR-E, WRR-F	B-1, B-2, B-3, B-4, B-5, B-6, W-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-F, FAW-H, FAW-I, FAW-J	B-1, B-2, B-3, B-5, W-1, W-2, W-4, W-5, H-1,
Public Health EIR section 5.10	PH-A	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, 5.9.4	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.

ATASCADERO CREEK VASCULAR PLANT LIST

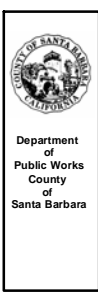
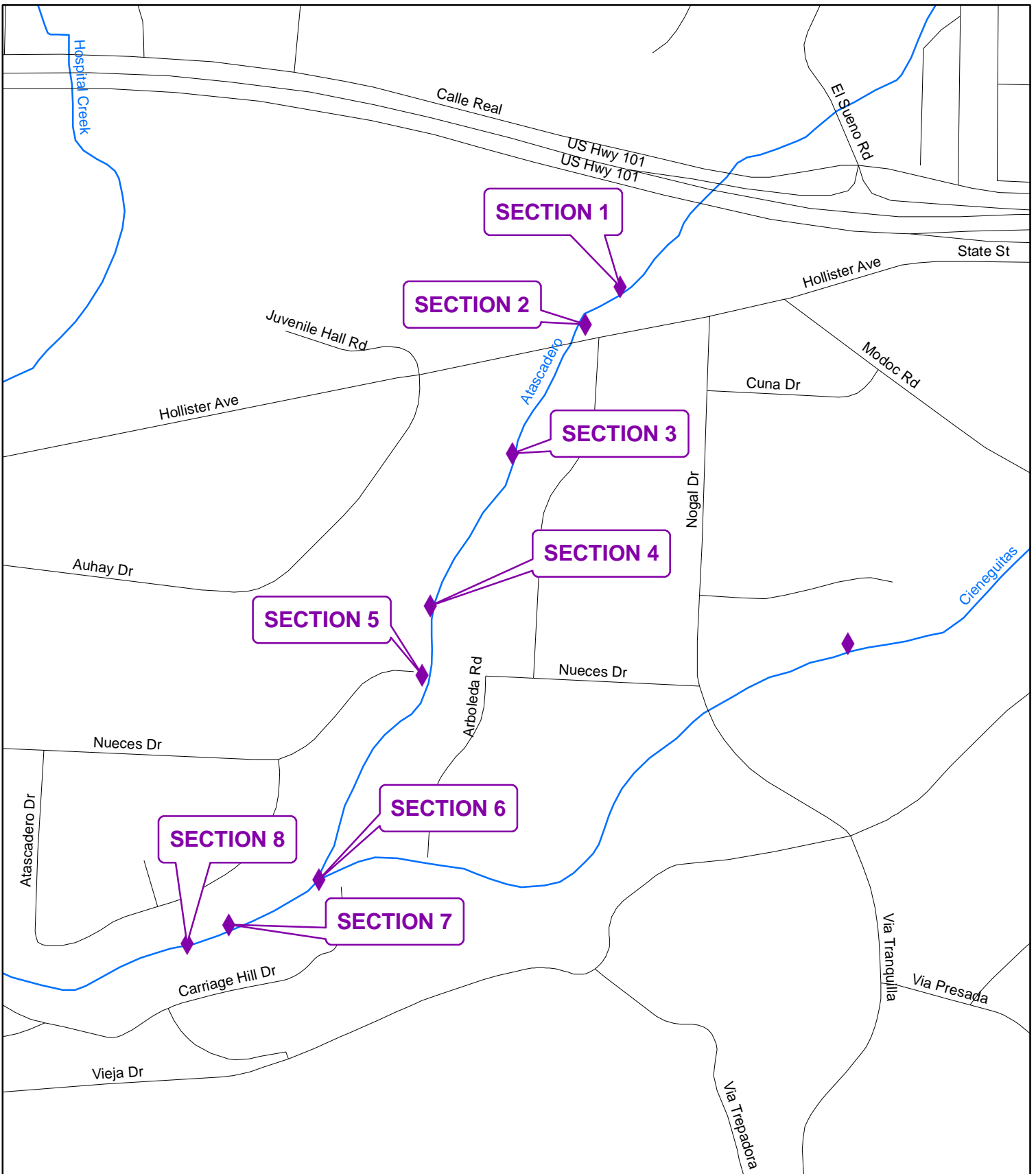
<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
ANACARDIACEAE		
Schinus molle	Pepper Tree	I
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Ageratina adenophora	Ironweed	I
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis douglasii	Marsh Baccharis	N
Baccharis glutinosa	Mulefat	N
Baccharis pilularis	Coyote Bush	N
ssp.consanguinea		
Cirsium vulgare	Bull Thistle	I
Gnaphalium sp.	Everlasting	N/I
Picris echioides	Ox tongue	I
Senecio mikanioides	German Ivy	I
Taraxcum officinale	Common Dandelion	I
Venegasia carpesioides	Canyon Sunflower	N
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium-aquaticum	Watercress	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
Lonicera sp.	Honeysuckle	I

CONVULVULACEAE			
	<i>Calystegia macrostegia</i> <i>ssp. cyclostegia</i>	Morning-Glory	I
EUPHORBIACEAE			
	<i>Ricinus communis</i>	Castor Bean	I
FABACEAE			
	<i>Melilotus indicus</i>	Yellow Sweet Clover	I
FAGACEAE			
	<i>Quercus agrifolia</i>	Coast Live Oak	N
JUGLANDACEAE			
	<i>Juglans sp.</i>	Walnut	N/I
LAMIACEAE			
	<i>Marrubium vulgare</i>	Horehound	I
	<i>Stachys bullata</i>	Wood Mint	N
MALVACEAE			
	<i>Malcothamnus sp.</i>	Mallow	N
MYRTACEAE			
	<i>Eucalyptus globulus</i>	Blue Gum	I
ONAGRACEAE			
	<i>Epilobium adenocaulon</i>	Willow-Herb	N
POACEAE			
	<i>Avena fatua</i>	Wild Oats	I
	<i>Bromus diandrus</i>	Ripgut Grass	I
	<i>Bromus mollis</i>	Soft Chess	I
	<i>Elymus condensatus</i>	Giant Rye	N
	<i>Lolium perenne</i>	Italian Ryegrass	I
	<i>Oryzopsis miliacea</i>	Ricegrass	I
	<i>Polypogon interruptus</i>	Beard Grass	I
POLYGONACEAE			
	<i>Polygonum sp.</i>	Smartweed	N
	<i>Rumex crispus</i>	Curly Dock	I
PRIMULACEAE			
	<i>Anagallis arvensis</i>	Scarlet Pimpernel	I

RANUNCULACEAE			
	<i>Clematis ligusticifolia</i>	Creek Clematis	N
ROSACEAE			
	<i>Rubus ursinus</i>	California Blackberry	N
SALICACEAE			
	<i>Populus fremontii</i>	Fremont Cottonwood	N
	<i>Salix exigua</i>	Narrowleaf Willow	N
	<i>Salix lasiolepis</i>	Arroyo Willow	N
SCROPHULARIACEAE			
	<i>Scrophularia californica</i>	California Figwort	N
SOLANACEAE			
	<i>Nicotiana glauca</i>	Tobacco Tree	I
TROPAEOLACEAE			
	<i>Tropaeolum majus</i>	Garden Nasturtium	I
TYPHACEAE			
	<i>Typha sp.</i>	Cattail	N

* I = Introduced

N = Native



Atascadero Creek

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.

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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

Atascadero Creek



Section 2



Section 3

Atascadero Creek



Section 4



Section 5

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 29, 2018.

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

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

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

Revegetation:

Beginning with the 2002/2003 Annual Routine Maintenance Plan, which was tiered off the 2001 EIR for the Updated Routine Maintenance Program, the District began a new reporting and accounting program for the restoration component of the Annual Routine Maintenance Program. Since that time, the District has been tracking the impacts and associated restoration on creeks included in each Annual Routine Maintenance Plan.

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

Canada de la Pila Creek					
Annual Plan Year	New Impacts to Vegetation (square feet)	Temporal to Native (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
2017/2018	0		0	0	800
2018/2019	0		0	0	800

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:

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

Project Description:

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

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

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

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

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

Section 1:

In this length of approximately 800' willow branches are projecting into the active channel and will be limbed.

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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	WQ-A, WQ-C, WQ-D	H-1, B-2, W-1, W-4

EIR sections 5.2.2, 5.2.3		
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:

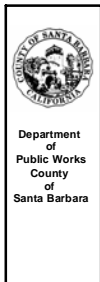
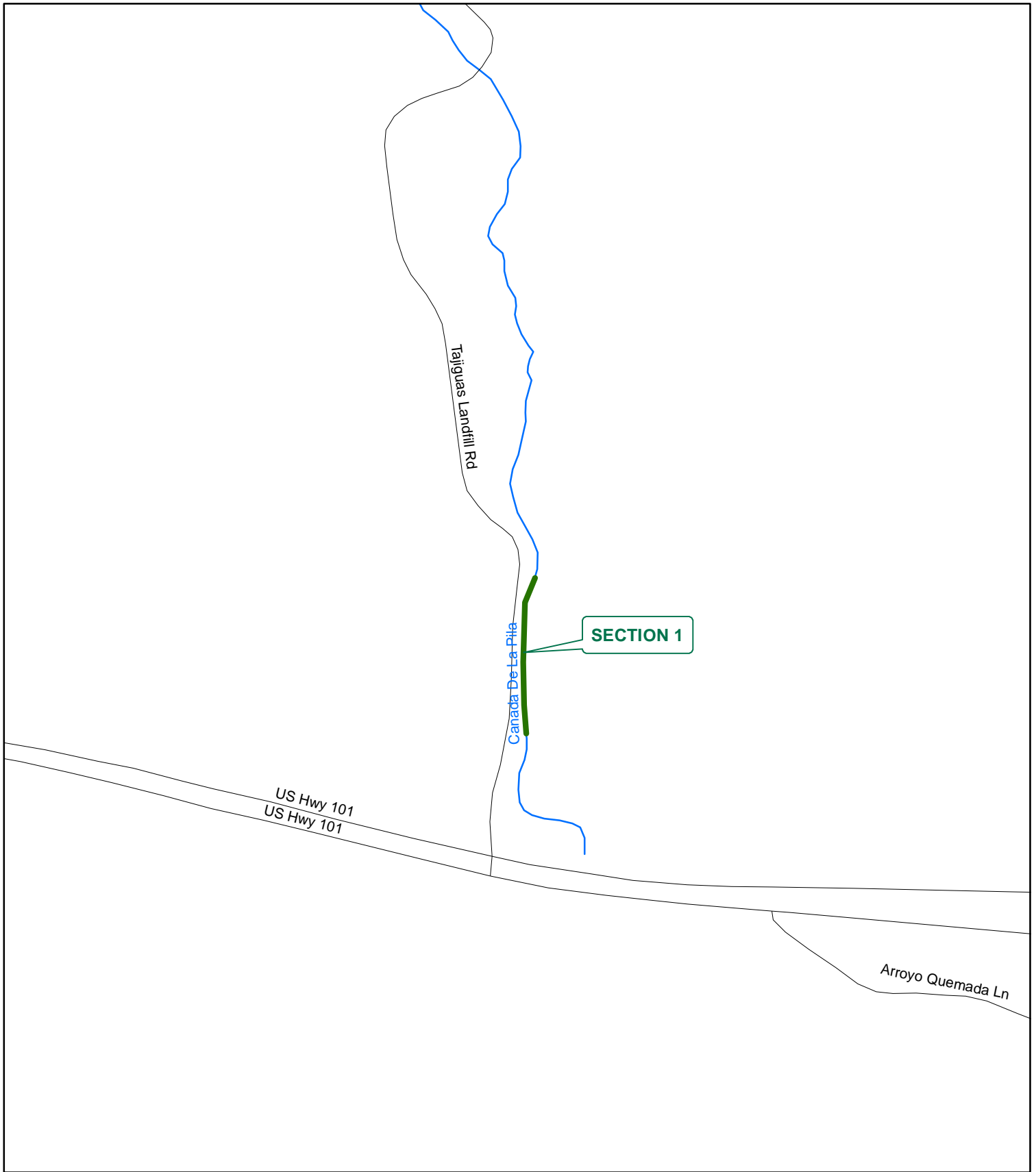
This project will take 1 day to complete.

CANADA DE LA PILA CREEK VASCULAR PLANT LIST

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
ANACARDIACEAE		
Malosma laurina	Laurel Sumac	N
Toxicodendron diversilobum	Poison 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

<u>SCIENTIFIC NAME</u> (cont'd)	<u>COMMON NAME</u> (cont'd)	<u>ORIGIN</u> (cont'd)
LAMIACEAE		
Marrubium vulgare	Horehound	I
Mentha spicata	Spearmint	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



Canada De La Pila Creek



Legend
 Lengths

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Annual Routine Maintenance Plan
 Fiscal Year 2018-2019

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

Canada De La Pila Creek



Section 1

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

Location:

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

Setting:

Inspected April 4, 2018.

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

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

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

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

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

The District's Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly

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	350	0	0	20,979
2018/2019	0	0	0	20,979

Engineering Analysis:

Vegetation tends to colonize the streambed during years when there is insufficient flow to scour the active channel. In an effort to reduce the potential for plugging downstream bridges and the creation of debris plugs and bank erosion, downed trees/limbs and obstructive vegetation that could be mobilized during high flows should be removed.

The bankfull discharge* for Carpinteria Creek downstream of Casitas Pass Road is approximately 625 cfs. With a velocity of approximately 6 fps and a typical depth of 3', the width of clearing should be 35' to maintain channel equilibrium.

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

Project Description:

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

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

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

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

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

Section 1:

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

Section 2:

A down 18"DBH by 12' alder will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.

Section 3:

A down 15"DBH by 10' sycamore will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.

Section 4:

Due to the 1/9 debris flow for a length of 300' the low flow channel has been pushed toward the nearly vertical left bank. Rock and sediment will be pushed from the right side of the channel toward the left vertical bank and the low flow will be restored to the center of channel. The work area will be 300'L by 30'W with no impact to native vegetation.

Section 5:

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

Section 6:

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

Section 7:

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

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

Section 8:

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

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

Section 9:

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

Section 10:

A down willow will be removed from the channel.

Section 11:

A down 12"DBH by 14' sycamore will be removed from the active channel. It will not be left in place due to the burned watershed above and potential for future debris flows.

Section 12:

Approximately 35' of "pipe and wire" structure was destroyed during the 1/9 debris flow and is within the active channel. The structure will be removed.

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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.

**CARPINTERIA CREEK
VASCULAR PLANT LIST**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
EQUISETACEAE		
<i>Equisetum telmateia</i> var. <i>braunii</i>	Giant Horsetail	N
<i>Equisetum laevigatum</i>	Smooth Scouringrush	N
<i>Equisetum hyemale</i> var. <i>affine</i>	Giant Scouringrush	N
ANACARDIACEAE		
<i>Rhus integrifolia</i>	Lemonade Berry	N
<i>Schinus molle</i>	California Pepper Tree	I
<i>Schinus terebinthofolius</i>	Brazilian Pepper	I
<i>Toxicodendron diversilobum</i>	Poison Oak	N
APIACEAE		
<i>Conium maculatum</i>	Poison Hemlock	I
<i>Foeniculum vulgare</i>	Sweet Fennel	I
APOCYNACEAE		
<i>Vinca major</i>	Periwinkle	I
ARALIACEAE		
<i>Hedera helix</i>	English Ivy	I
ASTERACEAE		
<i>Artemisia californica</i>	California Sagebrush	N
<i>Artemisia douglasiana</i>	Mugwort	N
<i>Baccharis pilularis</i>	Coyote Bush	N
<i>Baccharis salicifolia</i>	Mulefat	N
<i>Conyza bonariensis</i>	Horseweed	I
<i>Gnaphalium palustre</i>	Marsh Cudweed	N
<i>Gnaphalium bicolor</i>	Bicolored Cudweed	N
<i>Picris echioides</i>	Pricky Ox Tongue	I
<i>Senecio mikanioides</i>	German Ivy	I
<i>Senecio vulgare</i>	Common Groundsel	I
<i>Sonchus asper</i>	Prickly Sow-thistle	I
BETULACEAE		
<i>Alnus rhombifolia</i>	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 lathyris	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. australitoralis	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
MORACEAE			
Ficus carius	Cultivated Fig		I
MYRTACEAE			
Eucalyptus globulus	Blue Gum		I
ONAGRACEAE			
Epilobium ciliatum	Willowherb		N
Oenothera 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
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TROPAEOLACEAE

Tropaeolum majus	Garden Nasturtium	I
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TYPHACEAE

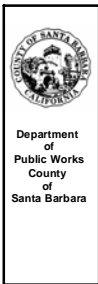
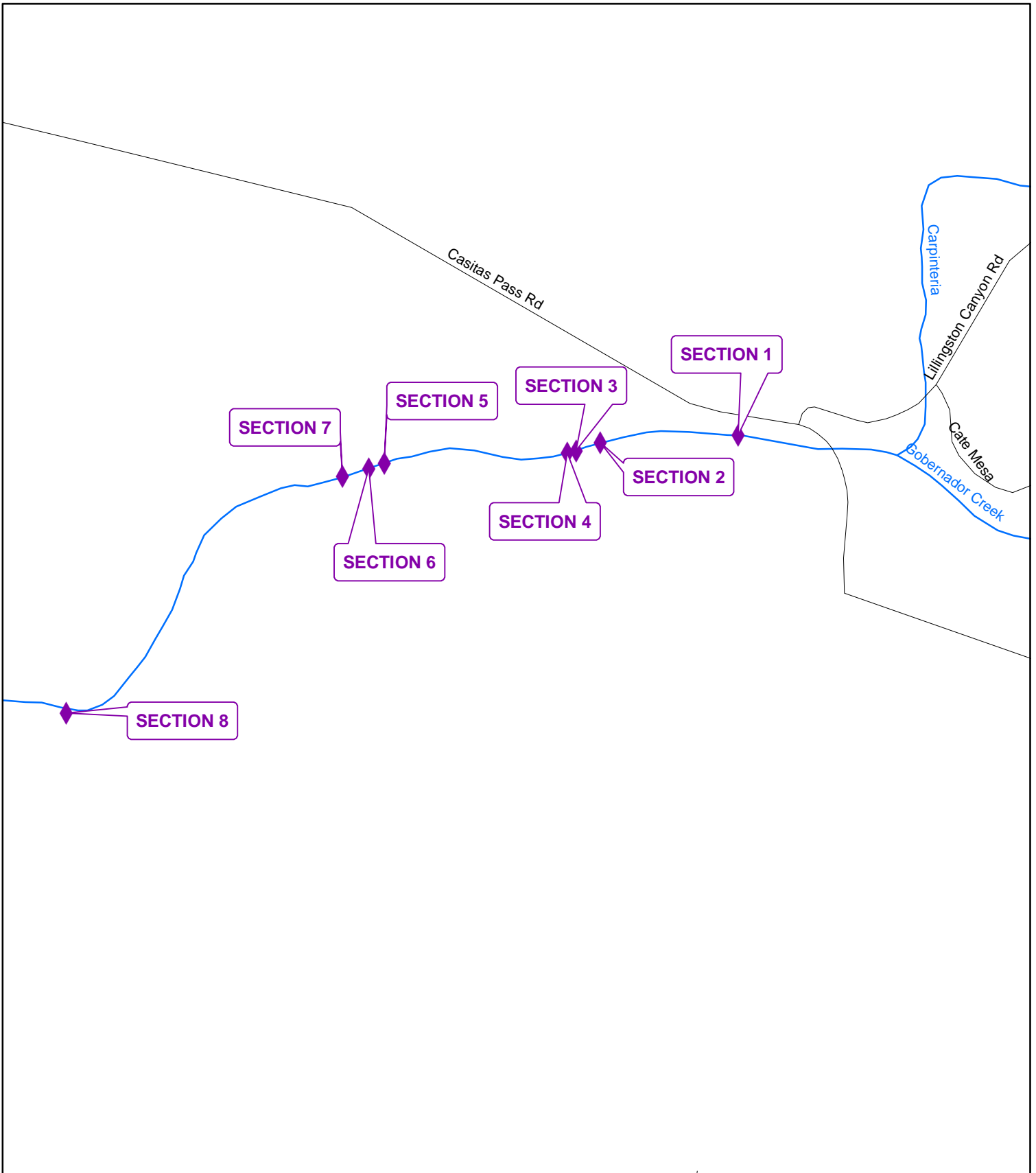
Typha angustifolia	Narrowleaf Cattail	N
Typha latifolia	Common Cattail	N

URTICACEAE

Urtica holosericea	Stinging Nettle	N
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* I = Introduced

N = Native



Carpinteria Creek-A

Legend

Sites

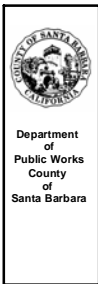
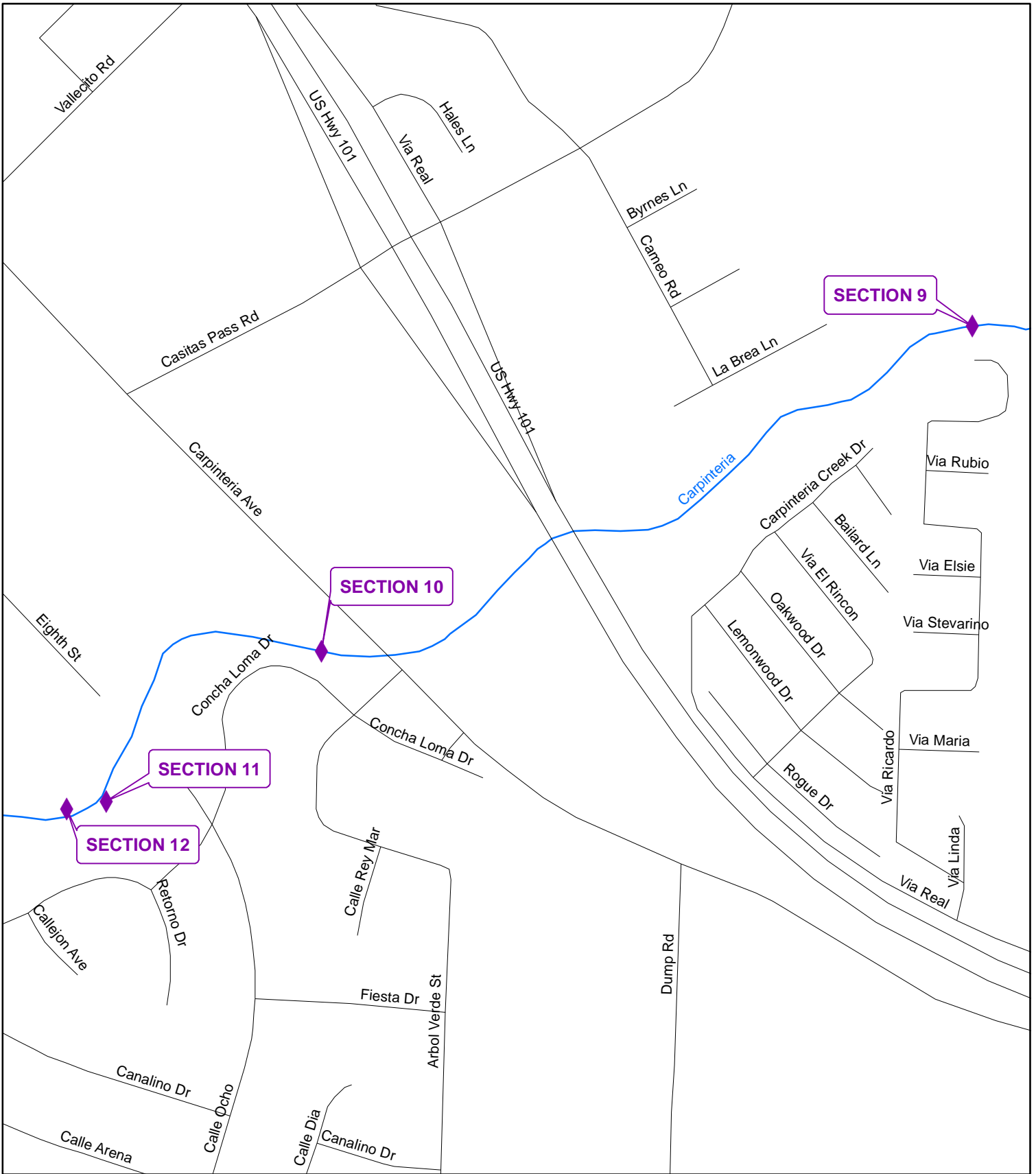
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450 225 0 450
Feet

Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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



Carpinteria Creek-B

Legend

◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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

Carpinteria Creek



Section 3



Section 7 (Looking upstream)

Carpinteria Creek



Apr 4, 2018 12:17 PM

Section 11



Apr 4, 2018 12:20 PM

Section 12 (Looking upstream)

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

Location:

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

Setting:

Inspected on April 4, 2018.

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

Revegetation:

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

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	100*	0
2011/2012	0	0	0	0
2016/2017	0	0	0	0
2018/2019	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 ft² of impact.

Engineering Analysis:

The culvert on Via Real and Under Highway 101 is very susceptible to plugging which would cause significant flooding of the adjacent homes, agricultural areas, Via Real, and Highway

101. In an effort to reduce the potential for plugging the culverts, downed trees and obstructive vegetation that could be mobilized during high flows should be removed.

Project Description:

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

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

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

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

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

Section 1:

A nonnative acacia branch is down in the active channel and will be removed.

Section 2:

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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:

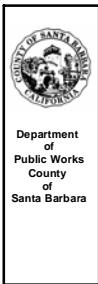
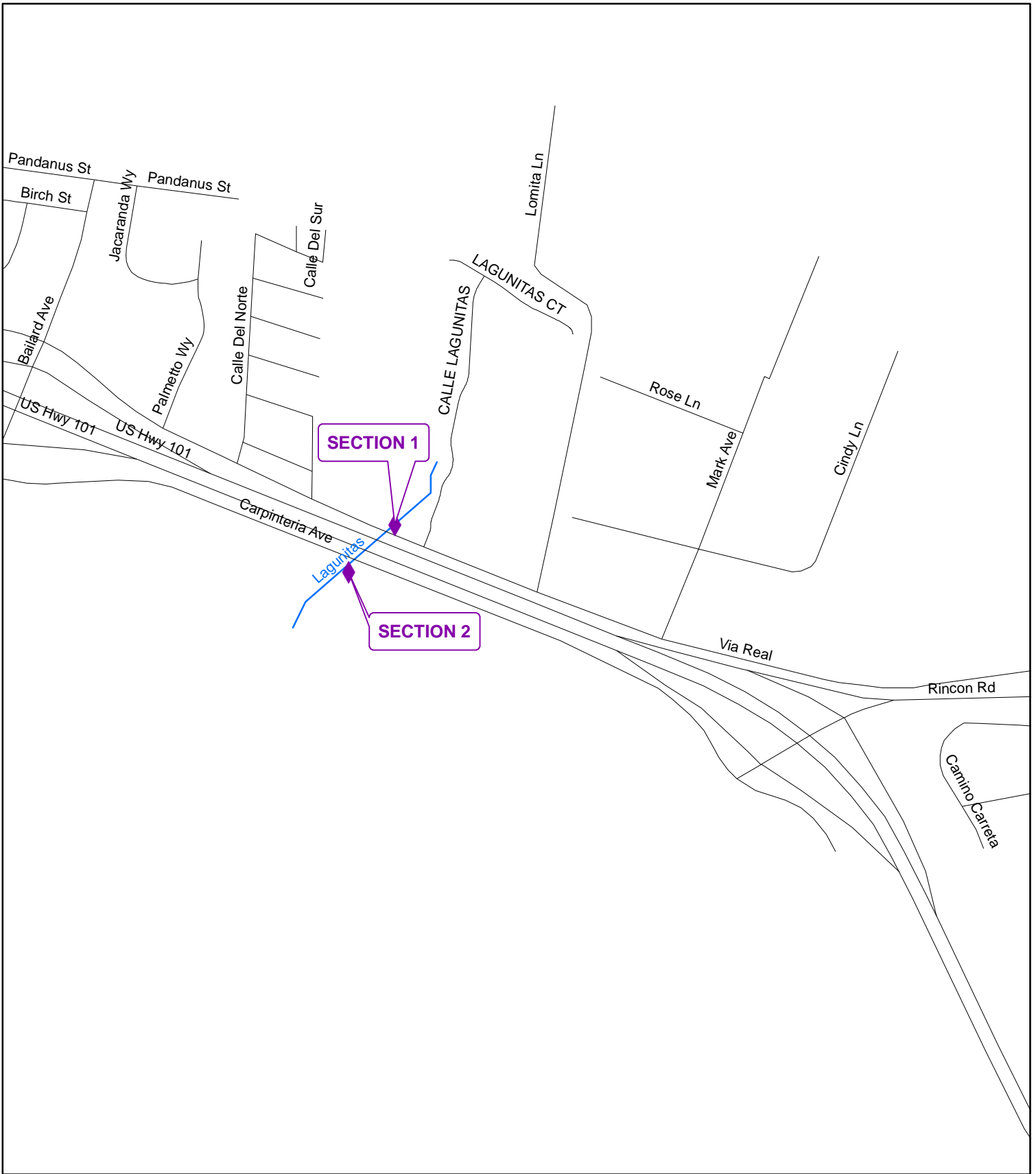
The project will take 1 day to complete.

LAGUNITAS CREEK VASCULAR PLANT LIST

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN</u>
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

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

* I = Introduced
N = Native



Lagunitas Creek

Legend

◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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

Lagunitas Creek



Section 1

Lagunitas Creek



Section 2

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

Location:

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

Setting:

Inspected on March 27, 2018.

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

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

Revegetation:

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

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

Maria Ygnacio 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	1,060	7,500	0	6,440
2003/2004	2,170	0	0	4,230
2005/2006	1,425	0	0	2,805
2006/2007	800	1,800+1.17 acres	1.21 acres	1.25 acres
2007/2008	375	0	0	1.24 acres
2009/2010	1,975	0	0	1.19 acres
2011/2012	0	0	0	1.19 acres
2013/2014	345	0	0	1.19 acres
2015/2016	340	0	0	51,400

2017/2018	150	0	0	51,250
2018/2019	50	0	0	51,200

Engineering Analysis:

Removing obstructive vegetation from the bankfull channel cross-section (active channels) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel and downed trees can become mobilized during flood flows, raising the water surface elevation as well as plugging bridges and culverts located downstream. The bankfull discharge* for Maria Ygnacio Creek is approximately 363 cfs. With a velocity of approximately 6 fps and a typical depth of 3', the width of clearing should be 20' to maintain channel equilibrium.

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

Project Description:

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

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

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

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

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

Section 1:

A landslide has occurred on the right bank leaving an 8"DBH by 24' willow growing in the channel that will be removed. This size tree requires a 10-1 mitigation. In order to fulfill this, 20 willow poles will be taken from the willow when it is being removed and planted on the right bank outside of the active channel. This will also aid in stabilizing the bank that has failed.

Section 2:

There is a down 10"DBH by 30' alder and 3 down willows that will be removed from the active channel. This is an area where LWD will not be left in the channel.

Section 3:

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

Section 4:

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

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

Section 5:

Two down willows will be removed from the active channel.

Impact Analysis and Mitigation Measures:

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

Impacts:

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

*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.

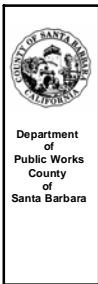
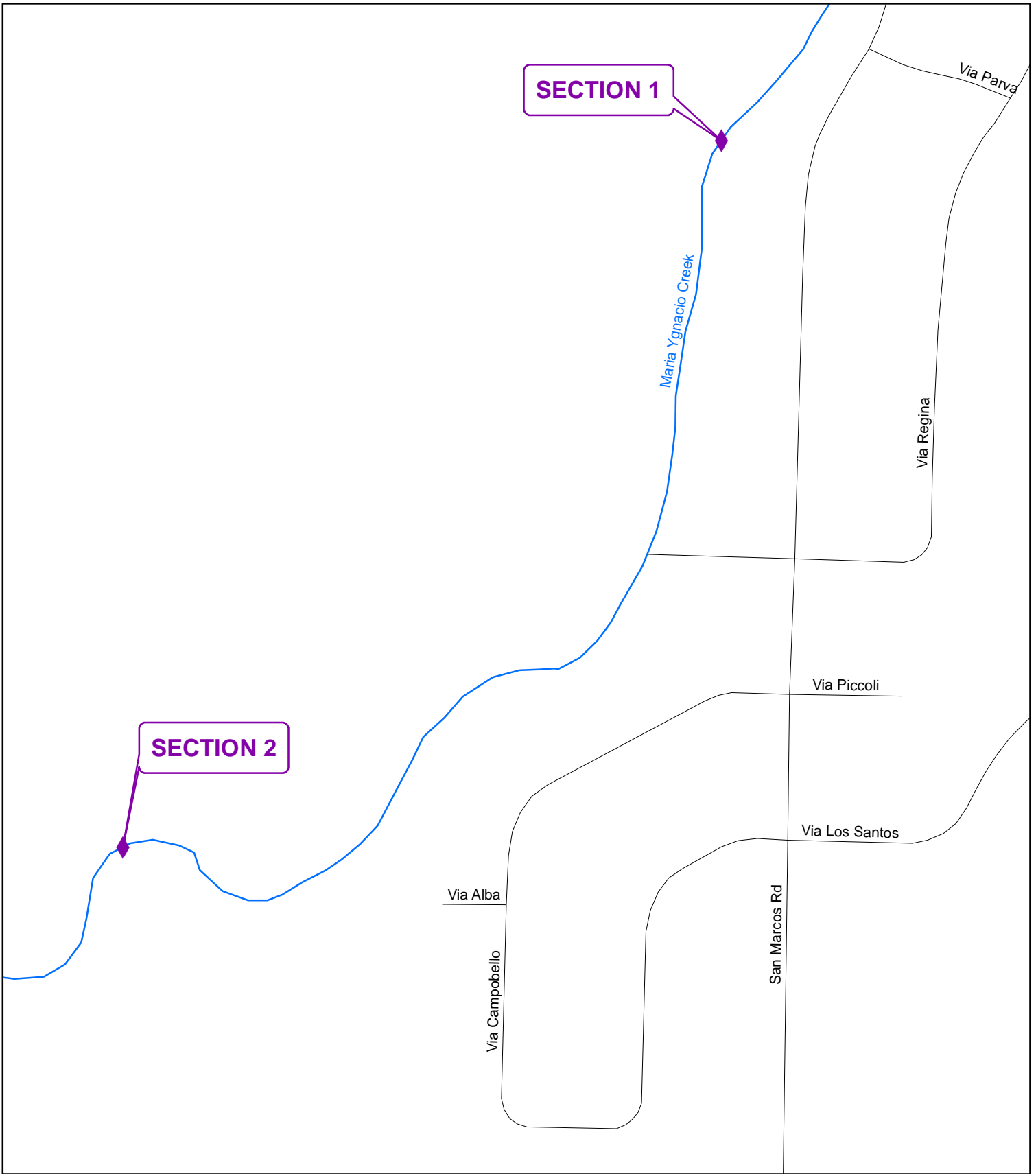
VASCULAR PLANT LIST
 MARIA YGNACIO CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
<i>Equisetum telmateia</i>	Giant Horsetail	N
APIACEAE		
<i>Apium graveolens</i>	Celery	I
<i>Foeniculum vulgare</i>	Sweet Fennel	I
ASTERACEAE		
<i>Artemisia douglasiana</i>	Mugwort	N
<i>Xanthium strumarium</i>	Cocklebur	I
BRASSICACEAE		
<i>Brassica nigra</i>	Black Mustard	I
<i>Raphanus sativus</i>	Wild Radish	I
<i>Rorippa nasturtium-aquaticum</i>	Watercress	I
CONVOVULACEAE		
<i>Calystegia macrostegia</i> <i>ssp. cyclostegia</i>	Morning Glory	I
CYPERACEAE		
<i>Cyperus alternifolius</i>	Umbrella Plant	I
<i>Scirpus californicus</i>	California Bulrush	N
EUPHORBIACEAE		
<i>Ricinus communis</i>	Castor Bean	I
FABACEAE		
<i>Melilotus albus</i>	White Sweet Clover	I
<i>Vicia benghalensis</i>	Vetch	I
FAGACEAE		
<i>Quercus agrifolia</i>	Coast Live Oak	N
HYDROPHYLLACEAE		
<i>Phacelia ramosissima</i>	Branching Phacelia	N
ONAGRACEAE		
<i>Clarkia deflexa</i>	Clarkia	N

Oenothera hookeri	Primrose	N
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
PLATANACEAE		
Plantanus racemosa	Western Sycamore	N
POACEAE		
Arundo donax	Giant Reed	I
Cortaderia atacamensis	Pampas Grass	I
POLYGONACEAE		
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
SALICACEAE		
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
VERBENACEAE		
Verbena lasiotachys	Verbena	N

* N = Native

I = Introduced



Maria Ygnacio Creek-A

Legend

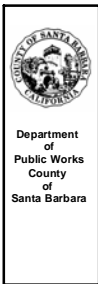
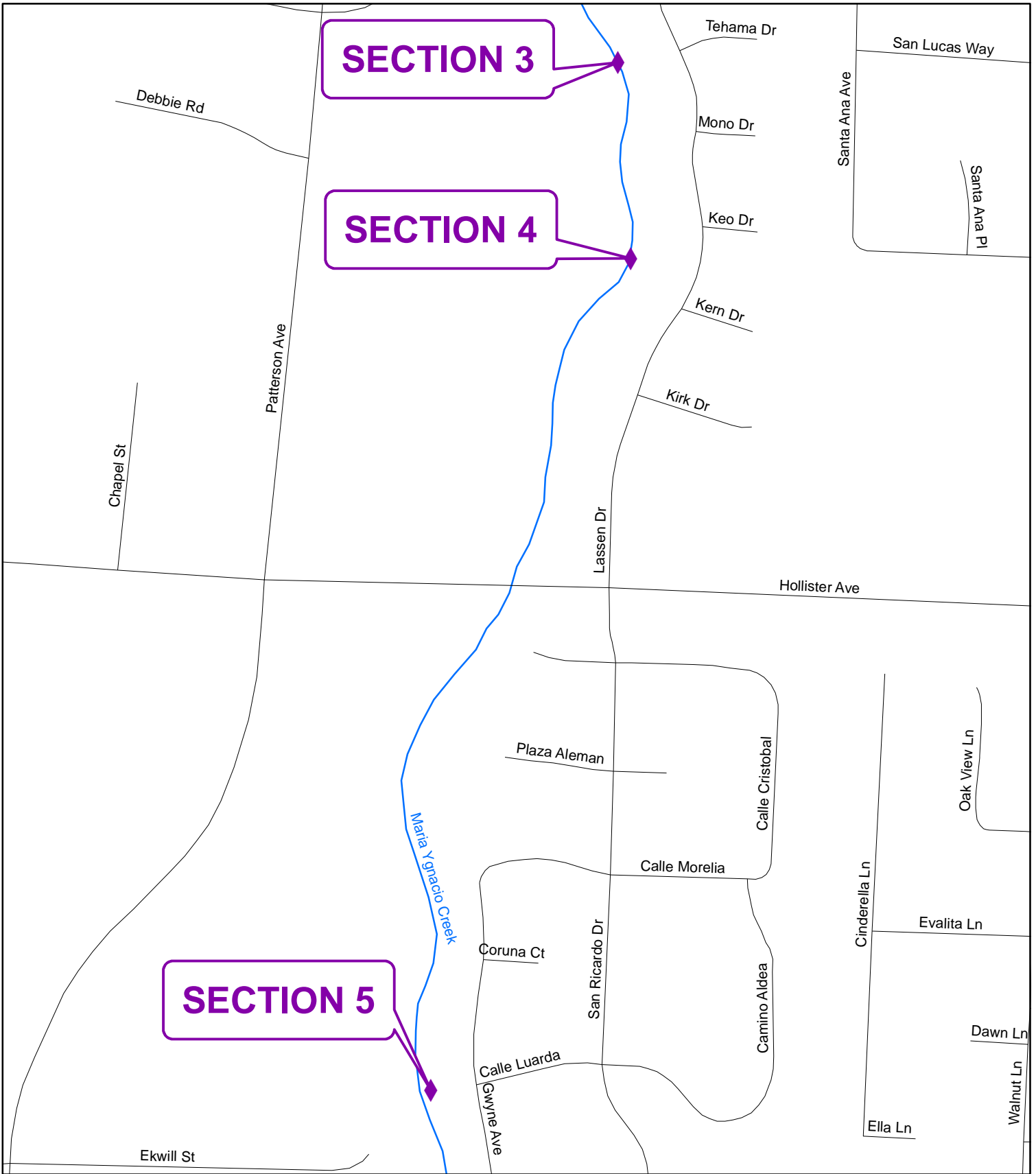
◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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



Maria Ygnacio 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.

275 137.5 0 275
Feet

Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Maria Ygnacio Creek



Section 1



Section 2

Maria Ygnacio Creek



Section 5



Section 5

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

Location:

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

Setting:

Inspected on March 27, 2018.

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

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

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

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

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

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

Mission Creek is designated critical habitat for the Southern California Distinct Population Segment of steelhead (*Oncorhynchus mykiss*). The District developed a Vegetation Management Plan in 2016, as required by the National Marine Fisheries

Service (NMFS), which describes the District’s approach to vegetation management as it relates to the consideration of steelhead while providing flood protection.

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

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

Revegetation:

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

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	3000	2,598
2009/2010	1,080	0	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 lg willow	250 +10 willows	LCMB 105	-10 willows
2017/2018	0	0	0	-10 willows
2018/2019	175	10 willows	TBD	TBD

Engineering Analysis:

Removing obstructive/silt trapping vegetation from the bankfull channel cross-section (active channel) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel and downed trees can become mobilized during flood flows, raising the water surface elevation as well as plugging bridges and culverts located downstream.

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

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

Project Description:

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

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

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

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

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

Section 1:

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

Section 2:

A 14"DBH by 40' multi-trunk willow is down and will be removed from the channel.

Section 3:

Nonnative tree of heaven are growing in a 5' by 100' area of the active channel and will be brushed.

Section 4:

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

Section 5:

There are vertical walls on both sides of the channel in this location. Approximately 100 square feet of sandbar willow is growing on the left side of the active channel. All sandbar willow within 5' of the wall will be left in place and all vegetation beyond 5' of the left wall in the active channel will be brushed. 100 square feet of mitigation has already been accounted for under the 14/15 AP, so this will result in no new mitigation.

Section 6:

A down willow will be removed from the channel.

Section 7:

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

Section 8:

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

Mission Channel Habitat Improvement:

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

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

The lower section runs from Arrellaga Street downstream to Canon Perdido Street. In this section, approximately 60 trees would be removed (dead snags, myoporum, pines, palms,

eucalyptus, tree tobacco, pepper trees, ash, and arundo colonies). Approximately 250 new trees would be installed to replace the removed trees and fill existing gaps in the canopy. Removals and planting will occur along both sides of the channel.

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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:

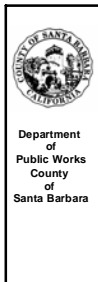
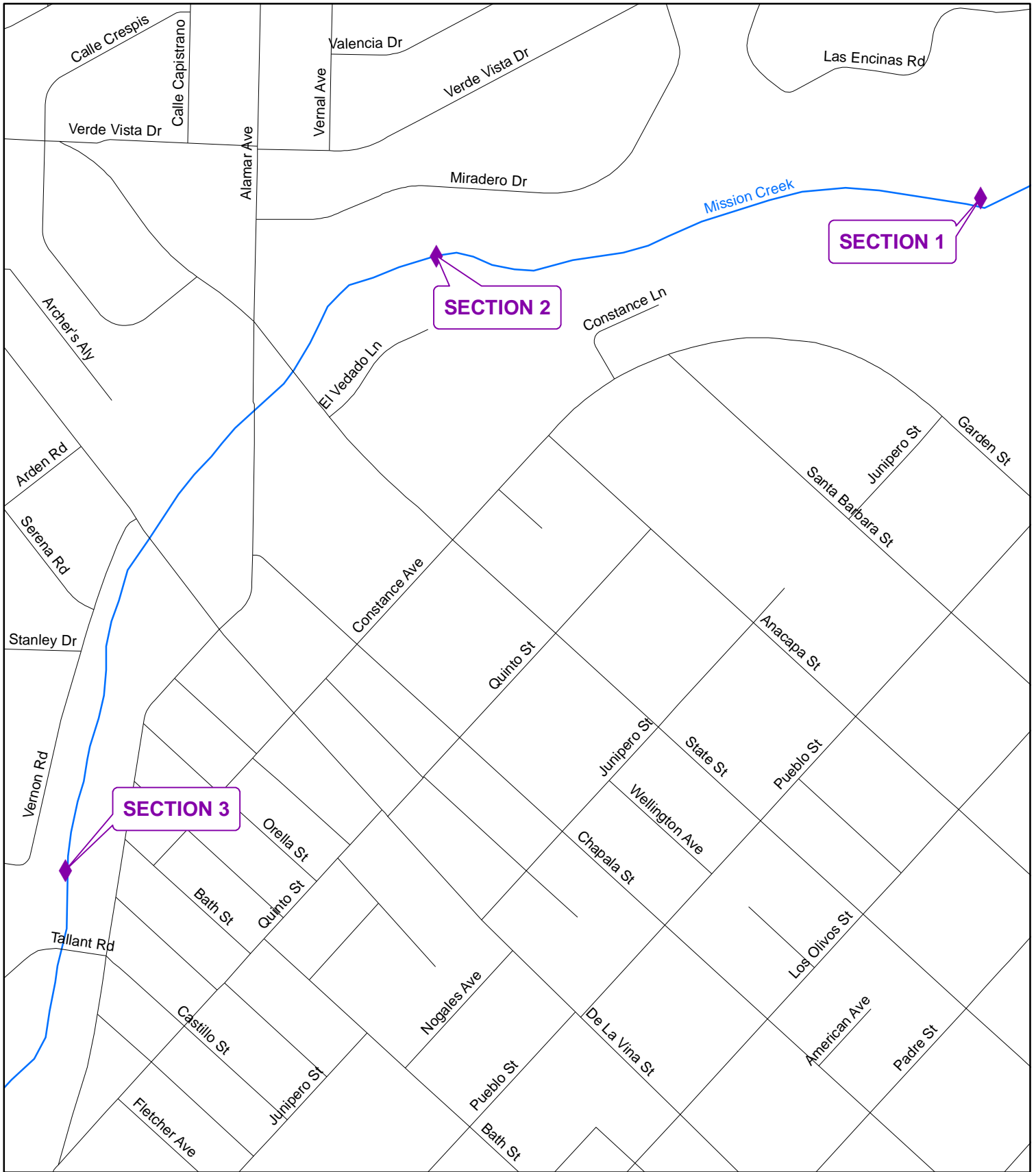
The project will take 5 days to complete.

VASCULAR PLANT LIST
MISSION CREEK

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
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
PLATANACEAE		
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



Mission Creek-A

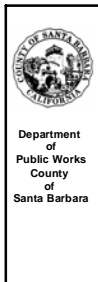
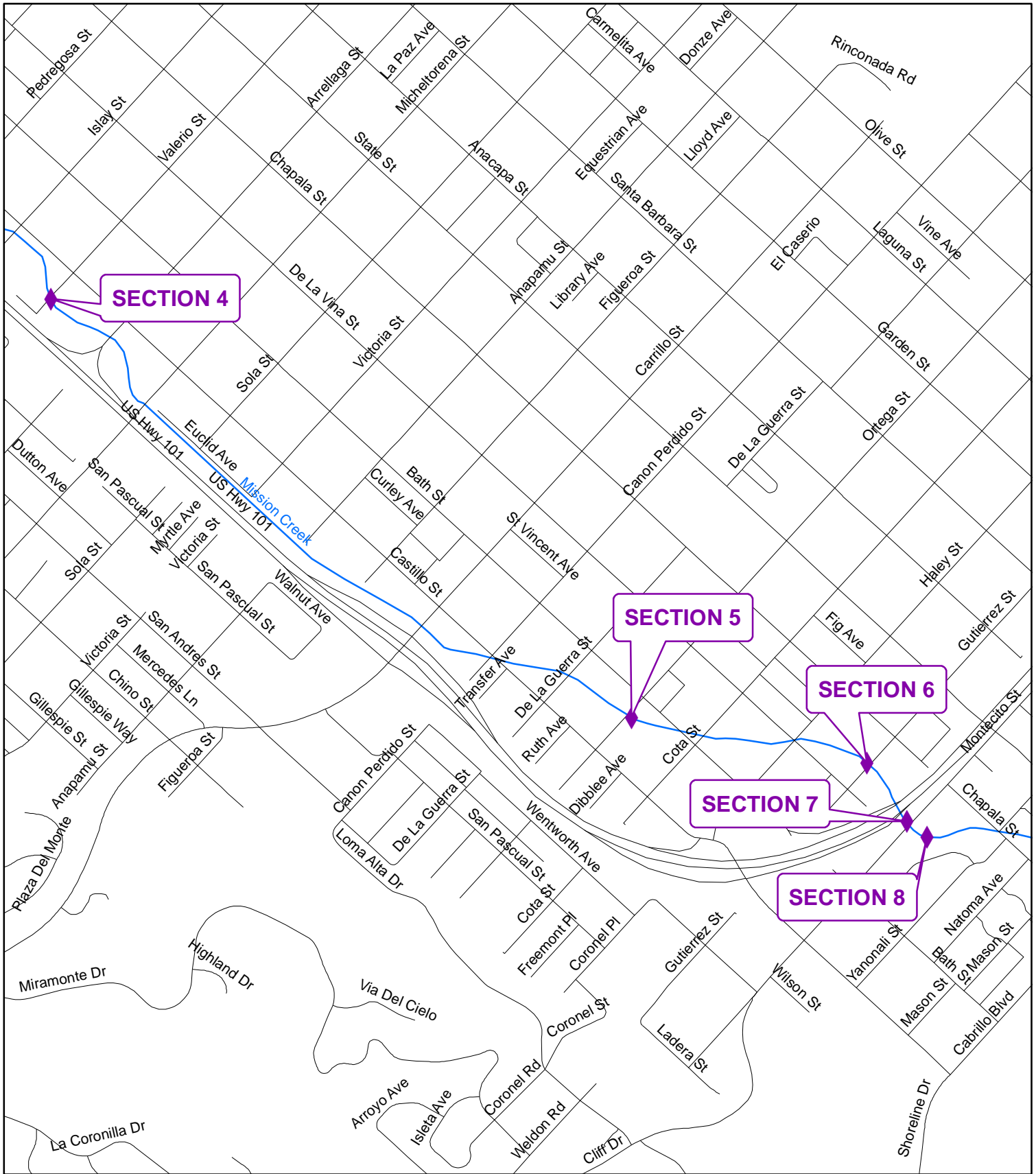
Legend
 Sites

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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



Mission Creek-B

Legend
◆ Sites

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750 375 0 750
Feet
Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Mission Creek



Section 1



Section 2

Mission Creek



Mar 27, 2018 1:12 PM

Section 3



Mar 27, 2018 2:07 PM

Section 7

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

Location:

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

Setting:

Inspected April 6, 2018.

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

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

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

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

Montecito Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bank full width may be considered. They will not be considered under the 2018/2019 Annual Plan due to the burned watershed above and potential for future flood flows.

Revegetation:

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

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

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	LCMB 10	0
2018/2019	0	0	0	0

Engineering Analysis:

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

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

Project Description:

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

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

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

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

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

Section 1:

A 15" x 40' sycamore is down on the left side of the channel and will be removed.

Section 2:

A down sycamore limb will be removed from the active channel.

Section 3:

There is a down 8" x 20' willow on the right side of the channel that will be removed.

Section 4:

A 14" x 10' down tree will be removed from the right side of the channel directly upstream of the Ashley Road Bridge.

Section 5:

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

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

Section 6:

A down tree will be removed from the left side of the active channel.

Section 7:

A down 15" x 10' oak limb will be removed from the active channel.

Section 8:

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

Section 9:

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

Section 10:

There are 2, 2" x 20' down sycamore trees on the right side of the channel that will be removed.

Section 11:

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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

*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.

VASCULAR PLANT LIST
MONTECITO CREEK

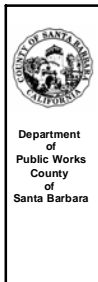
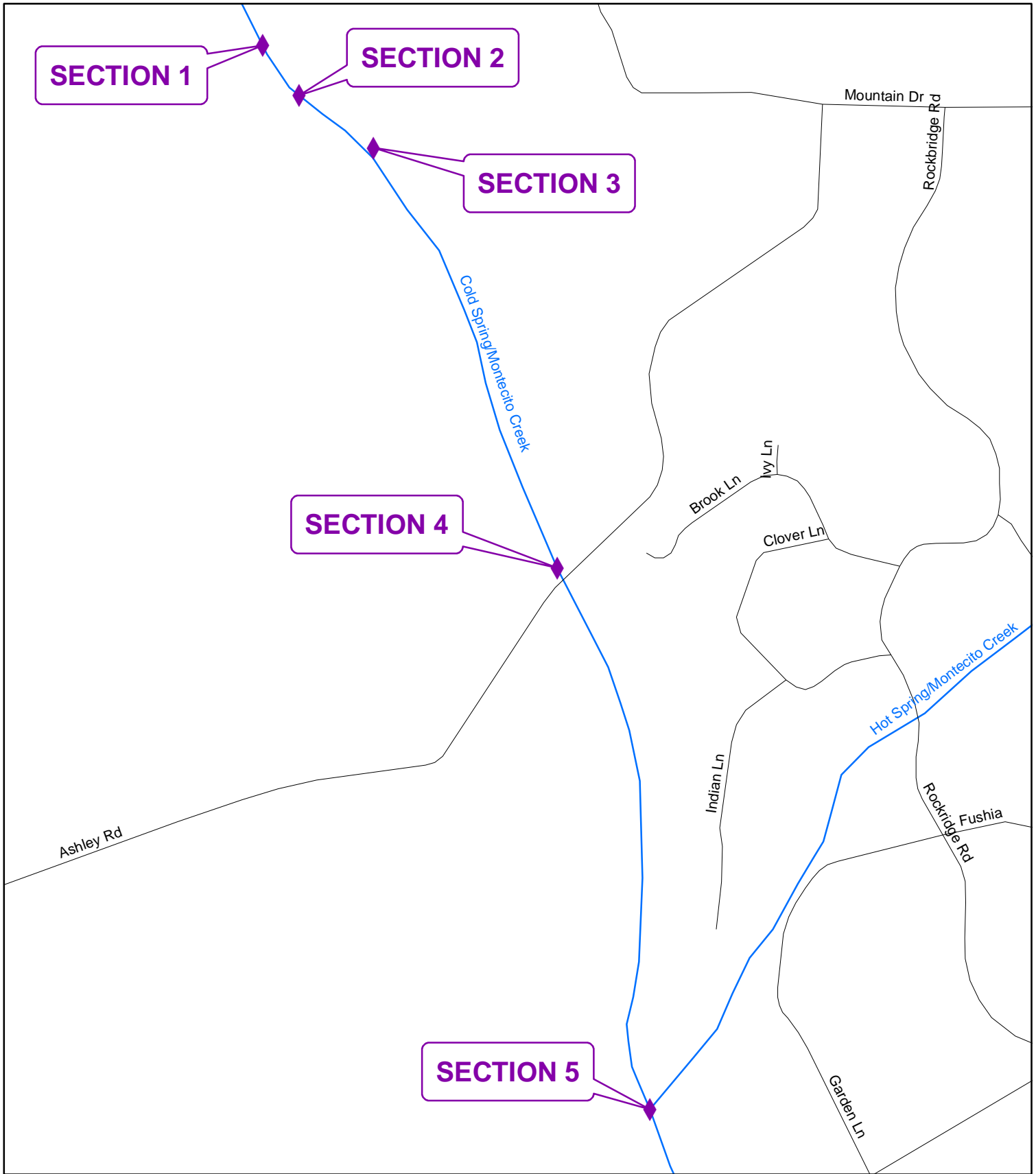
<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
EQUISETACEAE		
<i>Equisetum telmateia</i>	Giant Horsetail	N
ANACARDIACEAE		
<i>Rhus integrifolia</i>	Lemonadesberry	N
<i>Rhus laurina</i>	Laurel Sumac	N
<i>Schinus molle</i>	PepperTree	I
<i>Toxicodendron diversilobum</i>	Poison Oak	N
APIACEAE	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



Montecito Creek-A

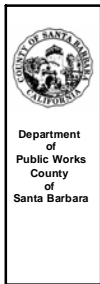
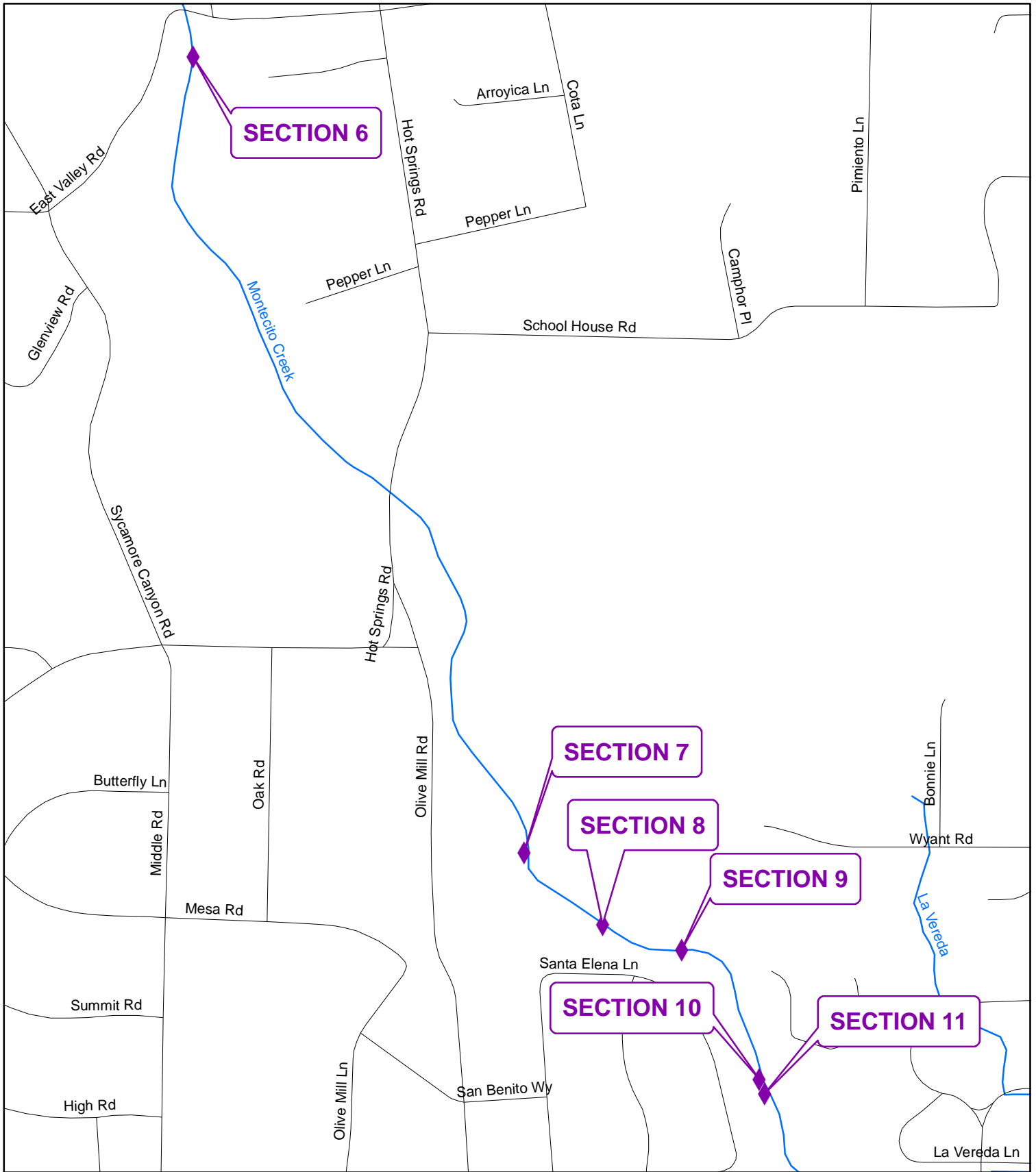
Legend
◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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



Montecito Creek-B

Legend

Sites

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan Fiscal Year 2018-2019

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

Montecito Creek



Section 1



Section 5

Montecito Creek



Section 8



Section 10

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

Location:

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

Setting:

Inspected on March 20, 2018.

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

Revegetation:

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

San Antonio 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	660	6,000	6,000	5,340
2006/2007	1,500	3,750	4,750	7,590
2008/2009	1,130	0	0	6,460
2009/2010	900 (check structure construction = 300 sq. ft at 3:1 replacement ratio)	0	0	5,560
2012/2013	2,015	0	0	3,545
2015/2016				
2018/2019	25			

Engineering Analysis:

Removing obstructive vegetation from the bankfull channel cross-section (active channel) is important to reduce the debris load associated with higher flows. Obstructive vegetation growing in the active channel as well as limbs projecting into the active channel and downed trees can become mobilized during flood flows, create debris plugs, raise the water surface elevation as well as plug bridges and culverts located downstream. The bankfull discharge for this section of San Antonio Creek is approximately 270 cfs. With a velocity of approximately 6 fps and a typical depth of 3', the width of clearing should be 15' to maintain channel equilibrium.

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

Project Description:

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

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

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

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

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

Section 1:

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

An excavator or backhoe will remove the gravel sediment bar and place the material just downstream of the Arizona crossing so it can continue to move through the system and potentially provide spawning gravels for steelhead. There will be no impact to native vegetation.

Section 2:

Mulefat is growing on the right bank and has branches projecting into the active channel for approximately 100'. The mulefat will be limbed.

Section 3:

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

Section 4:

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

Section 5:

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

Section 6:

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

Section 7:

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

Section 8:

A 10" x 25' down willow will be removed from the active channel.

Section 9:

A down willow will be removed from the active channel.

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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, B-7, W-4, W-1
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WRR-D , WRR-E, WRR-F	B-1, H-8, B-4, W-3
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-B, FAW-C, FAW-E, FAW-G	B-1, B-2, B-3, H-1, B-5, B-6, F-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.

VASCULAR PLANT LIST
SAN ANTONIO CREEK - GOLETA

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
EQUISETACEAE		
<i>Equisetum temateia</i>	Giant Horsetail	N
ANACARDIACEAE		
<i>Schinus molle</i>	Pepper Tree	I
<i>toxicodendron diversilobum</i>	Poison Oak	N
APIACEAE		
<i>Foeniculum vulgare</i>	Sweet Fennel	I
APOCYNACEAE		
<i>Vinca Major</i>	Periwinkle	I
ARALIACEAE		
<i>Hedera helix</i>	English Ivy	I
ASTERACEAE		
<i>Ageratina adenophora</i>	Ironweed	I
<i>Artemisia californica</i>	California Sagebrush	N
<i>Artemisia douglasiana</i>	Mugwort	N
<i>Baccharis glutinosa</i>	Mulefat	N
<i>Baccharis pilularis</i>	Coyote Bush	N
<i>ssp. Consanguinea</i>		
<i>Gnaphalium californicum</i>	Pearly Everlasting	N
<i>Gnaphalium luteo-album</i>	Weedy Everlasting	I
<i>Picris echioides</i>	Ox Tongue	I
<i>Senecio mikanioides</i>	German Ivy	I
<i>Venegasia carpesioides</i>	Canyon Sunflower	N
BETULACEAE		
<i>Alnus rhombifolia</i>	White Alder	N
BRASSICACEAE		
<i>Brassica nigra</i>	Black Mustard	I
<i>Raphanus sativus</i>	Wild Radish	I
<i>Rorippa-nasturtium-aquaticum</i>	Watercress	I

CAPRIFOLIACEAE			
Lonicera japonica	Garden Honeysuckle		I
Sambucus mexicana	Elderberry		N
CARYOPHYLLACEAE			
Silene gallica	Windmill Pink		I
CHENOPODIACEAE			
Chenopodium ambrosioides	Mexican Tea I		I
Chenopodium murale	Nettle Leaved -Goosefoot		I
CONVULVULACEAE			
Calystegia macrostegia ssp. cyclostegia	Morning-Glory		I
CYPERACEAE			
Cyperus erageotis	Cyperus		I
Scirpus robustus	Prairie Bulrush		N
EUPHORBIACEAE			
Ricinus communis	Castor Bean		I
FABACEAE			
Lathyrus latifolius	Common Sweetpea		I
Lupinus bicolor	Bicolor Lupine		N
Lupinus succulentus	Succulent Lupine		N
Melilotus albus	White Sweet Clover		I
Melilotus indicus	Yellow Sweet Clover		I
Vicia americana	American vetch		I
FAGACEAE			
Quercus agrifolia	Coast Live Oak		N
GERANEACEAE			
Erodium botrys	Broad-Leaf Filatree		I
GROSSULARIACEAE			
Ribes amarum var. hoffmannii	Bitter Gooseberry		N
Ribes speciosum	Fuchsia-Flowered -Ribes		N

HYDROPHYLLACEAE			
Phacelia grandiflora	Phacelia		N
Phacelia ramossissima	Branching Phacelia		N
JUNCACEAE			
Juncus xiphioides	Iris-Leaved Juncus		N
LAMIACEAE			
Marrubium vulgare	Horehound		
Salvia mallifera	Black Sage		N
Stachys bullata	Wood Mint		N
MALVACEAE			
Malcothamnus sp.	Mallow		N
MYOPORUM			
Myoporum sp.	Myoporum		I
MYRTACEAE			
Eucalyptus globulus	Blue Gum		I
ONAGRACEAE			
Epilobium adenocaulon	Willow- Herb		N
Clarkia purpurea	Clarkia		N
OXALIDACEAE			
Oxallis pes-caprae	Sour Grass		I
PLANTAGINACEAE			
Plantago lanceolata	English Plantain		I
Plantago major	Common Plantain		I
PLANTANACEAE			
Platanus racemosa	Western Sycamore		N
POACEAE			
Avena fatua	Wild Oats		I
Bromus diandrus	Ripgut Grass		I
Bromus mollis	Soft Chess		I
Cortaderia atacamensis	Pampas Grass		I
Elymus condensatus	Giant Rye		N
Lolium perenne	Italian Ryegrass		I
Oryzopsis miliacea	Rice Grass		I
Polypogon interruptus	Beard Grass		I

POLEMONIACEAE			
	<i>Gilia achilleaefolia</i>	Gilia	N
POLYGONACEAE			
	<i>Rumex crispus</i>	Curly Dock	I
	<i>Rumex hymenosepalus</i>	Wild Rhubarb	I
PRIMULACEAE			
	<i>Anagallis arvensis</i>	Scarlet Pimpernel	I
RANUNCULACEAE			
	<i>Clematis ligusticifolia</i>	Creek Clematis	N
RHAMNACEAE			
	<i>Rhamnus californica</i>	Coffeeberry	N
	<i>Ceanothus spinosus</i>	Greenbark	N
ROSACEAE			
	<i>Heteromeles arbutifolia</i>	Toyon	N
	<i>Pyracantha</i> sp.	Pyracantha	I
	<i>Rosa californica</i>	Wild Rose	N
	<i>Rubus ursinus</i>	California Blackberry	N
SALICACEAE			
	<i>Populus trichocarpa</i>	Black cottonwood	N
	<i>Salix exigua</i>	Narrowleaf Willow	N
	<i>Salix laevigata</i>	Red Willow	N
	<i>Salix lasiolepis</i>	Arroyo Willow	N
SCROPHULARIACEAE			
	<i>Mimulus aurantiacus</i>	Monkey Flower	N
	<i>Mimulus guttatus</i>	Mash Monkey Flower	N
	<i>Scrophularia californica</i>	California Figwort	N
	<i>Veronica anagallis-aquatica</i>	Speedwell	I
SOLANACEAE			
	<i>Nicotiana glauca</i>	Tobacco Tree	I
	<i>Solanum douglasii</i>	Douglas Nightshade	N
	<i>Solanum xantii</i>	Chaparral Nightshade	N
TROPAEOLACEAE			
	<i>Tropaeolum majus</i>	Garden Nasturtium	I

TYPHACEAE

Typha sp.

Cattail

N

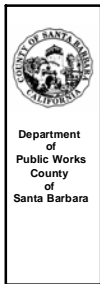
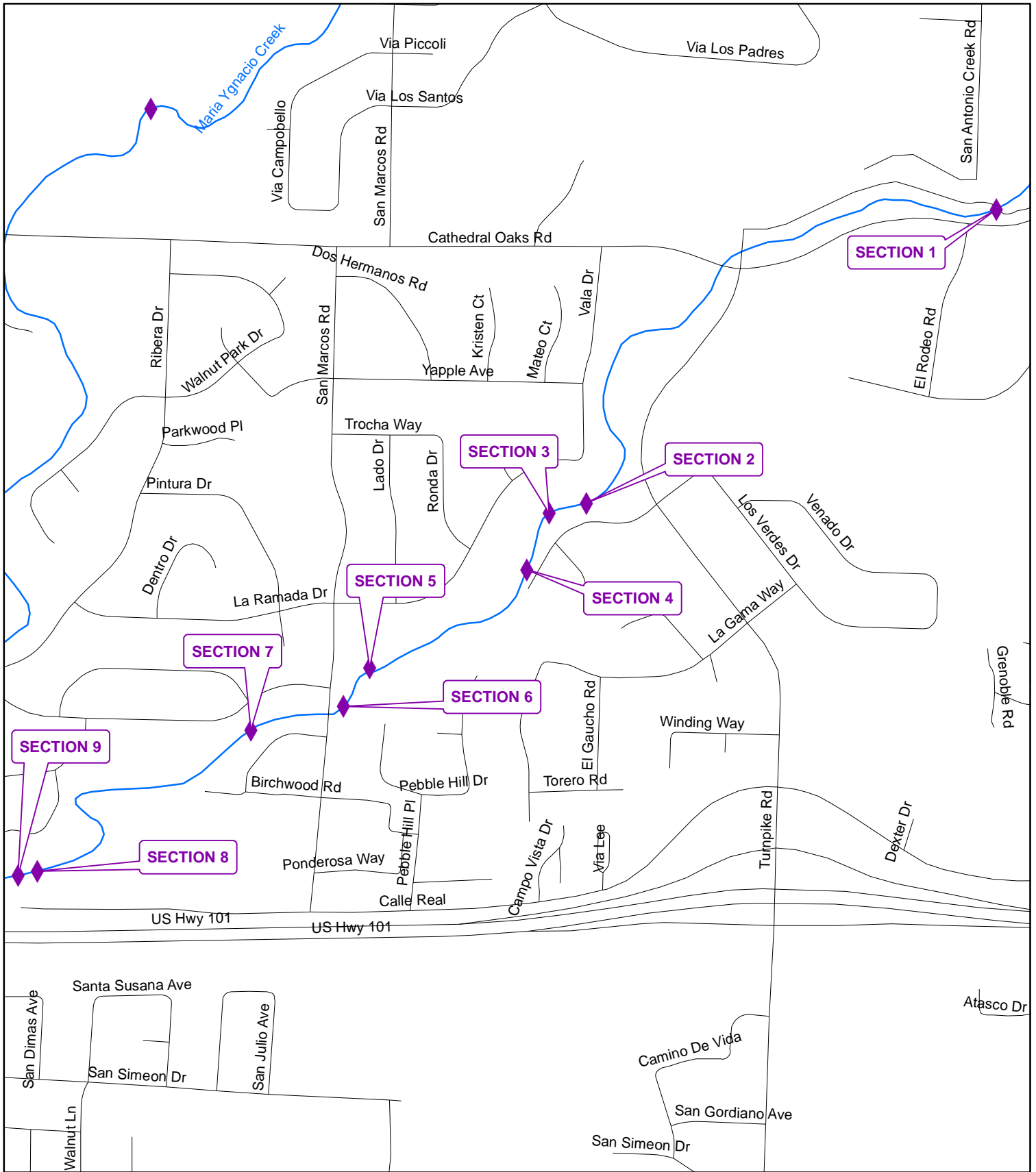
VERBENACEAE

Verbena lasiostachys

Verbena

N

* I = Introduced
N = Native



San Antonio Creek-Goleta

Legend

◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

San Antonio Creek



Section 1



Section 3

San Antonio Creek



Section 7



Section 8

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

Location:

The project begins 500' upstream of Patterson Avenue and terminates 300' upstream of Hollister Avenue.

Setting:

Inspected on April 3, 2018.

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

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

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

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

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

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

and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

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

Revegetation:

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

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	2300	18,580
2017/2018	0	0	0	18,580
2018/2019	0	0	0	18,580

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 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:

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

Section 2:

A down willow will be removed from the right side of the active channel.

Section 3:

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

Section 4:

Multiple down willows will be removed from the active channel.

Section 5:

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

Section 6:

A down willow limb will be removed from the left side of channel.

Section 7:

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

Section 8:

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

Section 9:

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

Section 10:

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

Section 11:

A down willow will be removed from the active channel.

Section 12:

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

Section 13:

A down alder will be removed from the active channel.

Section 14:

2 down willows will be removed from the active channel.

Section 15:

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

Section 16:

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

Section 17:

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

Section 18:

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

Section 19:

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

Section 20:

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

Section 21:

Elderberry is projecting into the channel from the right bank and will be limbed.

Section 22:

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

Section 23:

Down eucalyptus branches will be removed from the active channel.

Section 24:

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

Section 25:

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

Section 26:

A down willow will be removed from the active channel.

Section 27:

Nonnative arundo donax will be brushed.

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

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

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.

VASCULAR PLANT LIST
SAN JOSE CREEK

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
AIZOACAE		
<i>Carpobrotus edulis</i>	Hottentot Fig	I
ANACARDIACEAE		
<i>Toxicocladron diversilobum</i>	Poison Oak	N
<i>Schinus molle</i>	Pepper Tree	I
<i>Schinus terebenthifolius</i>	Pepper Tree	I
APIACEAE		
<i>Apium graveolens</i>	Wild Celery	I
<i>Conium maculatum</i>	Poison Hemlock	I
APOCYNACEAE		
<i>Vinca major</i>	Periwinkle	I
ARALIACEAE		
<i>Hedera canariensis</i>	Algerian Ivy	I
ASTERACEAE		
<i>Ambrosia psilostachya</i> var. <i>california</i>	Western Ragweed	N
<i>Amaranthus albus</i>	Tumbleweed	I
<i>Artemisia biennis</i>	Marsh Sagebrush	N
<i>Artemisia californica</i>	CA. Sagebrush	N
<i>Artemisia douglasiana</i>	Muswort	N
<i>Baccharis pilularis</i>	Coyotebrush	N
<i>Baccharis salicifolia</i>	Mulejat	N
<i>Carduus pycnocephalus</i>	Italian Thistle	I
<i>Conyza canadensis</i>	Horseweed	I
<i>Gnaphalium bicolor</i>	Bicolored Everlasting	N
<i>Gnaphalium californicum</i>	Green Everlasting	N
<i>Gnaphalium luteo-album</i>	Cudweed Everlasting	I
<i>Isocoma veneta</i>	Coast Golden Bush	N
<i>Lactuca serriola</i>	Prickly Lettuce	I
<i>Picris echioides</i>	Ox tongue	I
<i>Senecio micanioides</i>	German Ivy	I
<i>Senecio vulgaris</i>	Common Groundsel	I
<i>Sylibum marianum</i>	Milk Thistle	I
<i>Venegasia carpesioides</i>	Canyon Sunflower	N
<i>Xanthium strumarium</i>	Cocklebur	I

BETULACEAE		
<i>Alnus rhombifolia</i>	White Alder	N
BRASSICACEAE		
<i>Brassica geniculata</i>	Summer Mustard	I
<i>Brassica nigra</i>	Black Mustard	I
<i>Lobularia maritima</i>	Sweet Alyssum	I
<i>Raphanus sativus</i>	Wild Raddish	I
<i>Rorippa Nasturtium-aquaticum</i>	Watercress	I
CACTACEAE		
<i>Opuntia ficus-indica</i>	Indian Fig	I
CAPRIFOLIACEAE		
<i>Sambucus mexicana</i>	Elderberry	N
CARYOPHYLLACEAE		
<i>Sagina occidentalis</i>	Western Pearlwort	N
<i>Stellaria media</i>	Common Chickweed	I
CHENOPODIACEAE		
<i>Atriplex patula</i> ssp. <i>hastate</i>	Spear-leaved Saltbush	N
<i>Chenopodium ambrosioides</i>	Mexican Tea	I
<i>Chenopodium berlandieri</i>	Berlander's Goosefoot	N
<i>Chenopodium murale</i>	Nettle-leaved Goosefoot	I
<i>Salsola australis</i>	Russian Thistle	I
CUCURBITACEAE		
<i>Marah herbaceous</i>	Wild Cucumber	N
CYPERACEAE		
<i>Carex</i> sp.	Sedge	
<i>Cyperus alternifolius</i>	African Umbrella Sedge	I
<i>Cyperus eragrostis</i>	Tall Umbrella Sedge	N
<i>Eragrostis</i> sp.		
EQUISETACEAE		
<i>Equisetum telmateia</i> var. <i>braunii</i>	Giant Horsetail	N
EUPHORBIACEAE		
<i>Ricinus communis</i>	Castor Bean	I
<i>Euphorbia Peplus</i>	Petty Spurge	I
FABACEAE		
<i>Acacia</i> sp.		I
<i>Lotus salsuginosus</i>	Coastal Hosackia	N
<i>Melilotus alba</i>	White Sweetclover	I

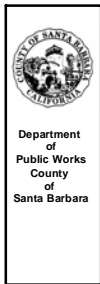
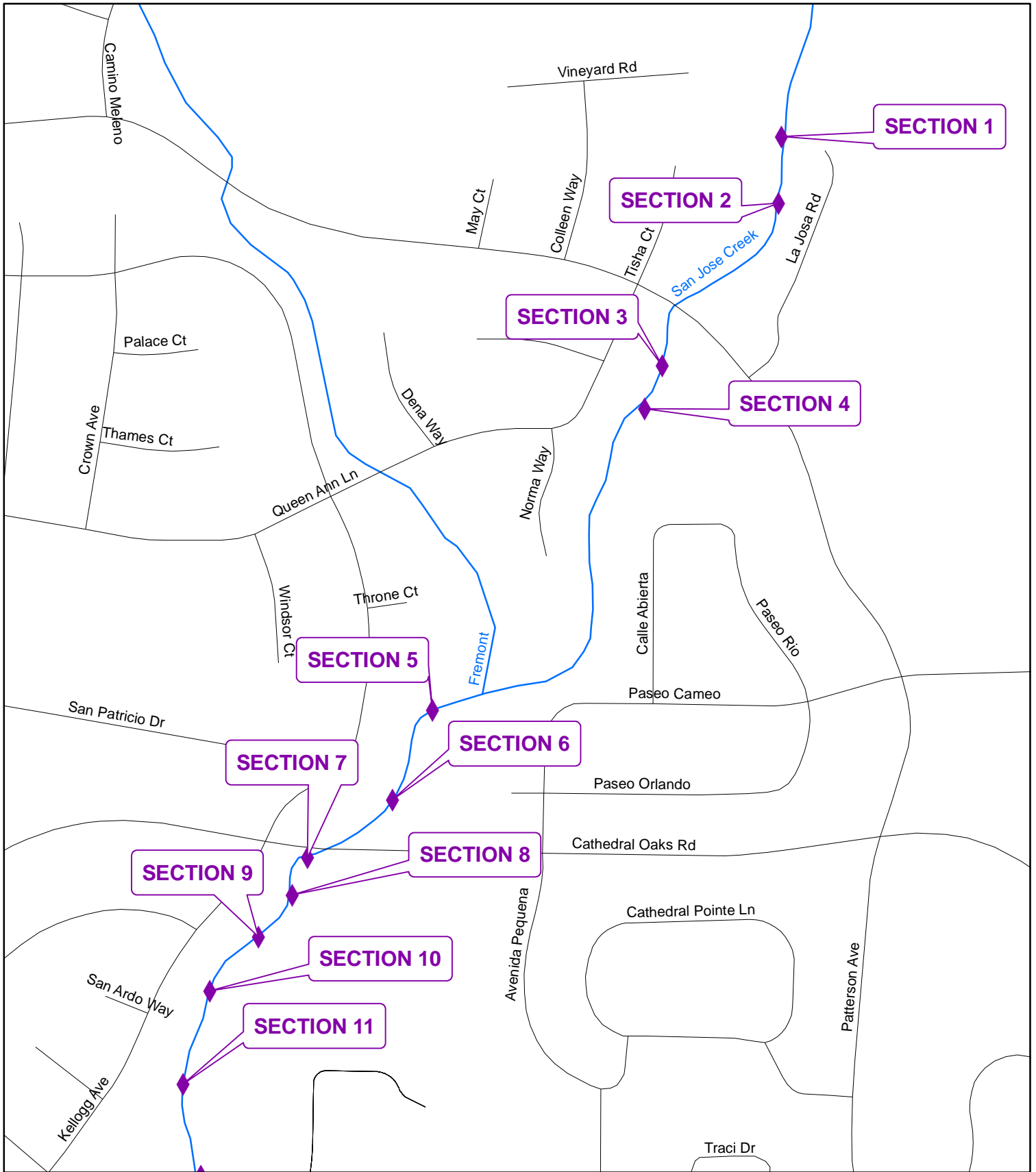
FAGACEAE			
	<i>Quercus agrifolia</i>	Coast Live Oak	N
GROSSULARIACEAE			
	<i>Ribes amarum</i>	Gooseberry	N
GERANIACEAE			
	<i>Erodium cicutarium</i>	Redstem Filaree	I
HYDROPHYLLACEAE			
	<i>Phacelia viscida</i>	Sticky phacelia	N
	<i>Phacelia ramosissima</i>	Branching phacelia	I
JUGLANDACEAE			
	<i>Juglans californica</i>	So. CA. Black Walnut	N
	<i>Juglans regia</i>	English Walnut	I
JUNCACEAE			
	<i>Juncus bufonius</i>	Toad Rush	N
LAMIACEAE			
	<i>Salvia mellifera</i>	Black Sage	N
	<i>Mentha</i> sp.	Mint	I
LAURACEAE			
	<i>Umbellularia californica</i>	CA. Bay	N
LYTHRACEAE			
	<i>Lythrum hyssopifolia</i>	Hyssop-leaved Loosestrife	N
MALVACEAE			
	<i>Lavatera cretica</i>	Annual Lavatera	I
	<i>Malva nicaeensis</i>	Mallow	I
	<i>Malva parvifolia</i>	Cheeseweed	I
MYOPORACEAE			
	<i>Myoporum laetum</i>	Myoporum	I
MYRTACEAE			
	<i>Eucalyptus globulus</i>	Blue Gum	I
	<i>Eucalyptus camaldulensis</i>	Murray Red Gum	I
	<i>Eucalyptus citriodora</i>	Lemon-scented Gum	I
	<i>Eucalyptus lehmannii</i>	Lehmann's Gum	I
OLEACEAE			
	<i>Fraxinus uhdei</i>	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		
Cotoneaster 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 lasiolepis	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 douglasii	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 Jose Creek-A

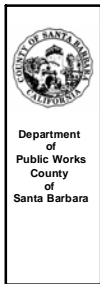
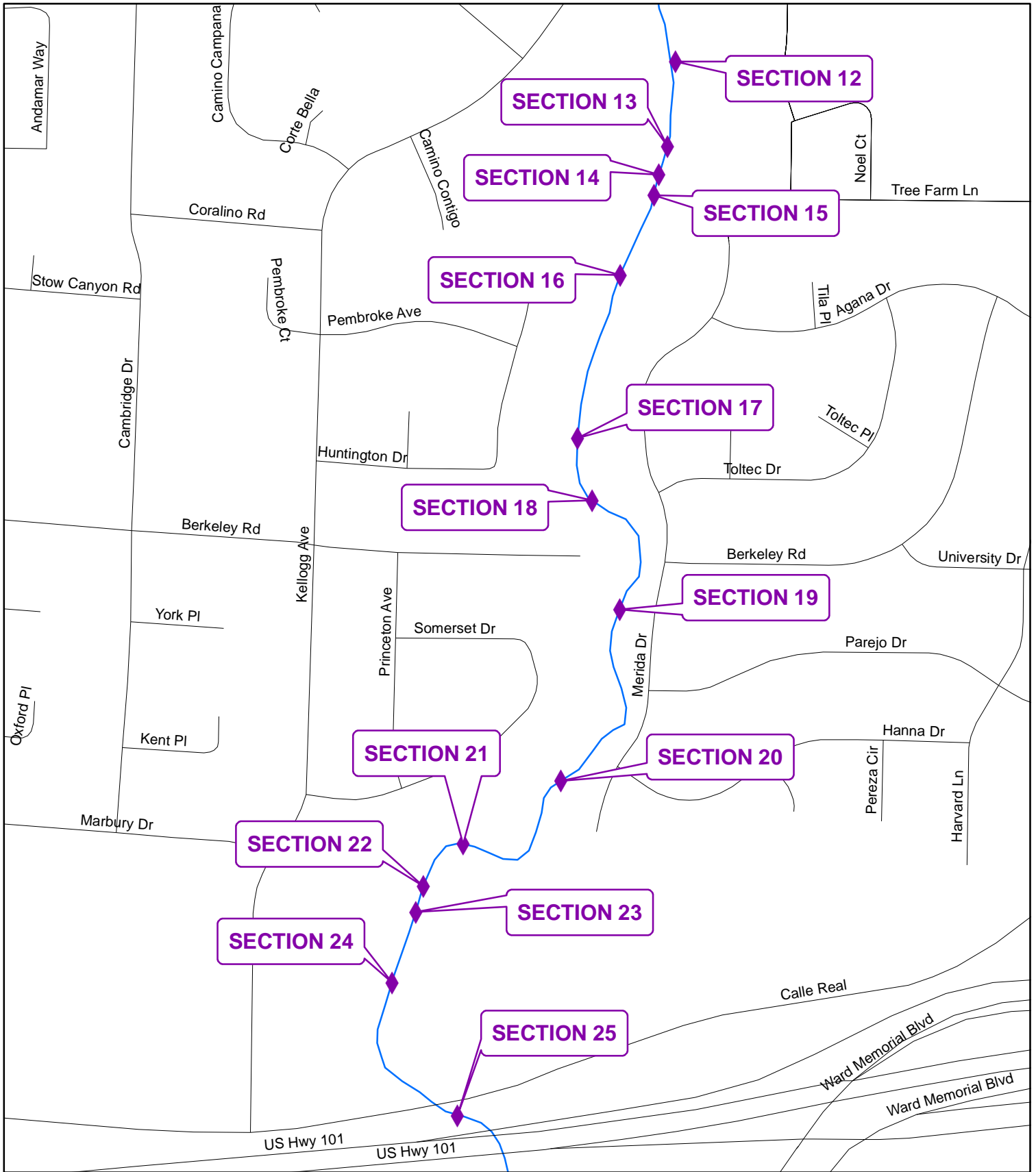
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 Sites

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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



San Jose Creek-B

Legend

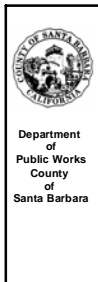
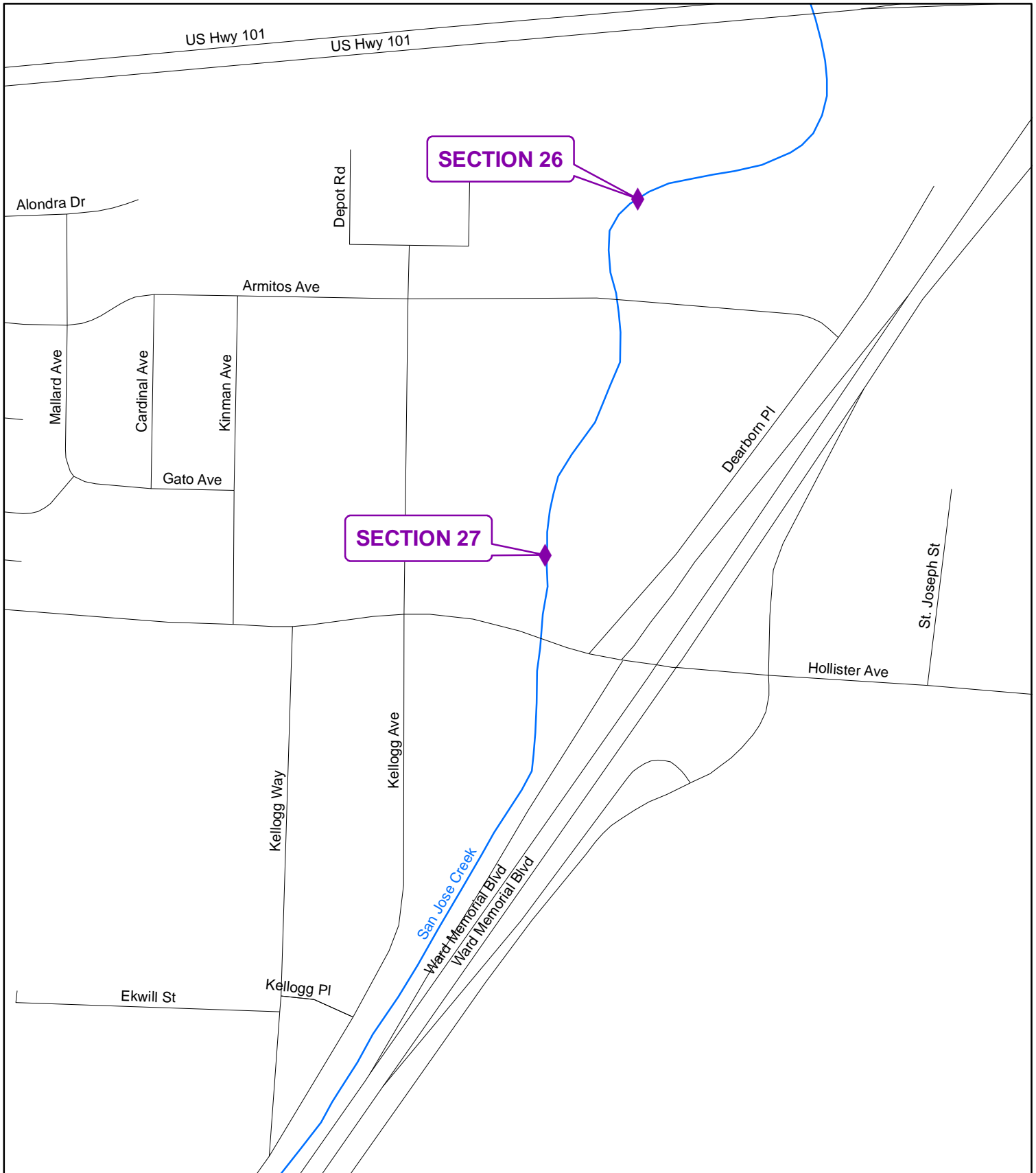
◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

Prepared By:
The Santa Barbara County Flood Control and Water Conservation District
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San Jose Creek-C

Legend

Sites

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Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan
Fiscal Year 2018-2019

Prepared By:
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San Jose Creek



Section 8



Section 10

San Jose Creek



Section 14



Section 23

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 3, 2018.

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

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

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

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

The District's Environmental, Engineering, and Maintenance Staff have reviewed the maintenance areas within steelhead creeks to determine areas that may have more flexibility for vegetation management. Based on decades of experience in these watersheds through several major flood seasons, District staff has determined certain reaches that are particularly sensitive to obstructions and flood hazards. These reaches tend to be narrow, shallow, with many constrictions, culverts, adjacent structures, and bridges. These areas have little to no tolerance for consideration of obstructive/woody vegetation retention within the bankfull width, including Large Woody Debris, (LWD) and Key Woody Debris (KWD) and retention of large live trees in the center of the channel.

The emphasis for management approach in these areas will be to maintain the bankfull width free of obstructions. The zones where LWD/KWD and the retention of live trees within the bankfull width may be considered are generally wider, deeper, and are less sensitive to constrictions. The District retains final discretion on all decisions regarding vegetation management including when and where KWD/LWD is left behind and/or installed in the channel.

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

Revegetation:

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

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
2017/2018	50	0	0	4,775
2018/2019	0	0	0	4,775

Engineering Analysis:

The culvert on San Pedro Creek at Calle Real is susceptible to plugging causing significant flooding of the adjacent residential areas. In an effort to reduce the potential for plugging the culvert, obstructive vegetation that could be mobilized during high flows should be removed. The bankfull discharge* for San Pedro Creek downstream of Cathedral Oaks Road is approximately 234 cfs. With a velocity of approximately 6 fps and a typical depth of 2.5’, the width of clearing should be 16’ to maintain channel equilibrium.

The creek downstream of the UPRR track is relatively flat and prone to sedimentation. The area in the vicinity of Fairview and Hollister Avenue is very prone to siltation and flooding (including major portions of Old Town Goleta) so maintaining maximum hydraulic capacity is essential. Maintaining the channel bed clear of vegetation including breaking up any root mass that develops will help maintain capacity as well as provide for efficient sediment transport. Due to lower velocities associated with the relatively flat slope in this section, the bankfull channel width is approximately 20' upstream of Hollister. The bankfull channel width is approximately 34' downstream of Hollister due to the increase in watershed area including Las Vegas Creek.

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

Project Description:

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

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

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

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

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

Section 1:

40 square feet of cottonwood sprouts will be brushed from the active channel. This section was previously mitigated for under Section 1 of the 13/14 AP.

Section 2:

Willow branches are projecting into the active channel from the right bank and will be limbed.

Section 3:

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

Section 4:

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

Section 5:

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

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

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

included. Some of the impacts listed below are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of this project and the current state of the creek this project would not be considered a worst-case scenario. Therefore the impacts identified below are considered Class II.

Mitigation Measures:

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

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.

SAN PEDRO CREEK
VASCULAR PLANT LIST

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
EQUISETACEAE		
<i>Equisetum laevigatum</i>	Smooth Scouring Rush	N
ANACARDIACEAE		
<i>Malosma laurina</i>	Laurel Sumac	N
<i>Schinus molle</i>	Pepper Tree	I
<i>Toxicodendron diversilobum</i>	Poison Oak	N
APIACEAE		
<i>Foeniculum</i>	Sweet Fennel	I
APOCYNACEAE		
<i>Vinca major</i>	Periwinkle	I
ARALIACEAE		
<i>Hedera helix</i>	English Ivy	I
ASTERACEAE		
<i>Artemisia douglasiana</i>	Mugwort	N
<i>Baccharis salicifolia</i>	Mulefat	N
<i>Baccharis pilularis</i>	Coyote Bush	N
<i>Centaurea melitensis</i>	Yellow Star Thistle	I
<i>Lactuca serriola</i>	Prickly Lettuce	I
<i>Matricaria marrioides</i>	Pineapple Weed	I
<i>Senecio mikanioides</i>	German Ivy	I
<i>Senecio vulgare</i>	Common Groundsel	I
<i>Sonchus asper</i>	Sow Thistle	I
<i>Sonchus oleraceus</i>	Sow Thistle	I
<i>Xanthium strumarium</i>	Cocklebur	I
BETULACEAE		
<i>Alnus rhombifolia</i>	White Alder	N

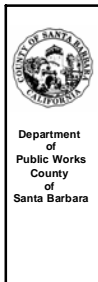
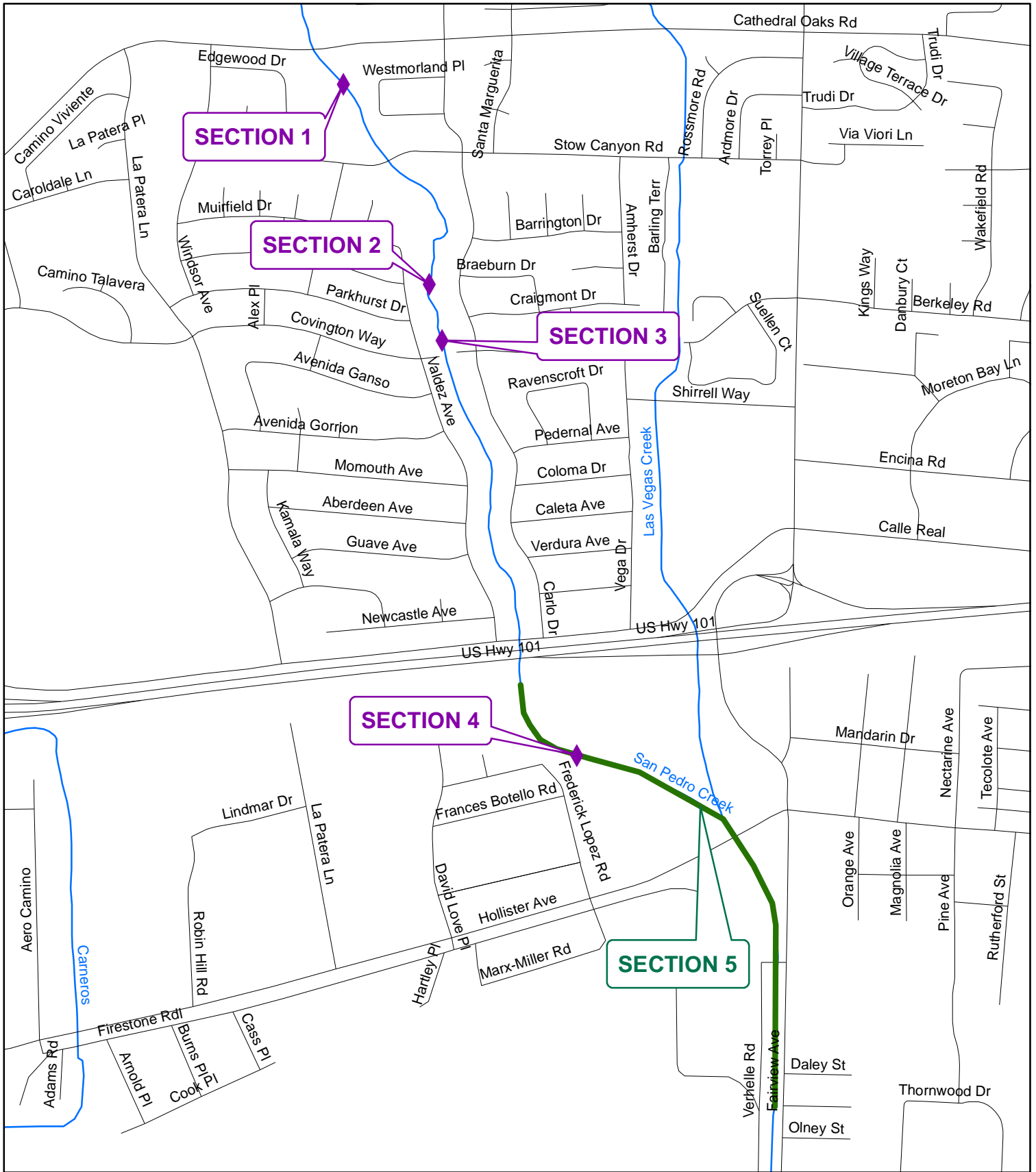
BRASSICACEAE

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
Pelargonium hortorum	Garden Geranium	I

HYDROPHYLLACEAE			
	<i>Phacelia ramossissima</i>	Branching Phacelia	N
	<i>Phacelia cicutaria</i>	Caterpillar Phacelia	N
LAMIACEAE			
	<i>Mentha spicata</i>	Spearmint	I
LAURACEAE			
	<i>Umbellularia California</i>	California bay	N
LEGUMINOSAE			
	<i>Astragalus sp.</i>	Locoweed	I
OXALIDACEAE			
	<i>Oxalis pes-caprae</i>	Sour Grass	N
PAPAVERACEAE			
	<i>Eschscholzia californica</i>	California Poppy	N
PLATANACEAE			
	<i>Platanus racemosa</i>	Western Sycamore	N
POACEAE			
	<i>Agrostis stolonifera</i>	Redtop	I
	<i>Arundo donax</i>	Giant Reed	I
	<i>Avena barbata</i>	Slender Wild Oats	I
	<i>Bromus diandrus</i>	Ripgut Grass	I
	<i>Bromus rubens</i>	Foxtail	I
	<i>Bromus tectorum</i>	Cheatgrass Brome	I
	<i>Cortaderia atacamensis</i>	Pampas Grass	I
	<i>Cynodon dactylon</i>	Bermuda Grass	I
	<i>Elymus condensatus</i>	Giant Rye	N
	<i>Elymus glaucus</i>	Blue Wild Rye	I
	<i>Hordeum sp.</i>	Foxtail Rye Grass	I
	<i>Piptatherum miliacea</i>	Rice Grass	I
	<i>Polypogon monspeliensis</i>	Rabbitsfoot Grass	I
POLYGONACEAE			
	<i>Rumex crispus</i>	Curly Dock	I
PORTULACACEAE			
	<i>Claytonia perfoliata</i>	Miner's Lettuce	N
ROSACEAE			
	<i>Heteromeles arbutifolia</i>	Toyon	N

Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus fremontii		
Fremont Cottonwood	N	
Salix lasiolepis		
Arroyo Willow	N	
SIMARUBACEAE		
Ailanthus altissima		Tree
of Heaven	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



Legend

- ◆ Sites
- Lengths

San Pedro Creek



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 damage 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.

740 370 0 740
Feet

Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

San Pedro Creek



Section 1



Section 2

San Pedro Creek



Section 5

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

Location:

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

Setting:

Inspected on March 20, 2018.

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

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

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

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

San Roque Creek is within the mapped zone where KWD, LWD and live trees in the middle of the bankfull width cannot be tolerated due to flooding and/or erosion concerns. San Roque is very urban with structures near the top of bank with a very shallow channel and impassable culverts at Highway 101.

Revegetation

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

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

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
2018/2019	0	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 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:

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

Section 2:

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

Section 3:

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

Section 4:

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

Section 5:

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

Section 6:

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

Section 7:

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

Impact Analysis and Mitigation Measures:

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

Impacts:

Impacts identified for this project have been taken directly from the Impact Summary Table of

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

Mitigation Measures:

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

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.

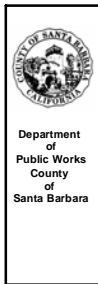
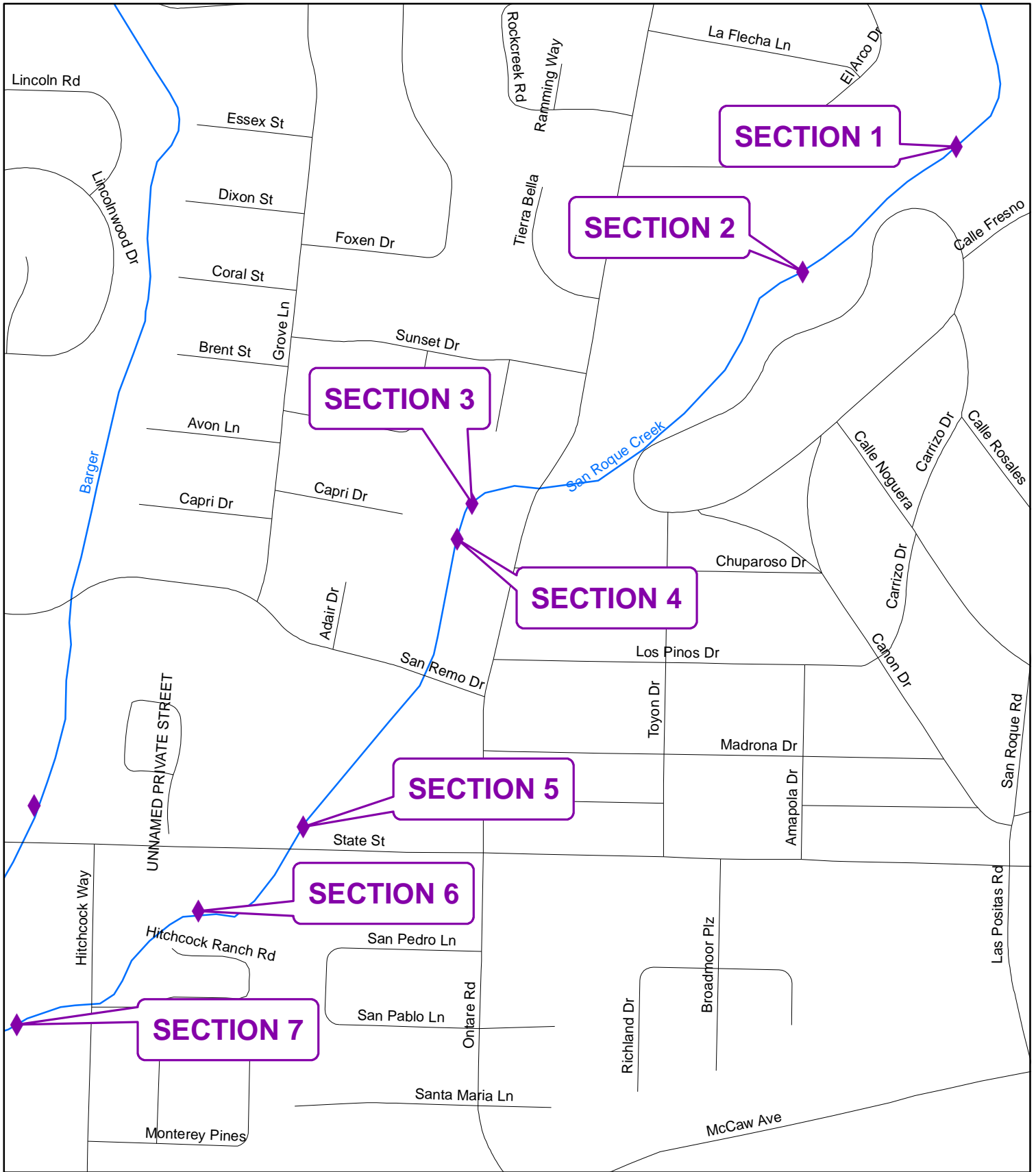
**VASCULAR PLANT LIST
SAN ROQUE CREEK**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
EQUISETACEAE		
<i>Equisetum telemateia</i>	Giant Horsetail	N
ANACARDIACEAE		
<i>Toxicodendron diversilobum</i>	Poison Oak	N
APIACEAE		
<i>Conium maculatum</i>	Poison Hemlock	I
<i>Foeniculum vulgare</i>	Sweet Fennel	I
APOCYNACEAE		
<i>Vinca major</i>	Periwinkle	I
ARALIACEAE		
<i>Hedera helix</i>	English Ivy	I
ASTERACEAE		
<i>Artemisia douglasiana</i>	Mugwort	N
<i>Baccharis pilularis</i> <i>ssp. consanguinea</i>	Coyote Bush	N
<i>Cirsium vulgare</i>	Bull Thistle	I
<i>Picris echioides</i>	Ox Tongue	I
CYPERACEAE		
<i>Cyperus esculentus</i>	Yellow Nutgrass	I
EUPHORBIACEAE		
<i>Ricinus communis</i>	Castor Bean	I
FAGACEAE		
<i>Quercus agrifolia</i>	Coast Live Oak	N
MALVACEAE		
<i>Malva parvifolia</i>	Cheeseweed	I
MYRTACEAE		
<i>Eucalyptus globulus</i>	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
TROPAEALACEAE			
Tropaeolum majus	Garden Nasturtium		I

* I - Introduced

N - Native



San Roque Creek

Legend
◆ Sites

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Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

San Roque Creek



Section 1



Section 3

San Roque Creek



Section 5



Section 7

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

Location:

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

Setting:

The creek was inspected on March 15, 2018.

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

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

Revegetation:

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

Tecolotito 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	14,620	15,000	15,000	380
2004/2005	0	0	0	380
2005/2006	525	150	150	5
2007/2008	1,100	1,100	1,100	5
2010/2011	100	0	0	-95
2014/2015	55	0	LCMB: 150	0
2017/2018	0	0	0	0
2018/2019	50	0	0	-50

Engineering Analysis:

Tecolotito Creek is prone to sedimentation and associated colonization by obstructive vegetation throughout the project reach. The creek has been improved to convey the Q100 and allow for adjacent development. Silt trapping vegetation consisting primarily of cattails and bulrush are growing in the active channel reducing capacity. Removing silt and silt trapping vegetation from the bankfull channel cross-section (active channel) is important to maintain the design capacity of the creek. The bankfull discharge for this section is approximately 300 cfs. With a velocity of approximately 6 fps and a typical depth of 3', the width of clearing should be 17' to maintain channel equilibrium.

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

Project Description:

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

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

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

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

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

Section 1:

A debris plug is within the active channel and will be cut up.

Section 2:

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

Section 3:

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

Section 4:

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

Section 5:

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

Section 6:

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

Section 7:

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

Section 8:

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

Section 9:

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

Section 10:

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

Impact Analysis and Mitigation Measures:

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

Impacts:

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

Mitigation Measures:

Mitigation measures are the Adopted Standard Practices which were derived from the Preferred Alternative section of the Updated Program EIR for Santa Barbara County Flood Control

Routine Maintenance Activities (01-EIR-01). Only the mitigation measures that apply to the previously identified impacts are included.

Resource	Impacts	Mitigation Measures*
Hydrology EIR sections 5.1.2, 5.1.3	H-A,	H-1,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-6, W-7, W-8
Wetlands, Riparian Habitat, and Rare Plants EIR sections 5.3.2, 5.3.3	WR-A	B-1, B-3,
Fish, Aquatic Species, and Wildlife EIR sections 5.4.2, 5.4.3	FAW-A, FAW-F, FAW-H, FAW-I, FAW-J	B-1, B-2, B-3, 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 3 days to complete.

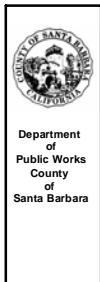
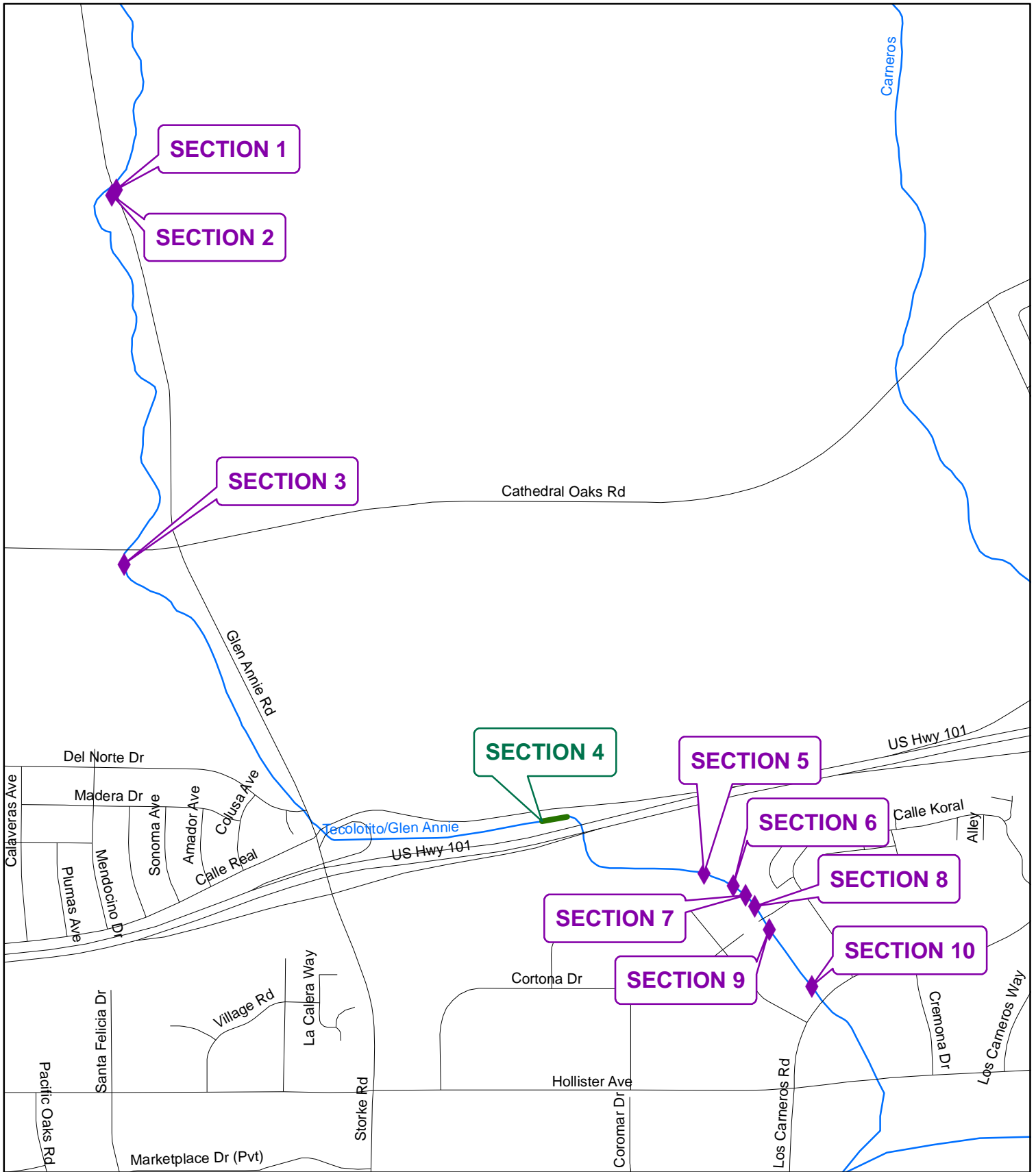
**VASCULAR PLANT LIST
TECOLOTITO CREEK**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>ORIGIN*</u>
EQUISETACEAE		
<i>Equisetum telemateia</i>	Giant Horsetail	N
ANACARDIACEAE		
<i>Rhus integrifolia</i>	Lemonadeberry	N
<i>Rhus laurina</i>	Laurel Sumac	N
APIACEAE		
<i>Foeniculum vulgare</i>	Sweet Fennel	I
ASTERACEAE		
<i>Artemisia californica</i>	California Sagebrush	N
<i>Baccharis pilularis</i>	Coyote Bush	N
<i>ssp. consanguinea</i>		
<i>Xanthium strumarium</i>	Cocklebur	I
BRASSICACEAE		
<i>Raphanus sativus</i>	Wild Radish	I
CAPRIFOLIACEAE		
<i>Sambucus mexicana</i>	Elderberry	N
CHENOPODIACEAE		
<i>Artiplex Hastata</i>	Hastate-Leaved -Saltbush	
CYPERACEAE		
<i>Cyperus alternifolius</i>	Umbrella plant	I
<i>Scirpus californicus</i>	California Bulrush	N
<i>Scirpus cernuus</i>	Low Club-Rush	N
<i>var. californicus</i>		
<i>Scirpus microcarpus</i>	Small-Fruited Bulrush	N
<i>Scirpus robustus</i>	Prairie Bulrush	N
EUPHORBIACEAE		
<i>Ricinis communis</i>	Castor Bean	I
FABACEAE		
<i>Lotus scoparius</i>	Deerweed	N

JUGLANDACEAE			
	<i>Juglans regia</i>	English Walnut	I
MYRTACEAE			
	<i>Eucalyptus globulus</i>	Blue Gum	I
PLATANACEAE			
	<i>Plantus racemosa</i>	Western Sycamore	N
POACEAE			
	<i>Cortaderia atacamensis</i>	Pampas Grass	I
POLYGONACEAE			
	<i>Rumex crispus</i>	Curly Dock	I
RANUNCULACEAE			
	<i>Clematis ligusticifolia</i>	Creek Clematis	N
ROSACEAE			
	<i>Hetermeles arbutifolia</i>	Toyon	N
	<i>Rubus ursinus</i>	California Blackberry	N
SALICACEAE			
	<i>Salix lasiolepis</i>	Arroyo Willow	N
SROPHULARIACEAE			
	<i>Scrophularia californica</i>	California Figwort	N
SOLANCEAE			
	<i>Nicotiana glauca</i>	Tobacco Tree	I
TROPAEOLACEAE			
	<i>Tropaeolum majus</i>	Garden Nasturtium	I
TYPHACEAE			
	<i>Typha sp.</i>	Cattail	N
URTICACEAE			
	<i>Urtica holosericea</i>	Giant Nettle	N

* I = Introduced

N = Native



Tecolotito Creek

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.

740 370 0 740
Feet

Coordinate System: State Plane California Zone V NAD 1983

**Annual Routine Maintenance Plan
Fiscal Year 2018-2019**

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

Tecolotito Creek



Section 1



Section 2

Tecolotito Creek



Section 3

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 2018/2019 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 2018/2019 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 CONTROL DISTRICT MAINTENANCE PROGRAM

The purpose of this plan is 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.

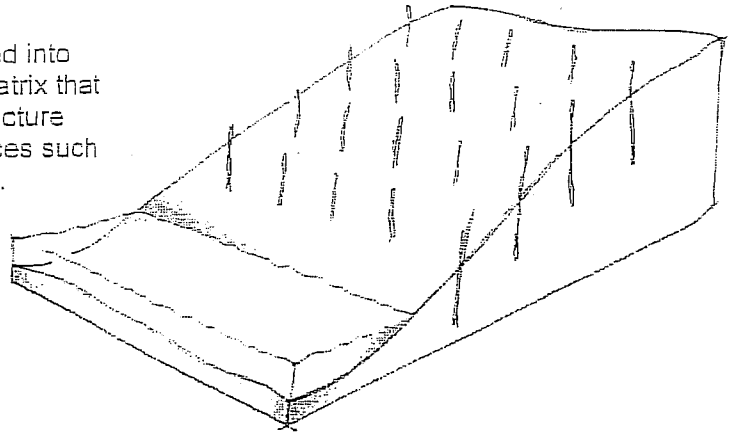
Bio-technical bank stabilization is not appropriate in all circumstances and is most suitable for creek restoration projects where the purpose is to reduce bank erosion, establish native vegetation on the bank, and not protect expensive structures or roads. The District will evaluate the erosion problems 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 Figures 1 through 4.

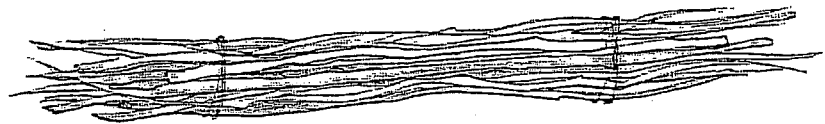
1. Anchored Cuttings. This technique employs large numbers of cuttings arranged in layers or bundles, which are secured to creek banks and partially buried. They provide direct protection from erosive flows, prevent overbank erosion, promote sediment capture, and quickly develop roots.
2. Live Stakes. 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.

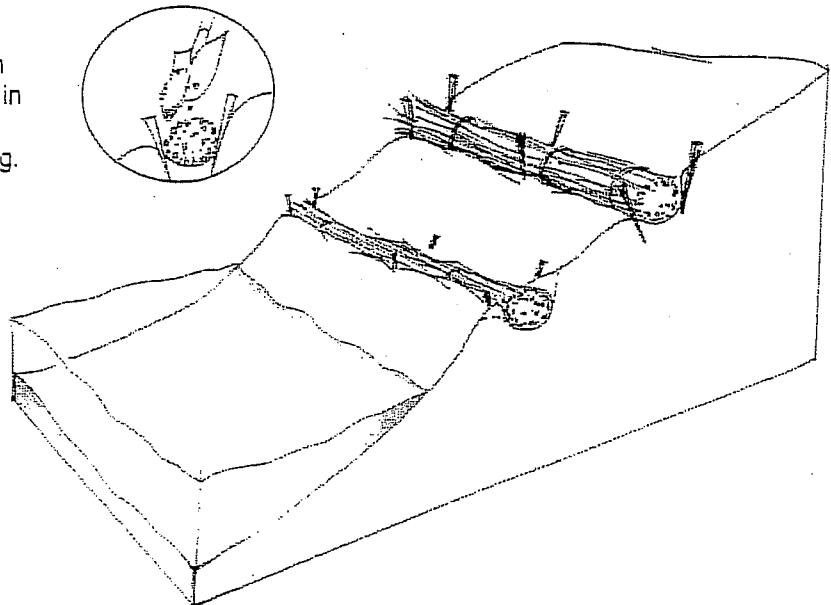
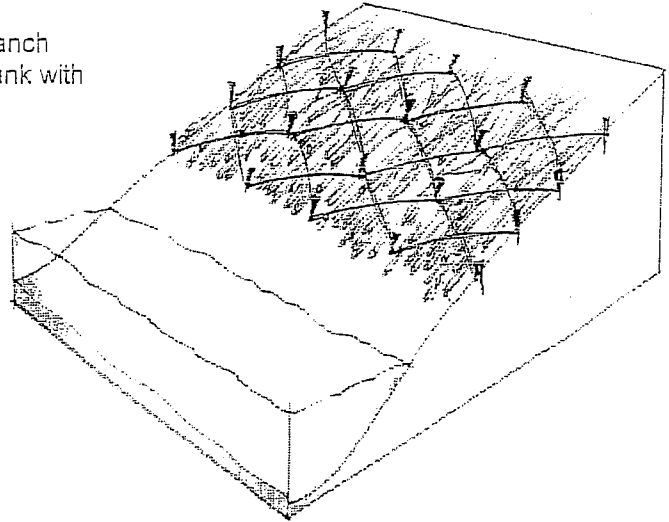


Figure 1. Examples of Bio-technical Techniques

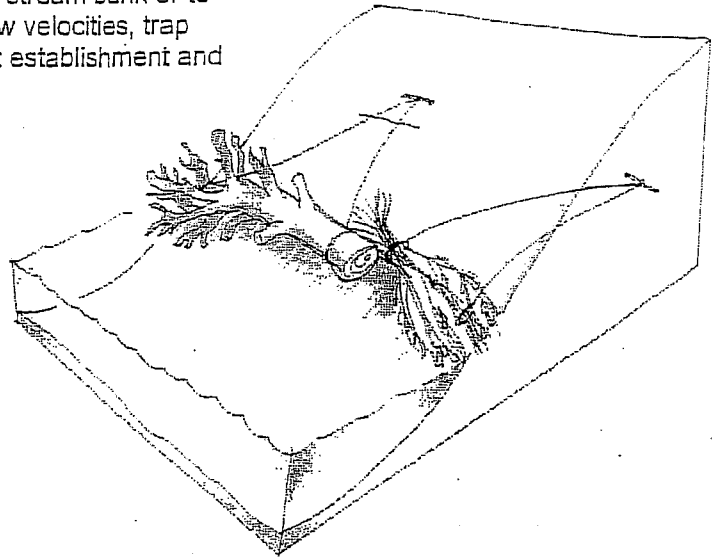
Brush Mattress

Live willow stakes, fascines 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.

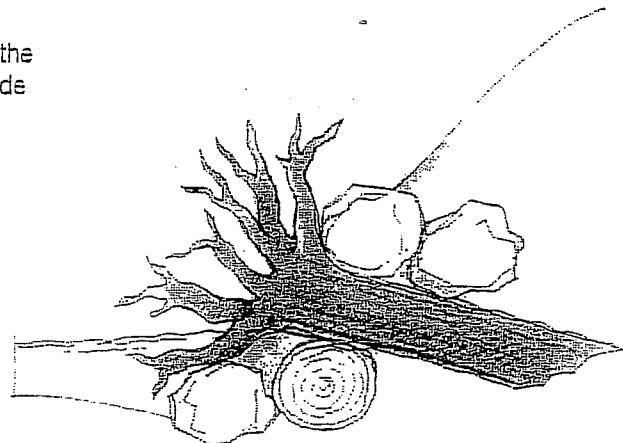
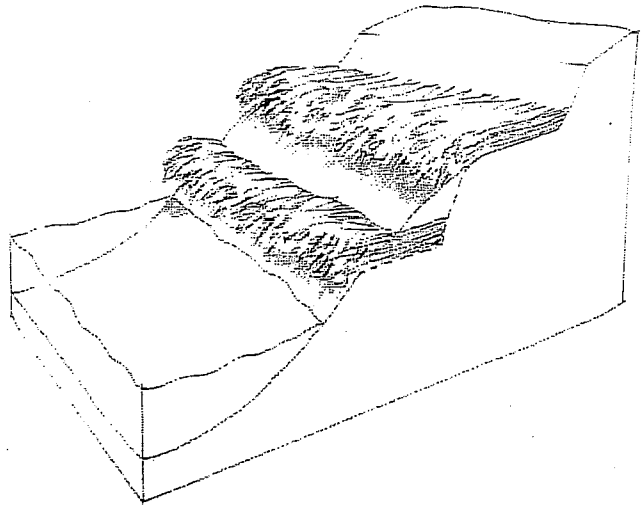


Figure 2. Examples of Bio-technical Techniques

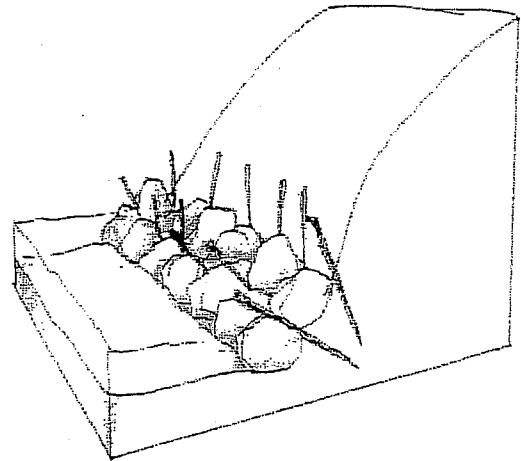
Brush Layering

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

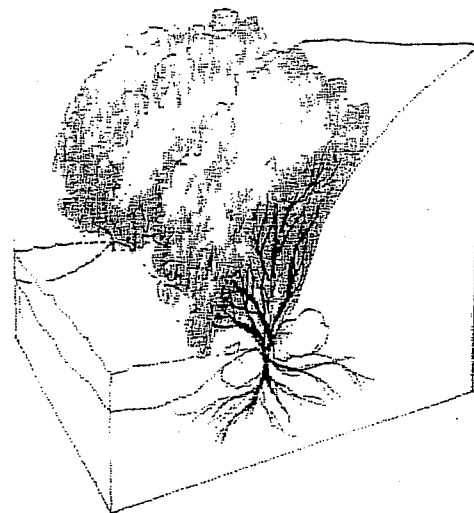
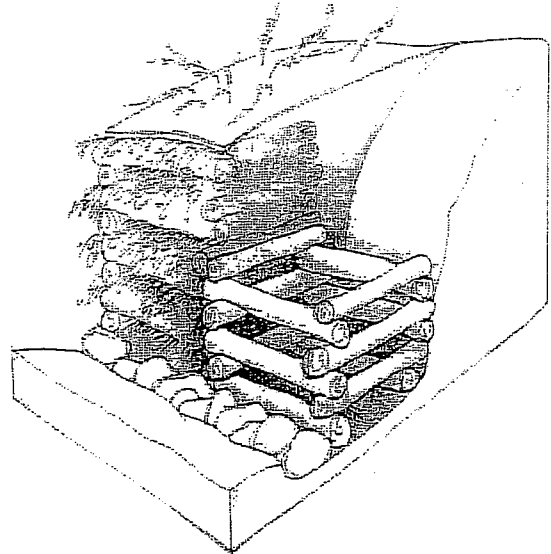


Figure 3. Examples of Bio-technical Techniques

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

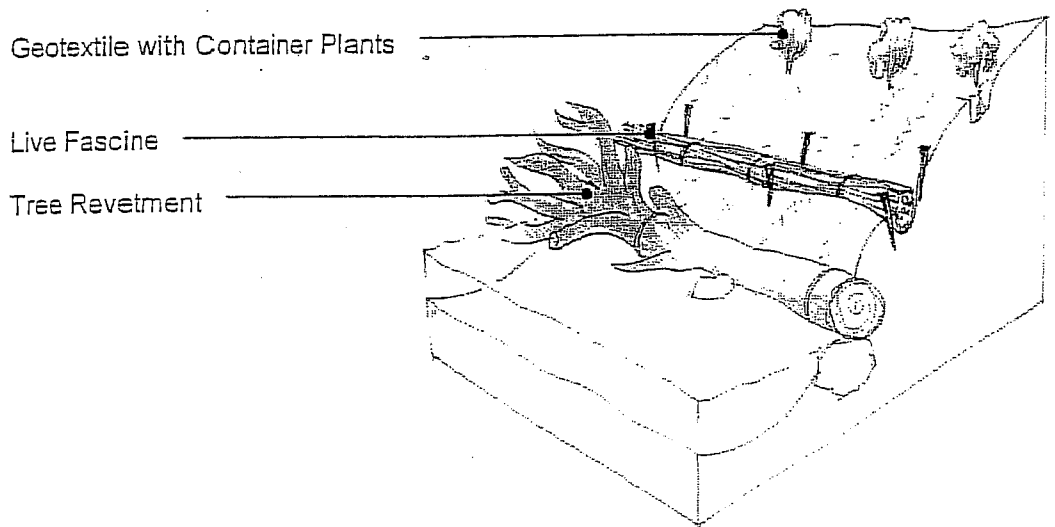
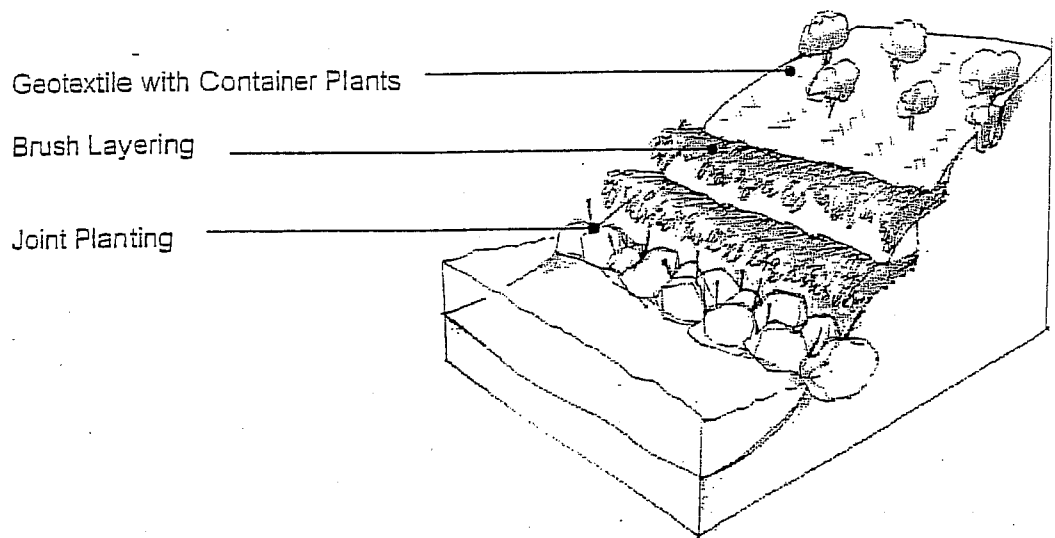


Figure 4. Examples of Bio-technical Techniques

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:

<i>Salix sp.</i>	Willow
<i>Platanus racemosa</i>	Sycamore
<i>Populus trichocarpa</i>	Black cottonwood
<i>Sambucus mexicana</i>	Elderberry
<i>Quercus agrifolia</i>	Coast live oak
<i>Umbellularia californica</i>	California bay laurel
<i>Baccharis salicifolia</i>	Mulefat
<i>Artemisia douglasiana</i>	Mugwort
<i>Clematis ligusticifolia</i>	Creek Clematis
<i>Elymus condensatus</i>	Giant ryegrass
<i>Hereromeles arbutifolia</i>	Toyon
<i>Lonicera suspicata</i>	Santa Barbara honeysuckle
<i>Rhamnus californica</i>	Coffeeberry
<i>Ribes amarum</i>	Gooseberry
<i>Ribes speciosum</i>	Fushia flowered gooseberry
<i>Rosa californica</i>	California rose
<i>Rubus ursinus</i>	Blackberry

PLANTING DENSITY RECOMMENDATIONS

SPECIES	# PER ACRE	SPACING
<i>Salix sp.</i>	1,000	6' - 7'
<i>Platanus racemosa</i>	50	30'
<i>Quercus agrifolia</i>	50	30'
<i>Populus sp.</i>	70	25'
<i>Alnus rhombifolia</i>	70	25'
<i>Umbellularia californica</i>	70	25'
<i>Sambucus mexicana</i>	200	15'
<i>Baccharis pilularis</i>	200	15'
<i>Rhus sp.</i>	450	10'
<i>Rosa californica</i>	450	10'
<i>Ribes sp.</i>	450	10'
<i>Heteromeles arbutifolia</i>	450	10'
<i>Rhamnus californica</i>	450	10'
<i>Lonicera subspicata</i>	450	10'
<i>Rubus ursinus</i>	1740	5'
<i>Clematis ligusticifolia</i>	1740	5'
<i>Artemesia douglasiana</i>	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 of 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 $\frac{3}{4}$ " to $1\frac{1}{2}$ " 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 NO_x 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 conduct 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 reduce 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 inadvertently 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 its 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 NO_x 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

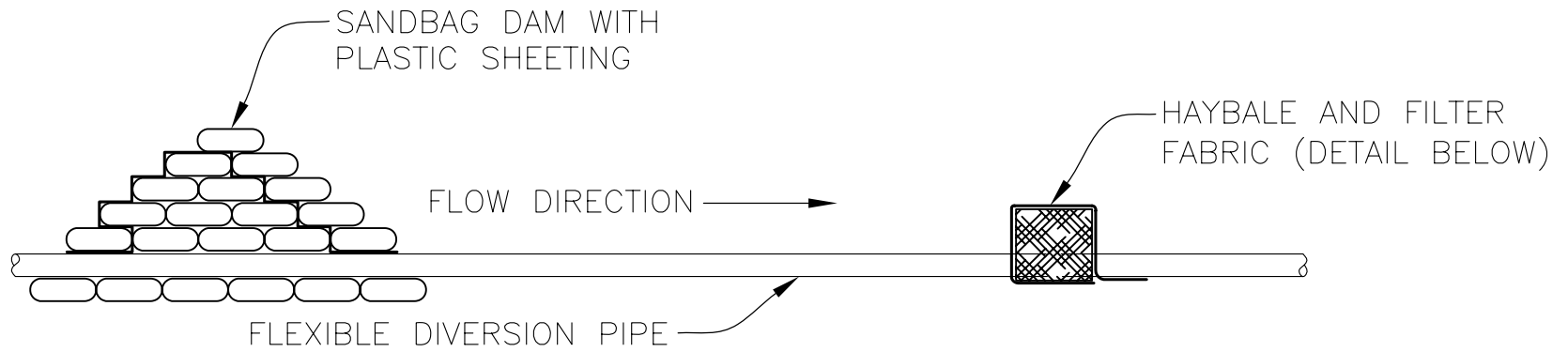
CLASS III IMPACTS

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

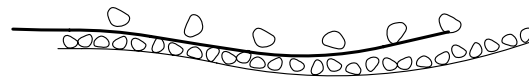
small proportion of the channel would be affected, dense woodland and mature trees on the banks would be avoided, and public viewing locations of the river channel are not present.

Mitigation:

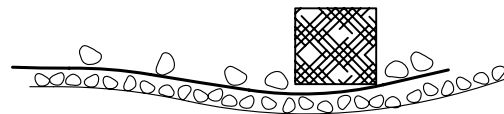
No mitigation required for Class III (adverse, but not significant) impacts.



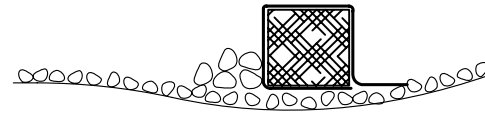
1. PREPARATION—SMOOTH A FLAT AREA OF CHANNEL BY MOVING COBBLES AND SAND (PERFORMED WITH HANDTOOLS ONLY)



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