ANNUAL ROUTINE MAINTENANCE PLAN

FISCAL YEAR 2025-2026

Prepared by

The Santa Barbara County Flood Control and Water Conservation District

Table of Contents

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

INTRODUCTION

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 2025/2026 Annual Routine Maintenance Plan marks the 34th 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 avoids and then minimizes environmental impacts to natural habitats, water quality, sensitive species, and natural fluvial processes.

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

PLANNING STEPS AND CRITERIA:

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

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

<u>STEP 1: Field Survey.</u>

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 situations needing engineering expertise, 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 years' 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. Maintenance Practices Summary – Summary of common maintenance tasks and methodology for describing work proposals, impacts and associate mitigation. Individual project-specific descriptions for each drainage to be maintained, including detailed information on the site conditions, biological resources, proposed maintenance actions, impact assessment, mitigation measures, maps, and photographs.

    a. North County Creek descriptions,
    b. South County Creeks descriptions.

4. CEQA Findings; CEQA Findings for the Annual Plan.

5. District's Revegetation Plan

6. Impacts and Mitigations; In order to save paper and reduce the size of the Plan, 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:

<u>Brush:</u> 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.
<u>Cut:</u> Same as Brush.
<u>Cut Up:</u> 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).
<u>Key Woody Debris:</u> 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.
<u>Large Woody Debris</u>: LWD is classified as pieces of wood measuring greater than 6-feet in length and greater than 4 inches in diameter.
<u>Limb:</u> 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.
<u>Trim or Trim Back:</u> Same as Limb.
<u>Remove:</u> 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.
<u>Seedling:</u> A tree less than 3 feet tall and 1” DBH.
<u>Sapling:</u> A tree with DBH between 1”-3”.

Impacts to live native vegetation that require mitigation (brushing) which occur at the same site (and same square footage) in a 10-year period are mitigated for one time in the given 10-year period. After the 10-year period, the mitigation requirements reset and sites require one-time mitigation in the next 10-year cycle. However, all surplus restoration is not subject to the 10-year cycle and rolls over into the next 10-year mitigation cycle. The current mitigation cycle started in 2022 and impacts to sites for which mitigation has been implemented will not require new mitigation until the 2033 maintenance season.

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 at the Bank. The table below lists the amount of restoration credits (square footage or acreage) that have been used.

Los Carneros Mitigation Bank Credits Used		
Annual Plan Year	**Credits Used (Square Feet)**	**Credits Used (Acres)**
2013/2014	4237	.097
2014/2015	1880	.043
2015/2016	3895	.089
2016/2017	460	.010
2017/2018	1050	.024
2018/2019	50	.001
2019/2020	680	.015
2020/2021	845	.019
2021/2022	2700	.062
2022/2023	1265	.029
2023/2024	205	.004
2024/2025	60	.001
Total	**17227**	**.395**

Since 2002, the District has installed over 27 acres of restoration throughout the county directly related to the Annual Routine Maintenance Plan. 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 vary large improvement to riparian corridor health for water quality, stream shading, wildlife habitat, and other ecological benefits. 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 thirty years, outside of the Annual Routine Maintenance Plan, and in association with other projects, 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 notifications 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 are also held in May. During this period, additional AVOIDANCE/ MINIMIZATION measures may be submitted by comment and incorporated into project design.

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

STEP 5: CEQA Compliance.
As noted above, the Annual Plan includes a description of each maintenance project to be conducted in the fall. In addition, it represents the environmental documentation under CEQA. The projects included in the Annual Plan are categorized as follows relative to CEQA:

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

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

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

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

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

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

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

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

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

Location – A description of the maintenance site is presented.

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

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

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

Engineering Analysis – A description of the site conditions that have caused the need for maintenance including: (1) the nature and extent of channel obstructions or damaged facilities; (2) the flooding and erosion hazards created by these conditions; and (3) the remedy for this situation. The analysis usually is based on visual observations of adverse conditions such as sediment deposits, significant in-stream vegetation, or damaged facilities. The District personnel that conduct the Annual Plan surveys is the same each year; as such, they have first-hand knowledge of site conditions along drainages in the County over many years and under various conditions. Hence, they can readily assess the maintenance needs. The District does not typically conduct quantitative field measurements or hydrologic calculations or modeling to determine the maintenance needs at all sites, however pursuant to the 2012 RWQCB 401B Technically Conditioned Water Quality Certification, a sheer stress analysis is conducted for all bank protection sites and additional geomorphologic analysis is also completed.

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

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

Impact Analysis and Mitigation Measures - The Addenda refer to the list of impacts associated with specific maintenance activities developed in the 2001 Updated Program EIR. The latter identified numerous significant, unmitigable impacts (Class I), significant, but mitigable to less than significant impacts (Class

II), and less than significant impacts (Class III). For maintenance projects proposed and implemented since 1992, the District has been able to avoid significant impacts by designing the projects or activities to avoid such impacts, and/or by implementing appropriate mitigation measures from the Program EIR to mitigate such impacts.

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

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

STEP 6: Plan Approval.

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

PERMITS

Local Land Use and Coastal Development Permits

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

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

State and Federal Permits

Most maintenance activities occur in natural watercourses and may 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 2016.

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 creek 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 act 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. Sheer 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 Streambed 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 in May or June of the following year. The consolidated Maintenance Report is designed to incorporate all the information that each agency has requested.

CARRY-OVER PROJECTS

The routine maintenance work season runs from August through the end of November for the majority of the maintenance tasks. There are occasional instances in which all of the proposed work cannot be completed within the work season, and some maintenance tasks are delayed until the following year's work season. These "carry-over" projects are identified in each year's Post-Project Report. For the 2025/26 Annual Maintenance Plan, there is one carry-over project in Carpinteria Creek. This is described in Sections 1 in the previous year's (2024/25) Annual Maintenance Addenda.

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 drainages County-wide, amounting to approximately 105 miles of drainage for potential maintenance. Not all of the drainages are placed in the Annual Routine Maintenance Plan and for the ones that are, only a small percentage of each creek are physically touched by actual work. Santa Barbara County contains over 940 miles of major drainages and the District includes only 11% of that area for potential routine maintenance to provide important flood protection through urban areas of the County.

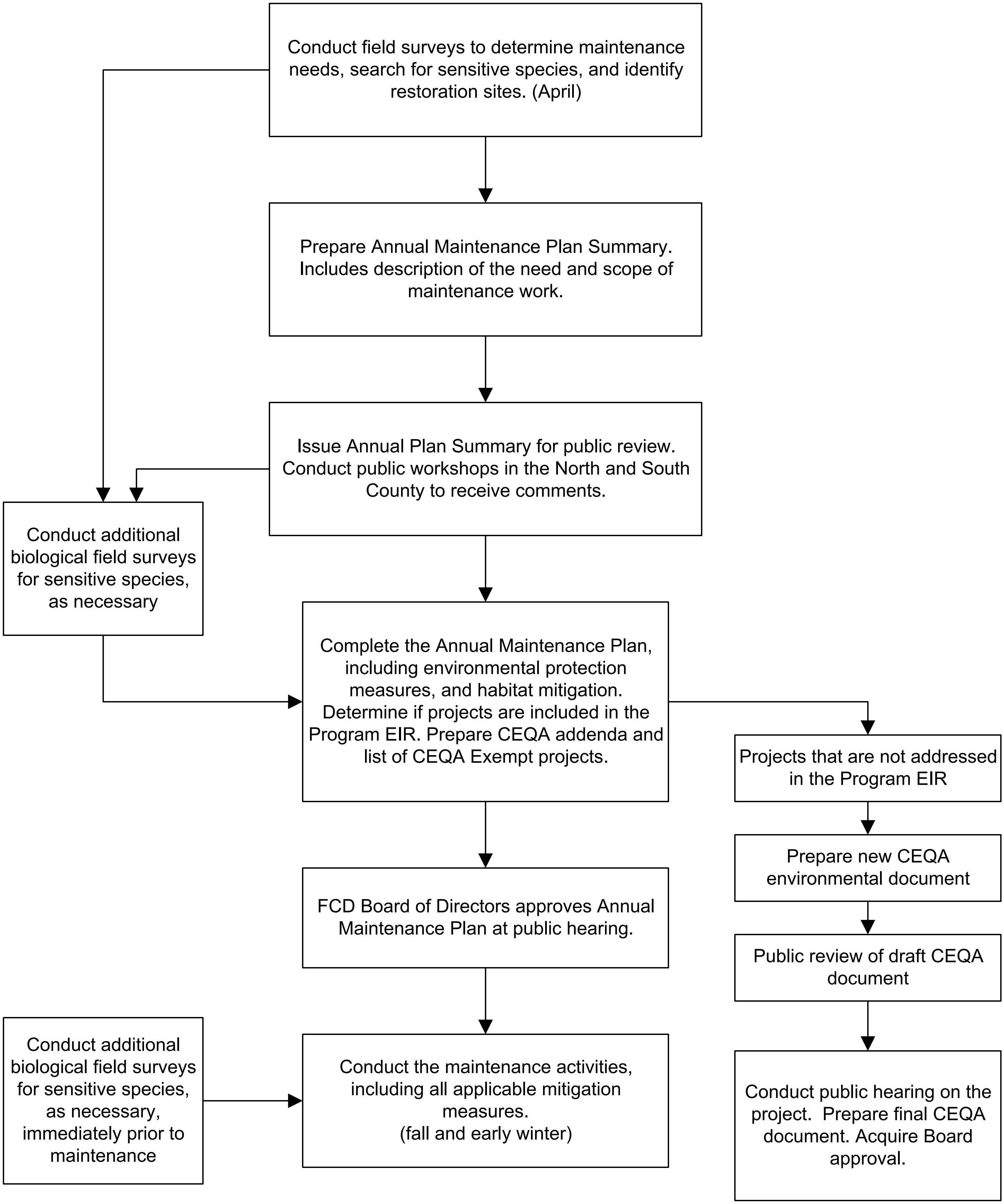


Chart 1. Annual Maintenance Program Process

Supervisorial
Districts 2025-2026

First District

Carpinteria Creek
Mission Creek
Picay Creek

Second District

Atascadero Creek
Cieneguitas Creek
Fremont Creek
Hospital Creek
Las Positas Creek
Las Vegas Creek
Mission Creek
San Jose Creek
San Pedro Creek

Third District

Adobe Canyon Creek
Alamo Pintado Creek
Miguelito Channel
San Jose Creek
San Pedro Creek
Tecolotito Creek
Zaca Creek
Zanja de Cota Creek

Fourth District

Bradley Canyon Channel
Cat Canyon Creek
Davis Creek
Foxenwood 3 Basin
Orcutt/Solomon Creek
San Antonio Creek-Los Alamos
Santa Maria Airport Channels
Santa Maria River

Fifth District

Corralitos Creek
Santa Maria River
Tanglewood Channel
Unit II Channels

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 District 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: Various **Case No.:** Not Applicable

Location: See project location maps under the Exempt Facilities tab in the 2025/2026 Annual Routine Maintenance Plan.

Project Title: 2025/2026 Annual Routine Maintenance Plan Exempt Facilities

Project Description: General maintenance includes periodic sediment removal, weed control, repair, and graffiti removal. Exempt facilities include concrete channels, earthen road-side ditches, man-made earthen channels, basins within developments, grassy swales, and retention and recharge basins. All maintenance involves no expansion of facility use. Please see detailed project descriptions under the Exempt Facilities tab in the Annual Plan.

Name of Public Agency Approving Project: County of Santa Barbara

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

Exempt Status: (Check one)

______ Ministerial
______ Statutory Exemption
__X__ Categorical Exemption
______ Emergency Project
______ Declared Emergency

Cite specific CEQA and/or CEQA Guideline Section: 15301 Existing Facilities. CEQA Guideline Section 15301: 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 the maintenance of existing public facilities with no expansion of use. Material is removed and repairs are made to these man-made facilities on an as-needed basis to maintain functionality. 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 are no scenic highways, hazardous waste sites, historical resources, or designated resources of critical concern or officially adopted. There are no unusual circumstances that conclude a reasonable possibility that the activity would have a significant effect or cumulative impact on the environment pursuant to Section 15300.2.

Lead Agency Contact Person: Seth Shank Phone #: (805) 568-3443

Department/Division Representative: Seth Shank Date: June 10, 2025

Signature: Seth Shank

NOTE: A copy of this document must be filed with the County Clerk of the Board after project approval to begin a 35-day statute of limitations on legal challenges.

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 of the year following that Annual Plan's approval.

North County exempt facility maps immediately follow this section and associated map page numbers are referenced in each exempt facility discussion.

Santa Maria/Guadalupe Area:

Ditches:

1. **Blosser Ditch:** This is an asphalt or concrete ditch from Fessler Road downstream to Blosser Basin, a distance of approximately 1.5 miles. The earthen portion of this channel begins downstream of the basin and continues downstream to the Santa Maria River where it enters a flap gate through the Santa Maria River Levee. Between Alvin Road and Donavan Road (a distance of approximately 2,600 feet) the channel is asphalt and sediment tends to settle out requiring 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. 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 Donavan Street portions of the concrete channel are desilted approximately every 3 years. Existing concrete panels between Main Street and Jones Street are damaged and will be replaced in-kind with new concrete panels to restore channel function. The earthern 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 0.17 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 earthern sides. It is approximately 0.75 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 feet 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 be desilted this year between Wicks Avenue and Andrew Street. 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 feet 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. 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 to 10 years. 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 feet of this ditch on an annual basis. Potential area of impact from mowing grass and weeds along the banks is 0.01 acres. Refer to Page 17 for the location of this facility.

11. **McCoy Lane Drain**: This is an approximately 200 foot 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 0.01 acres. Refer to Page 19 for the location of this facility.

12. **Patterson Road Ditch**: This is a concrete bottom ditch with concrete vertical walls approximately 443 feet long. This ditch flows though the Patterson Rd subdivision. Weep holes and cracks in the concrete lined section are spot sprayed with herbicide on an annual basis so the cracks don't get larger from the weeds growing in them and the weep holes remain functional. 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 foot-wide vegetation free zone along the entire toe of the levee. 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 feet 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. 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 feet 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. Refer to Page 11 for the location of this facility.

16. **Willemsen 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 to 10 years. 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 to 10 years. Potential areas of impact are less than 50 square feet from spot spraying and 0.25 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 to 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 0.18 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. Willows will be brushed at the entrance to the basin. Potential area of impact is less than 50 square feet for spot spraying and 500 square feet for brushing. The basin is desilted every 3 to 5 years. 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 an annual basis to eliminate vegetation from blocking the inlet structure. Potential area of impact is 0.5 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. The basin is desilted every 3 to 5 years. 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 0.25 acres from mowing. Refer to Page 13 for the location of this facility.

9. **Foxenwood Basin #2:** This basin a grassy Park within a subdivision that acts to retard runoff during the winter months but is otherwise a grassy play area. The District maintains the inlet and outlet pipes on a biannual basis by removing any accumulated sediment immediately blocking the pipes. Potential area of impact is 0.5 acres for mowing and less than 10 square feet for spot spraying. Refer to Page 7 for the location of this facility.

10. **Getty Basin:** This is a recharge basin. The upper banks of the basin are sprayed on a biannual basis and the slopes of the basin are disced on a biannual basis to retain the recharge capacity of this facility. Potential area of impact is 0.35 acres from spraying the fence line and 11 acres for discing the basin slopes. Refer to Page 13 for the location of this facility.

11. **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 an 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.

12. **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 0.28 acres for mowing and less than 10 square feet for spot spraying. Refer to Page 13 for the location of this facility.

13. **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 0.2 acres for mowing and less than 50 square feet for spot spraying. Refer to Page 15 for the location of this facility.

14. **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.

15. **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 0.5 acres for mowing and less than 10 square feet for spot spraying. Refer to Page 16 for the location of this facility.

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 0.28 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 0.23 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 0.2 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 to 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 0.1 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 0.1 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 feet 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 to 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 1,000 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 0.7 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. **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 0.4 acres for mowing and less than 100 square feet for spot spraying. Refer to Page 20 for the location of this basin.

8. **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.

9. **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.

10. **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.

11. **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.

12. **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 weeks 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.

13. **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 to 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 to 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 0.04 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 to 10 years and spot sprayed annually to remove woody vegetation if it becomes established. Potential area of impact is 0.04 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 to 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.

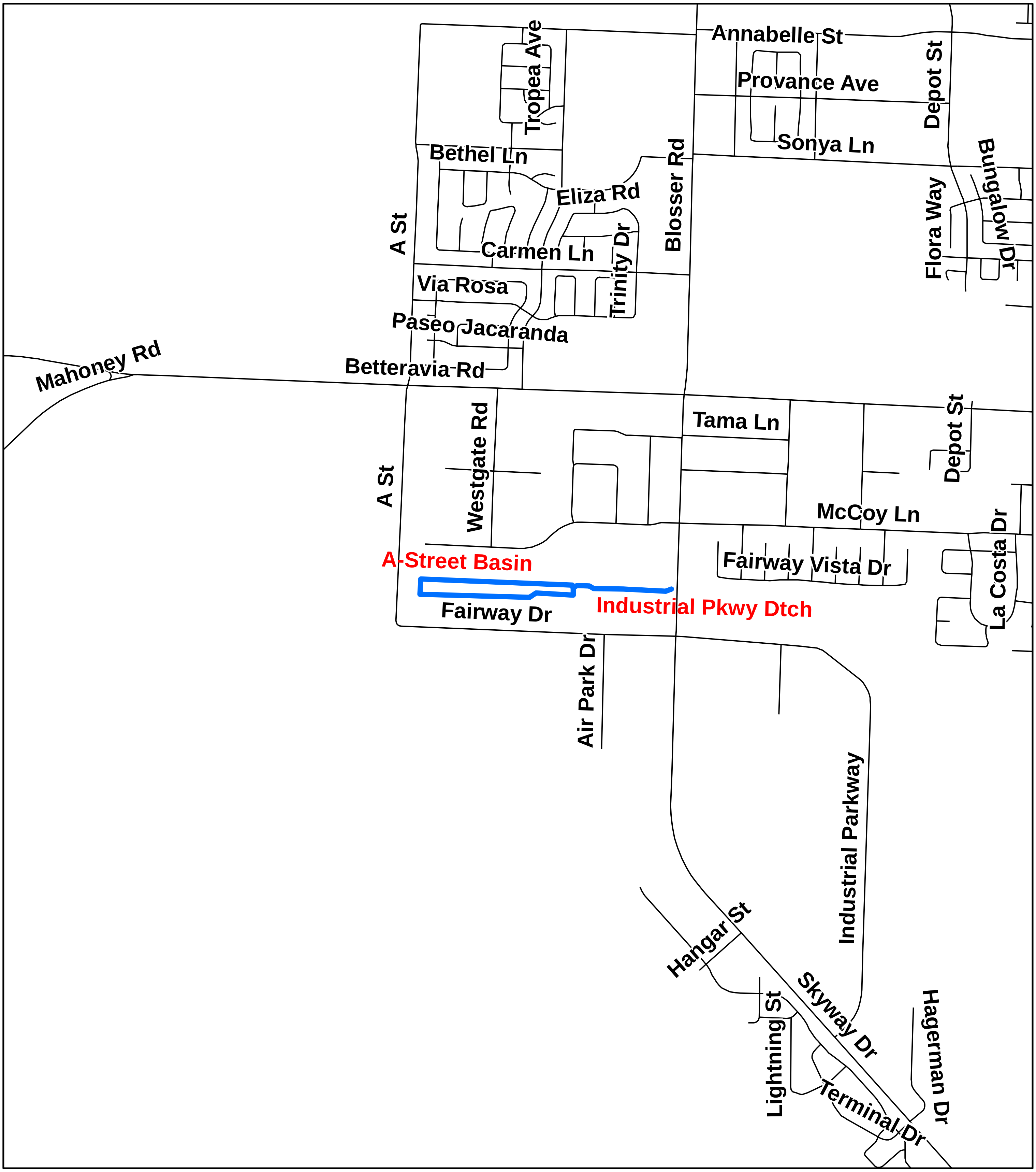
6. **Mormon Canyon Basin:** Weeds and grasses are mowed on an annual basis in the basin and the basin is desilted every 7 to 10 years. Potential area of impact is 0.04 acres for mowing. Refer to Page 23 for the location of this facility.

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 0.04 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 0.04 acres for mowing. Refer to Page 23 for the location of this basin.

9. **Cherry Ave. Basin:** The inlet structure is desilted every 3 to 5 years removing unwanted sediment and vegetation. Refer to Page 25 for the location of this basin.

10. **Hubble Basin:** This basin is annually mowed to control weeds. Potential area of impact is 0.5 acres for mowing. Refer to Page 25 for the location of this basin.



Department of Public Works County of Santa Barbara

A-Street Basin
Industrial Parkway Ditch

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

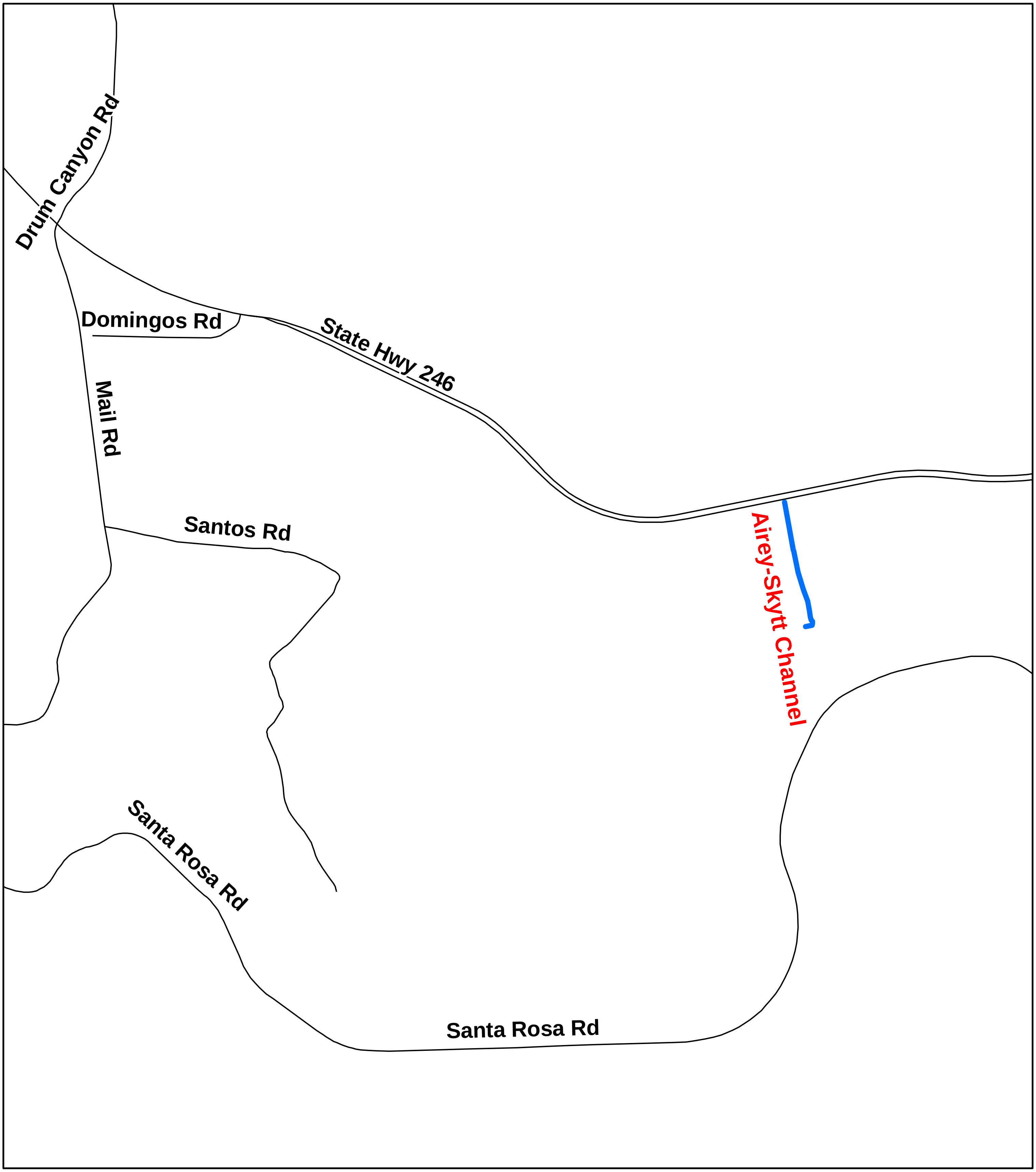
N
W E
S
Feet
1,250 625 0 1,250

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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



Department
of
Public Works
County
of
Santa Barbara

Airey-Skytt Channel

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

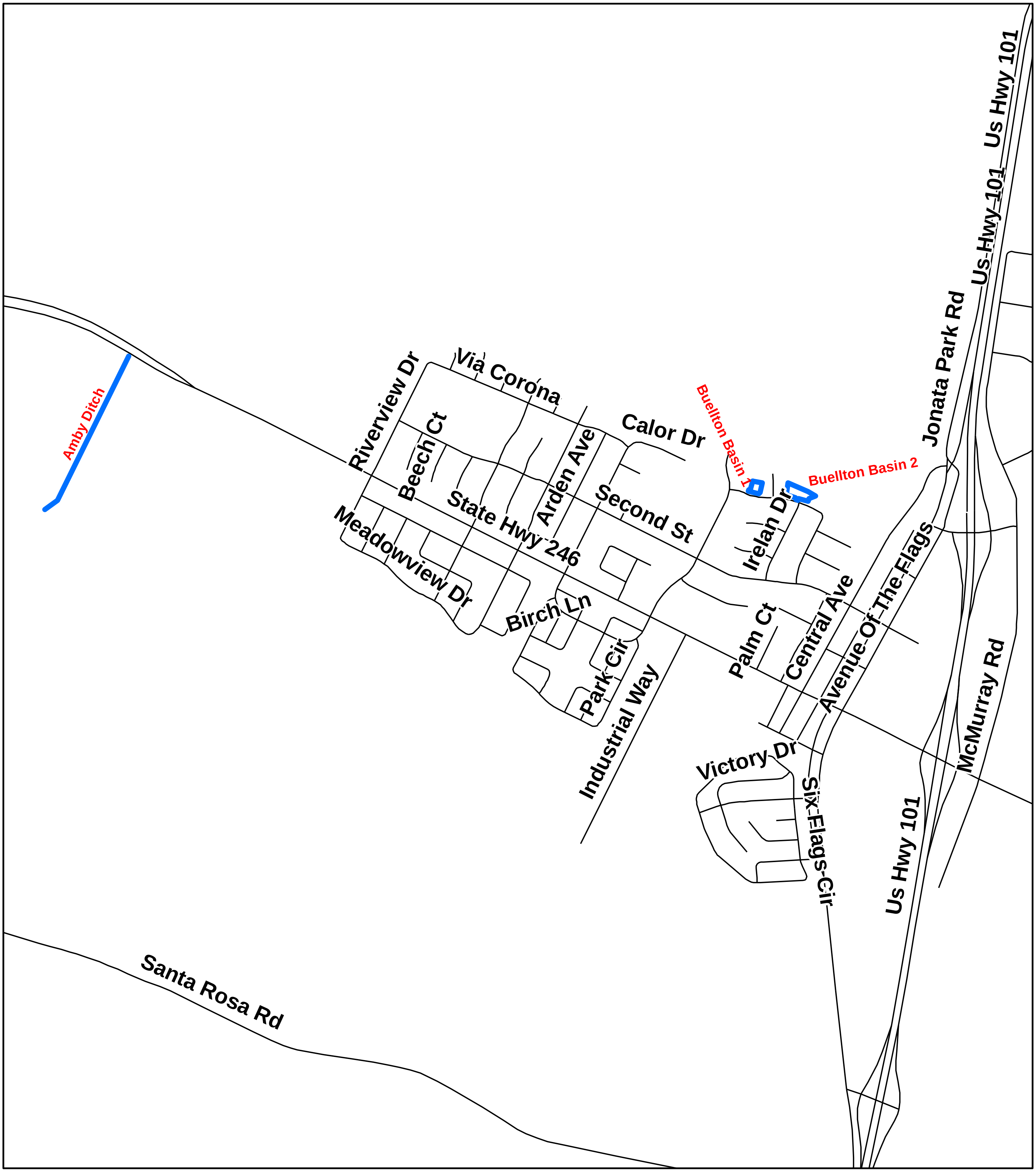
N
W E
S
Feet
1,900 950 0 1,900

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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



Department of Public Works County of Santa Barbara

Amby Ditch
Buellton Basins 1&2

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

1,100 550 0 1,100

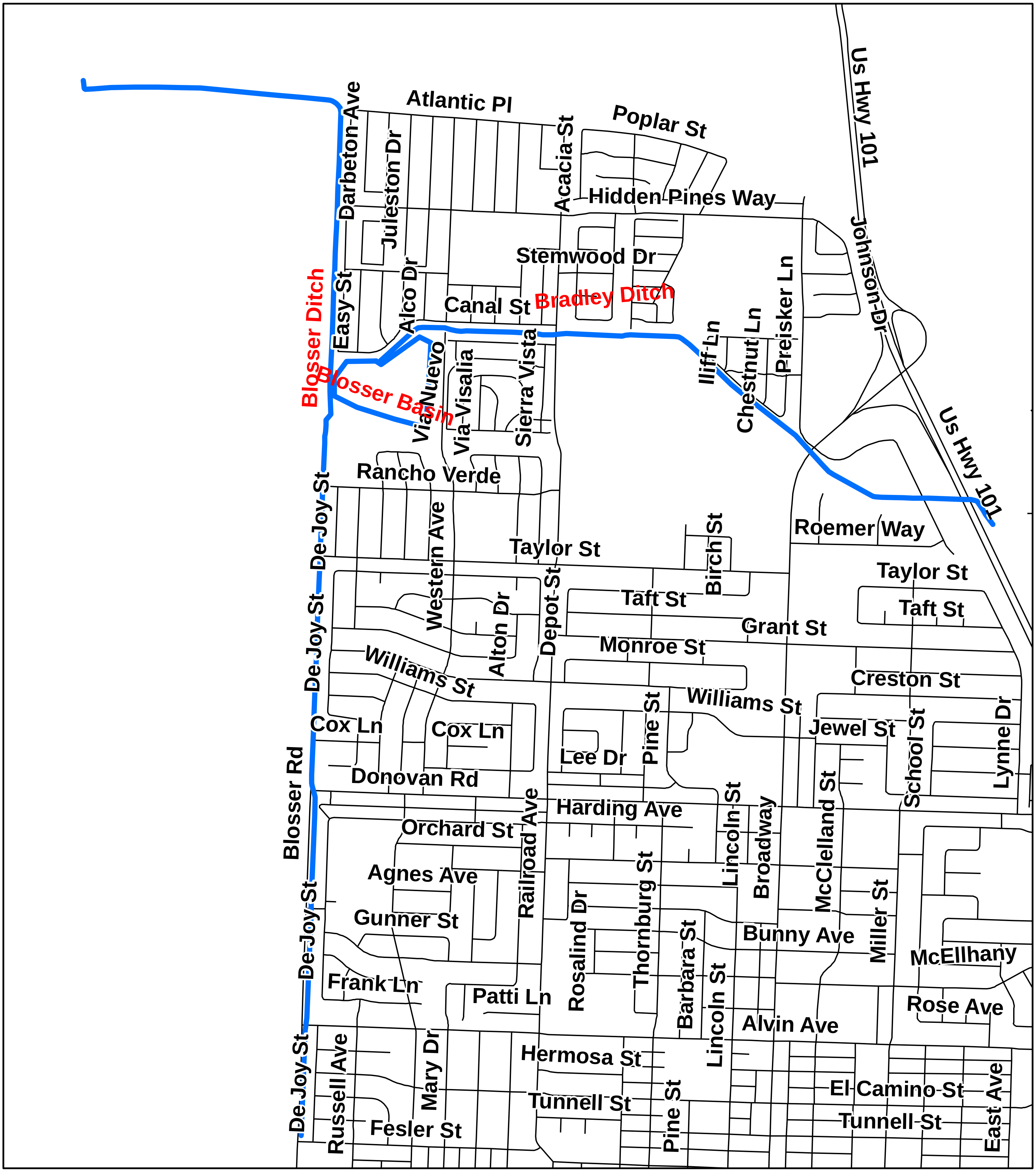
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Blosser Basin
Blosser Ditch

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

1,250 625 0 1,250

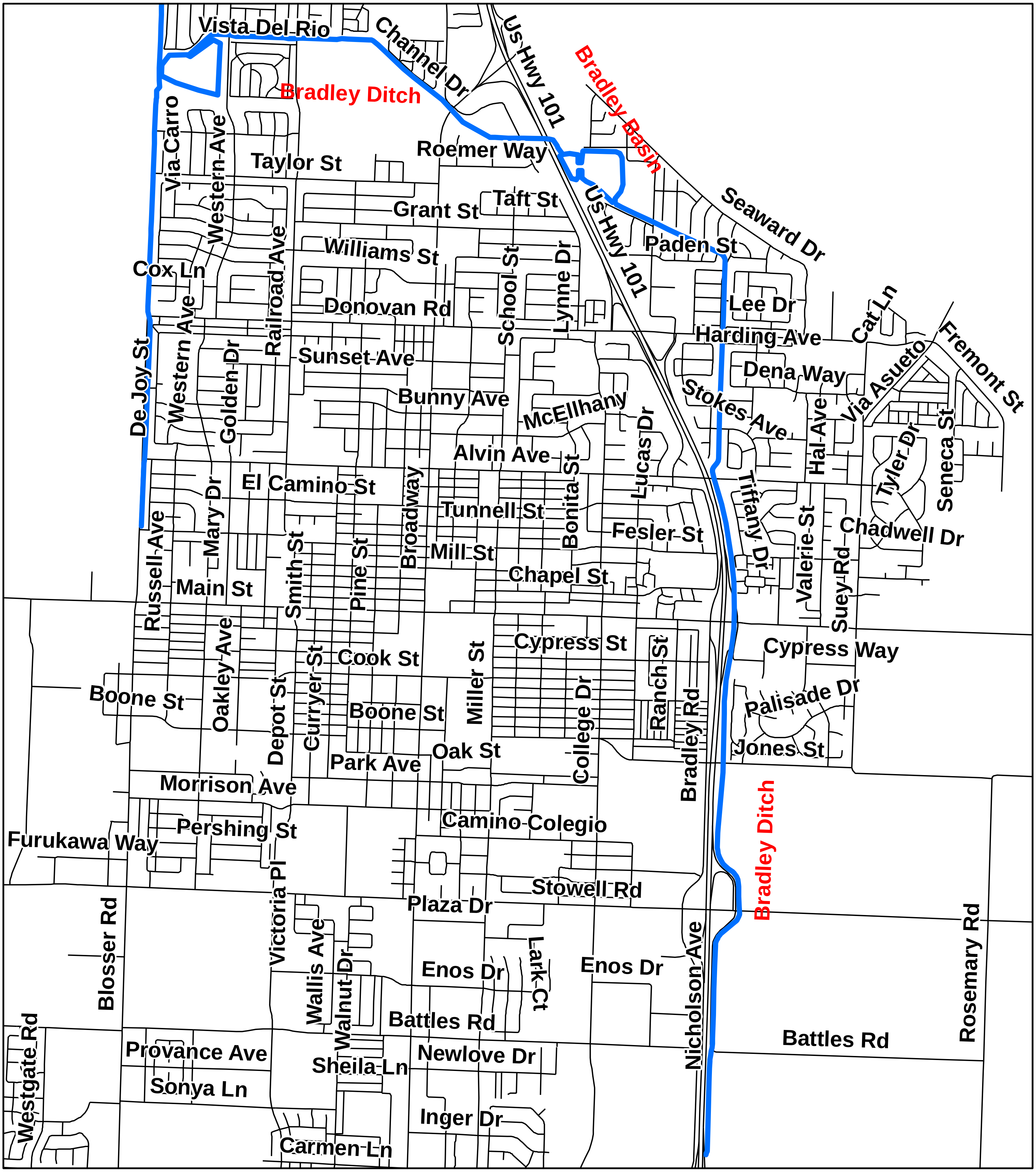
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Bradley Ditch
Bradley Basin

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

2,100 1,050 0 2,100

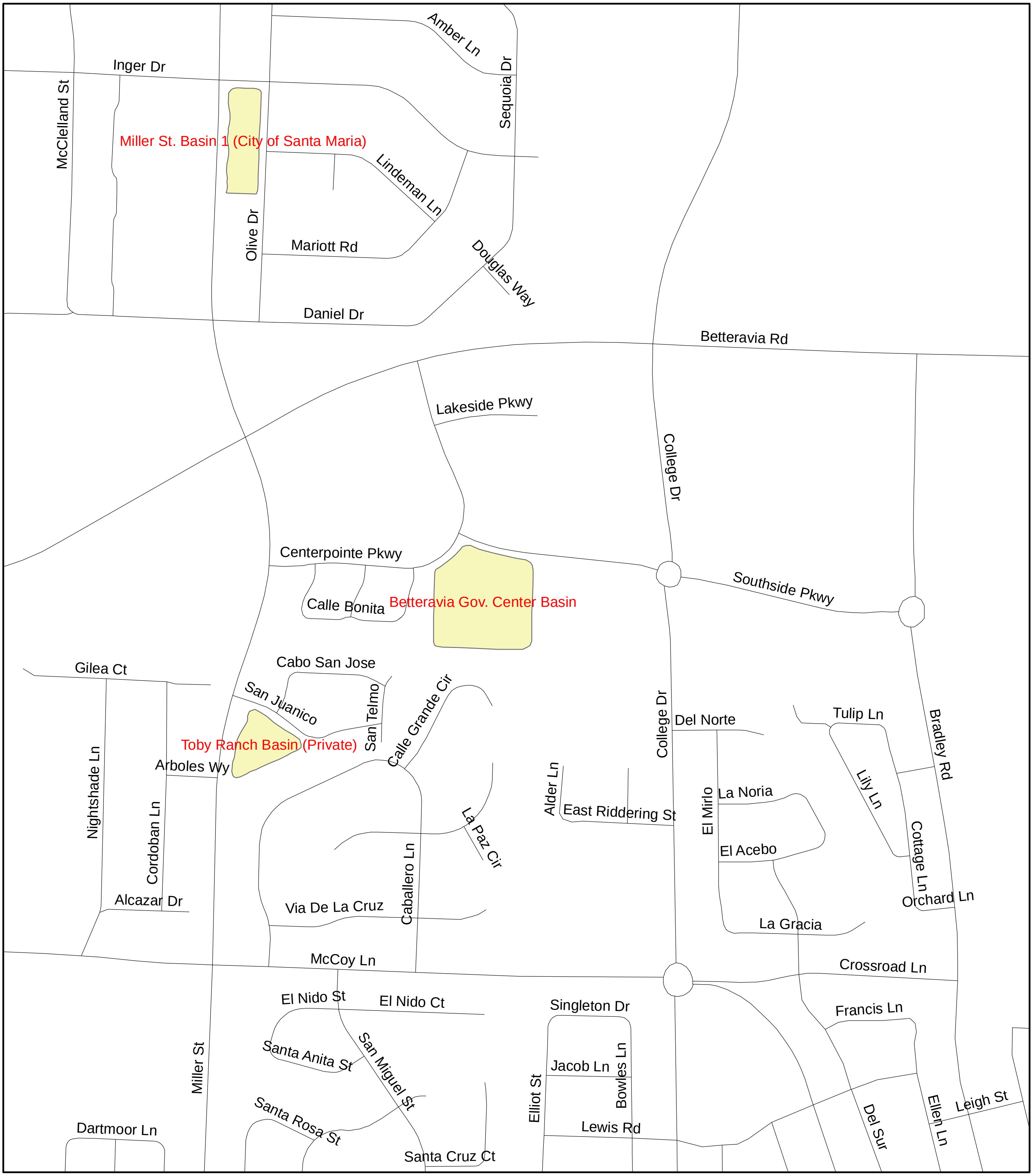
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

C2P2 Basin (Betteravia Gov. Center Basin)

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 base map. Lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

430 215 0 430

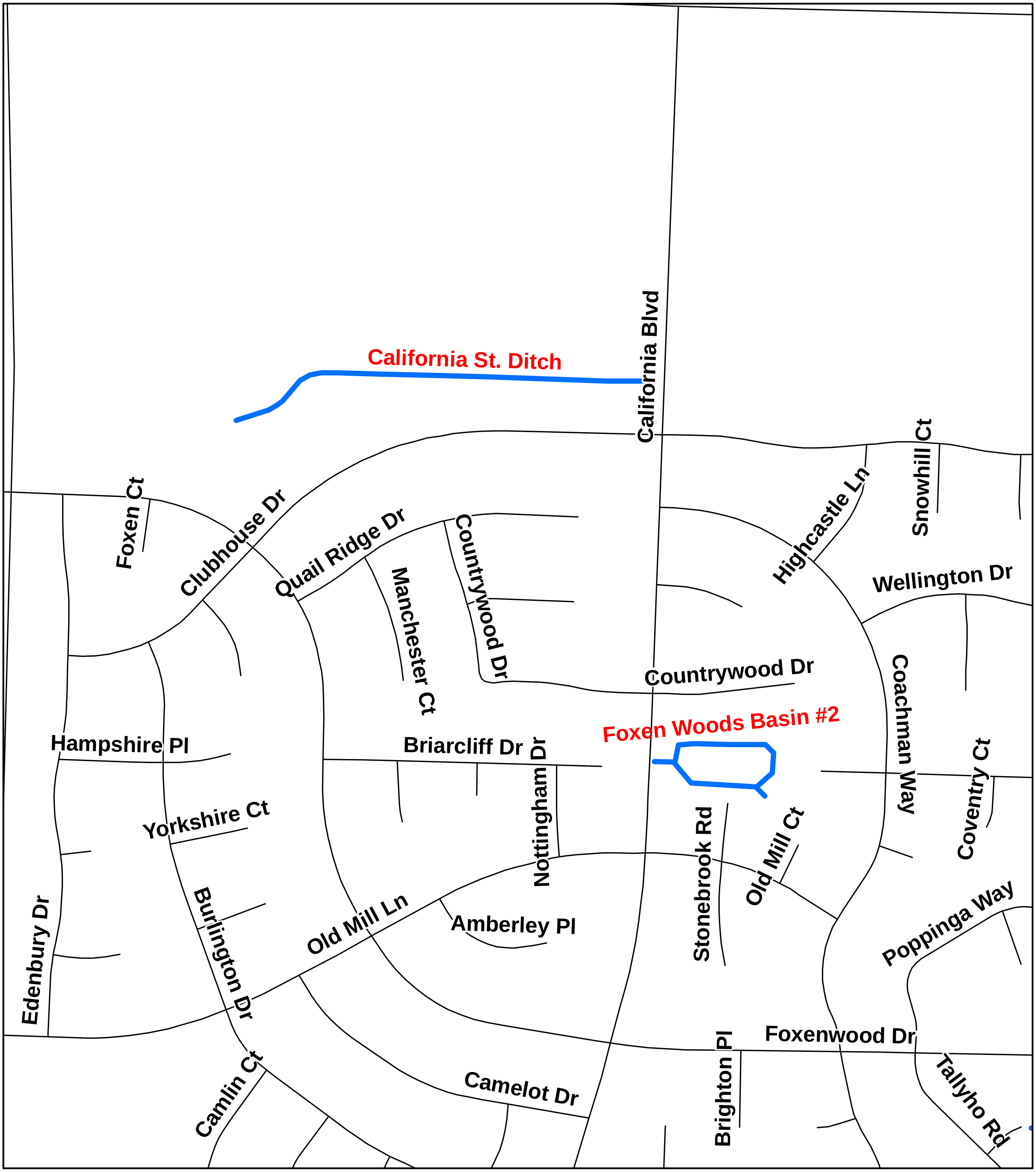
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

California St. Ditch
Foxen Woods Basin #2

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

425 212.5 0 425
Feet

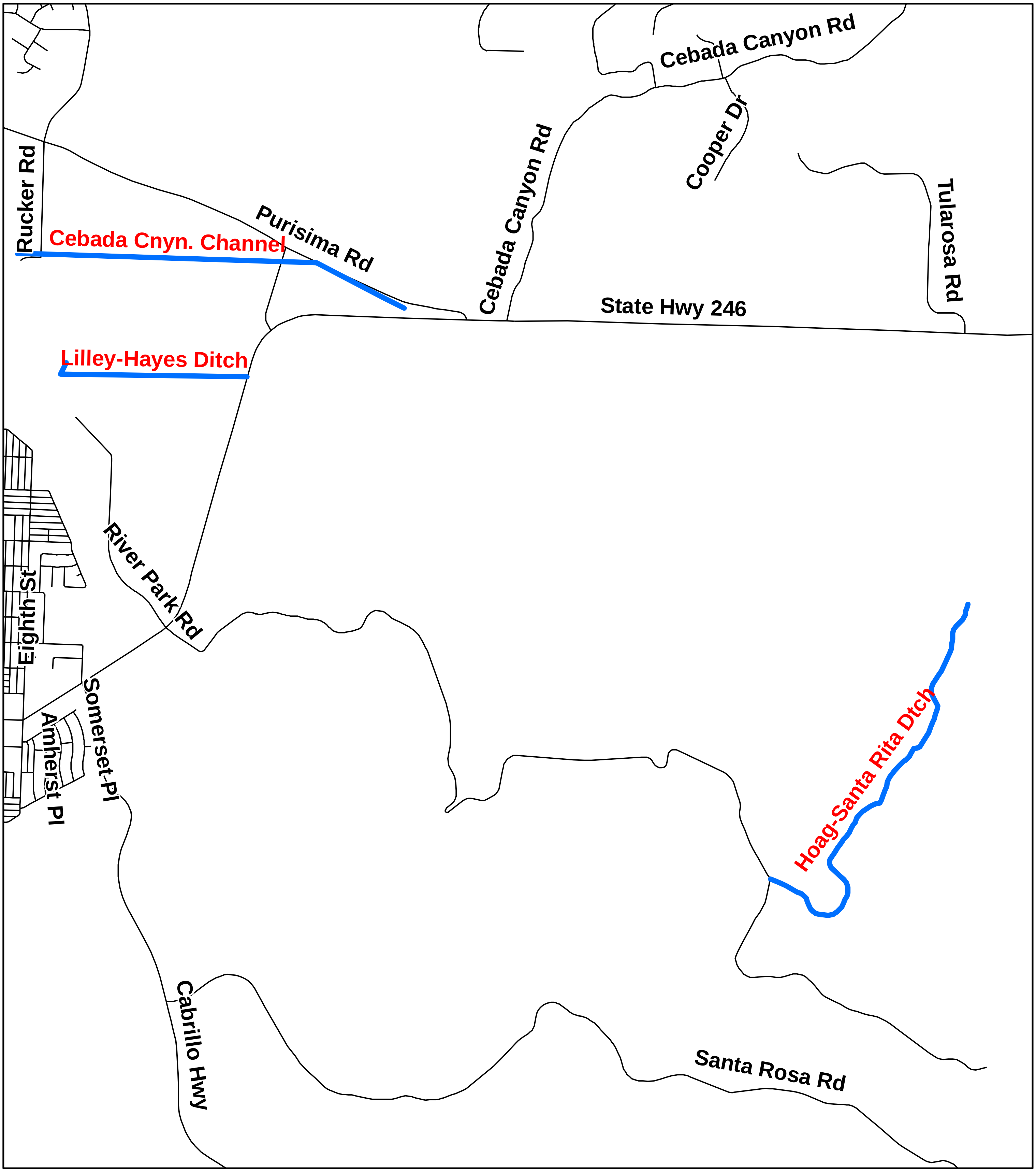
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department
of
Public Works
County
of
Santa Barbara

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

PUBLIC WORKS
ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

Feet
2,500 1,250 0 2,500

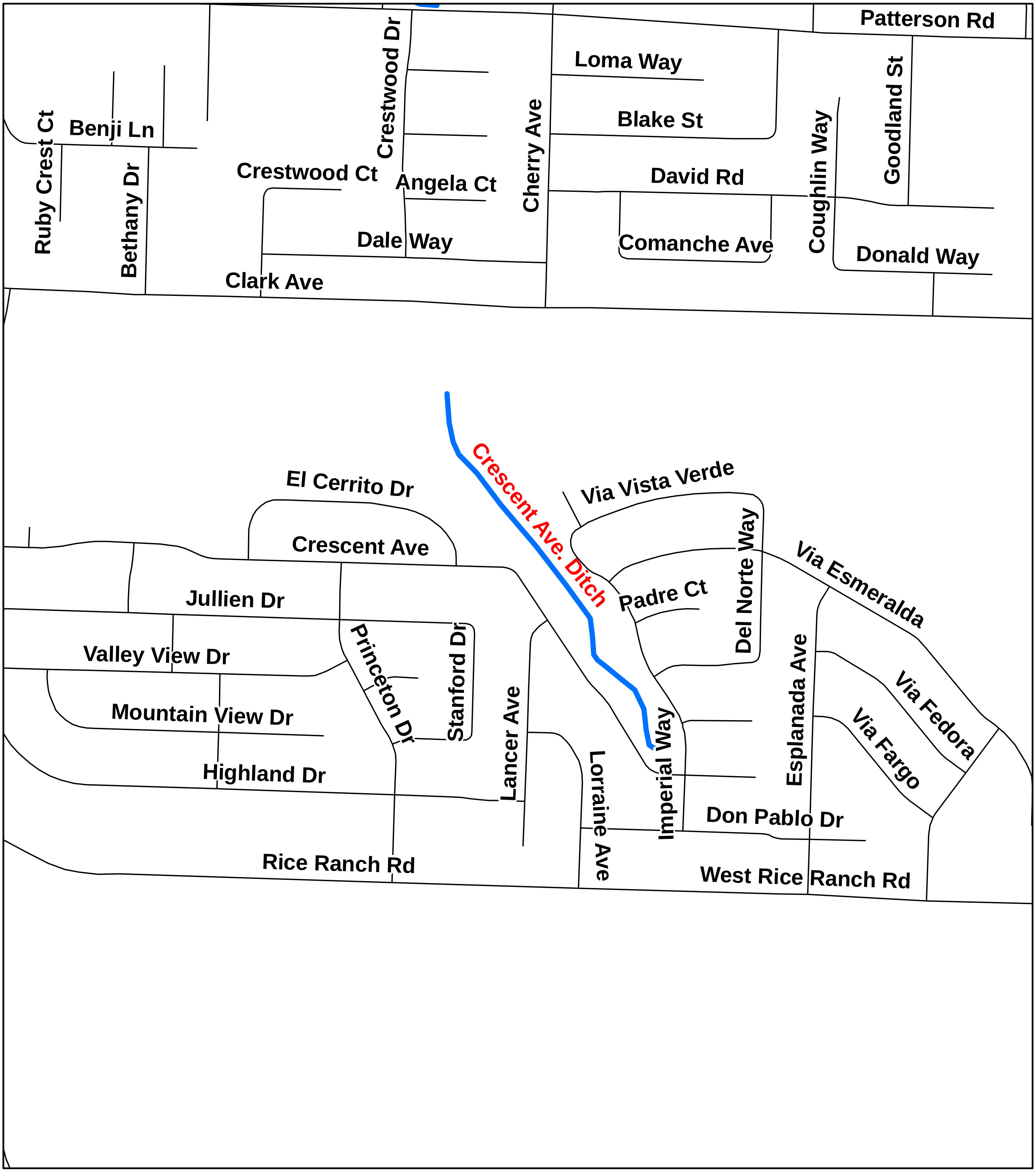
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Crescent Avenue Ditch

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

510 255 0 510

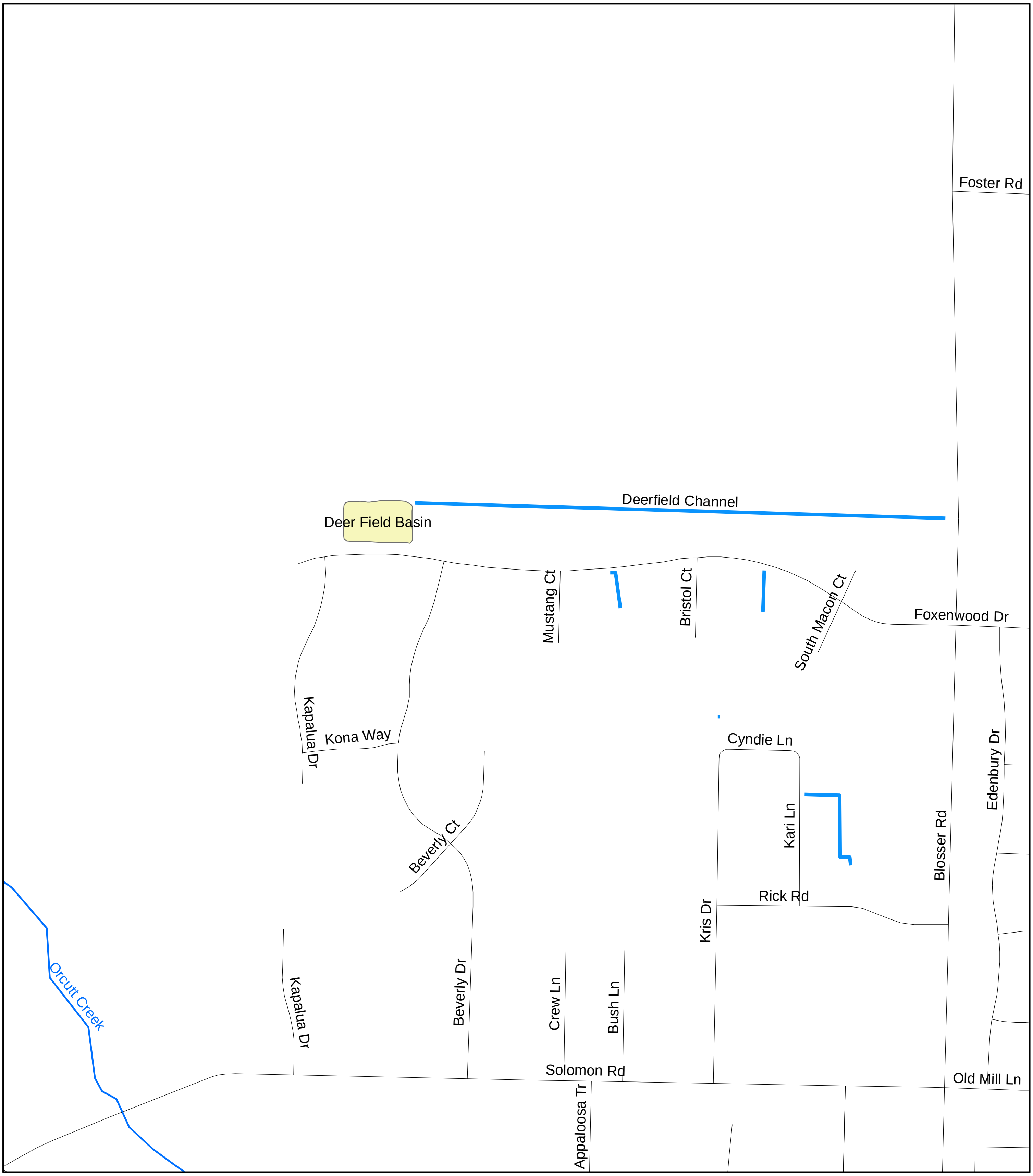
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Deerfield Channel Deerfield Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

490 245 0 490

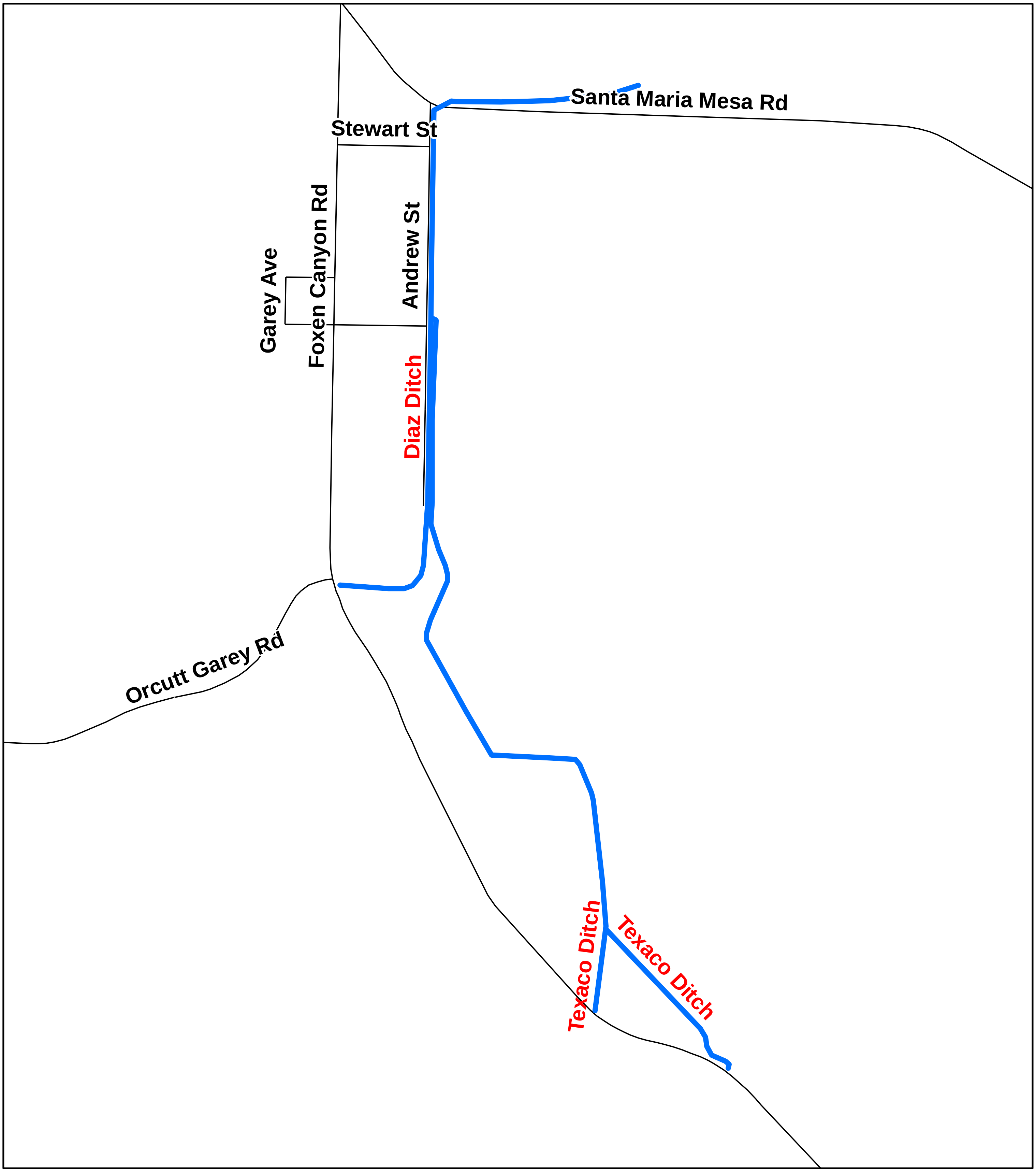
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department
of
Public Works
County
of
Santa Barbara

Diaz Ditch
Texaco Ditch

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

Feet
870 435 0 870

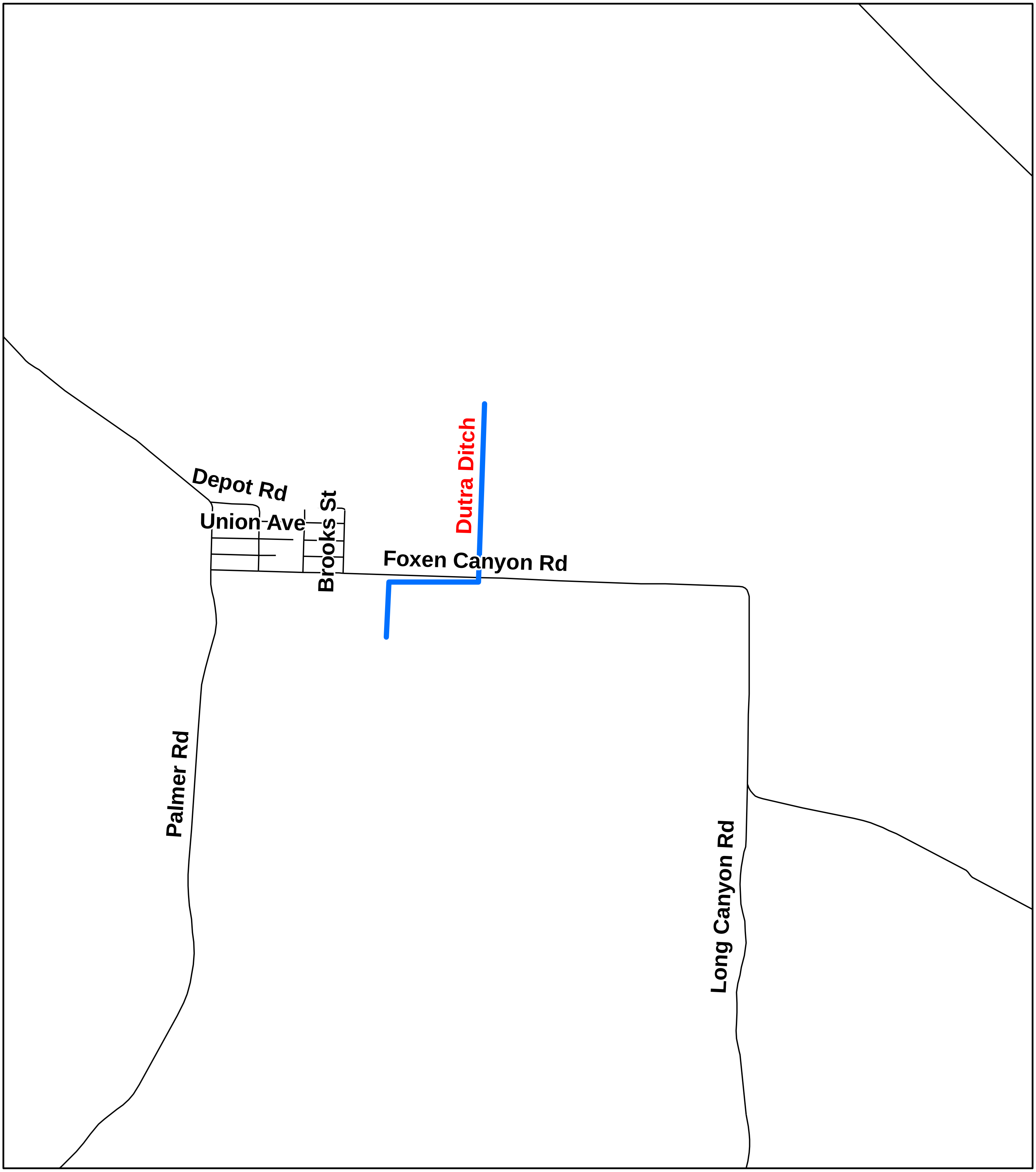
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department
of
Public Works
County
of
Santa Barbara

Dutra Ditch

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

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

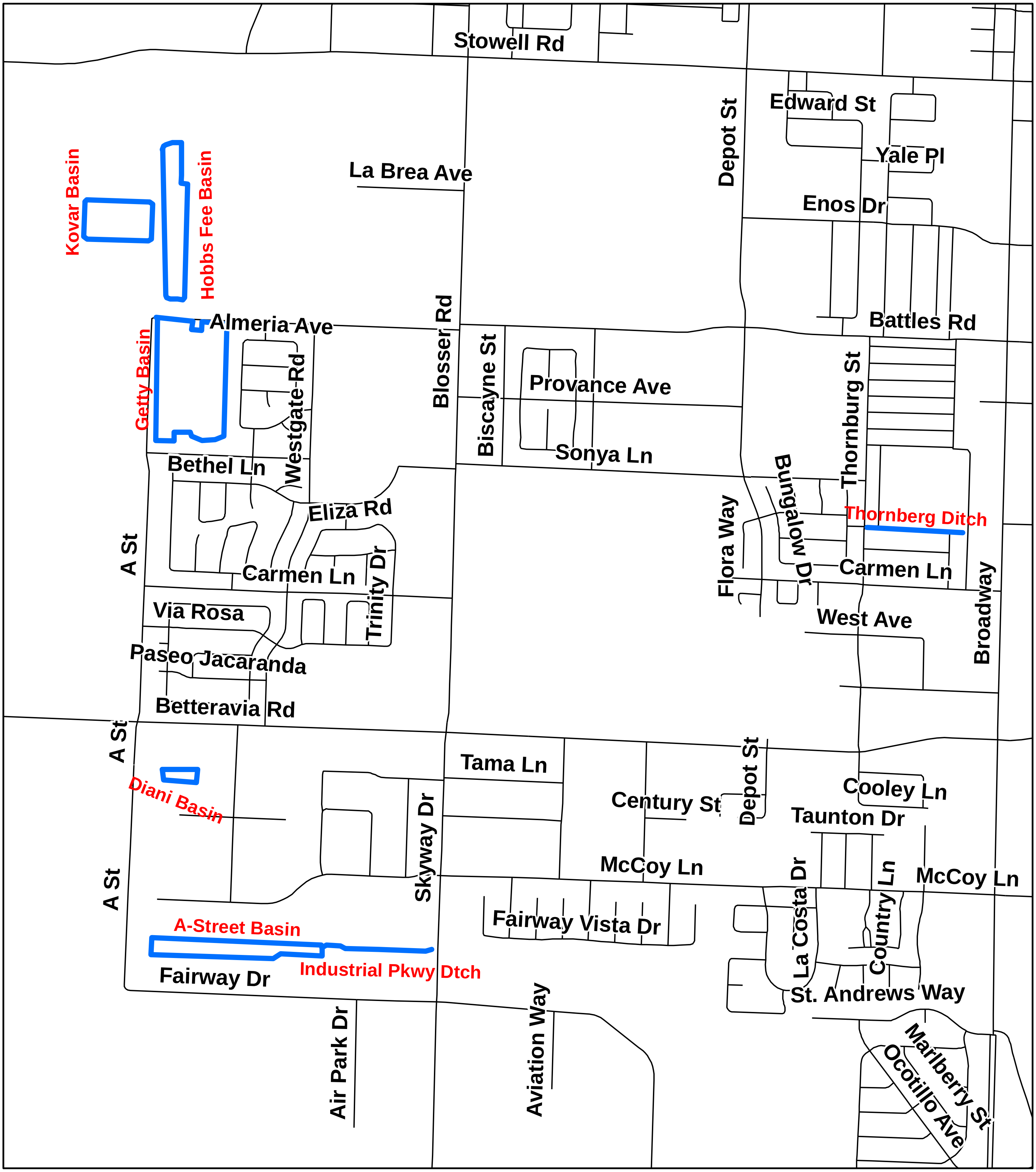
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.

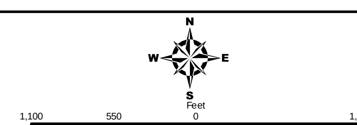


Department of Public Works County of Santa Barbara

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

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.



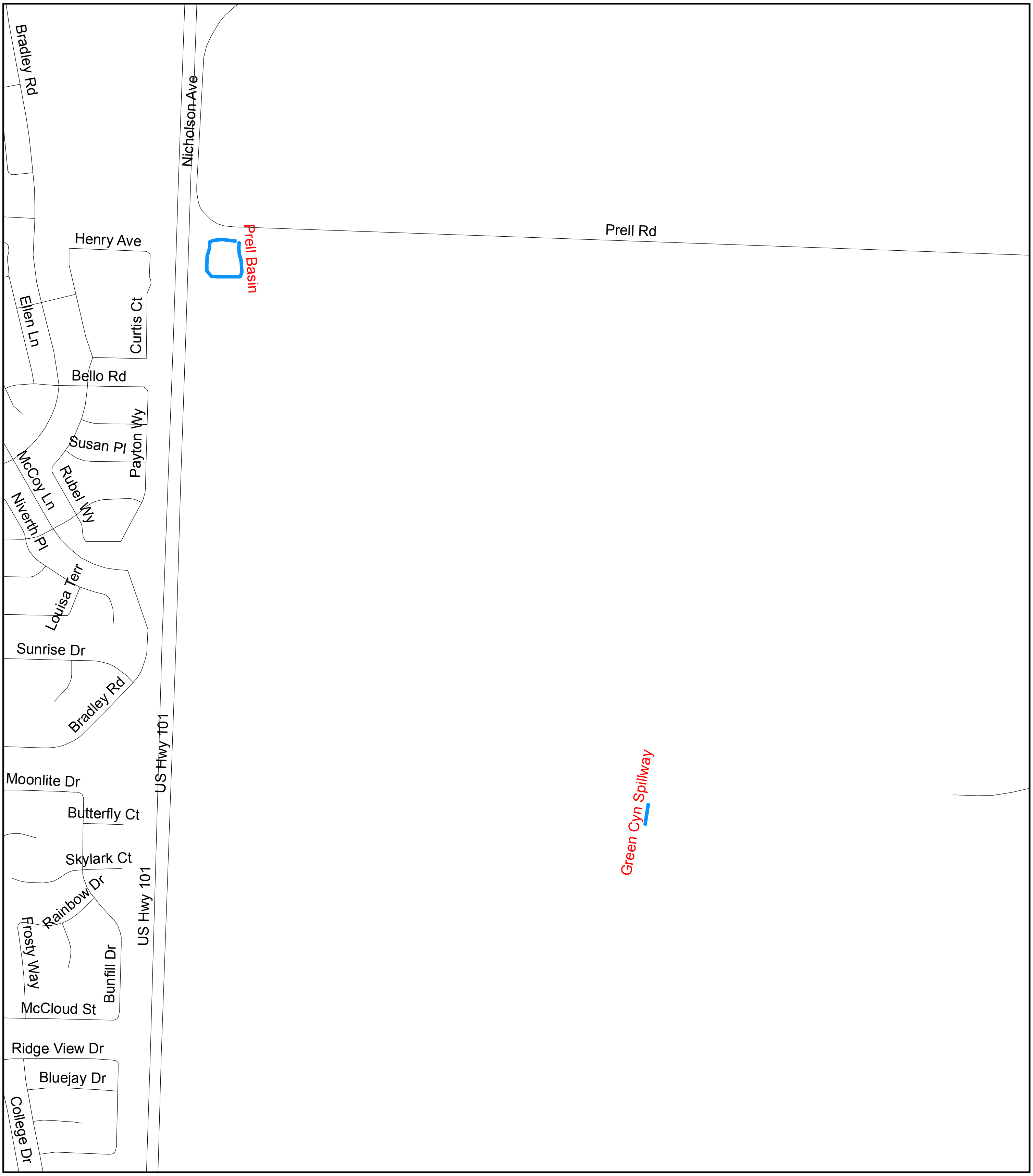
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Green Canyon Spillway

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

790 395 0 790

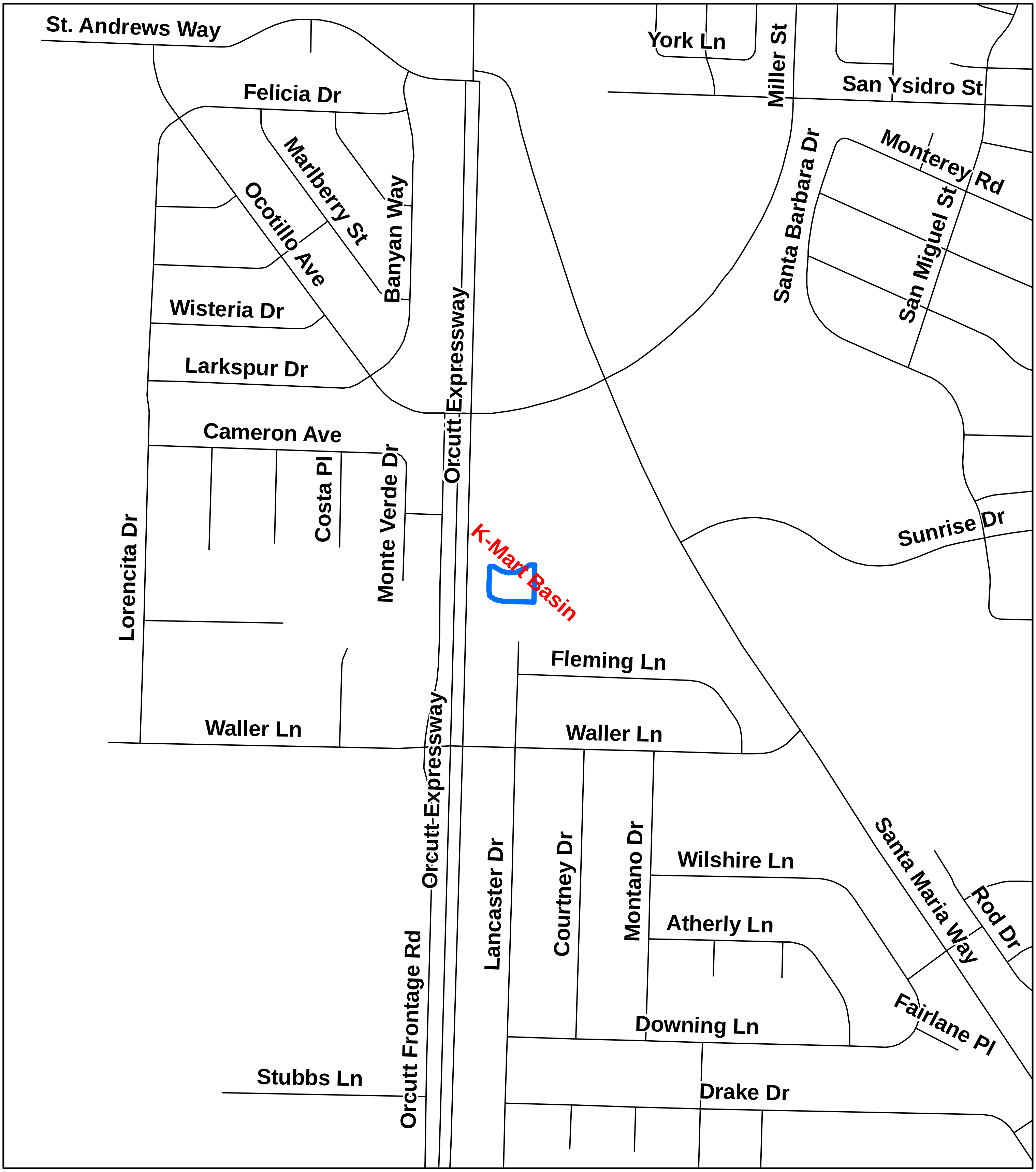
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

K-Mart Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

460 230 0 460

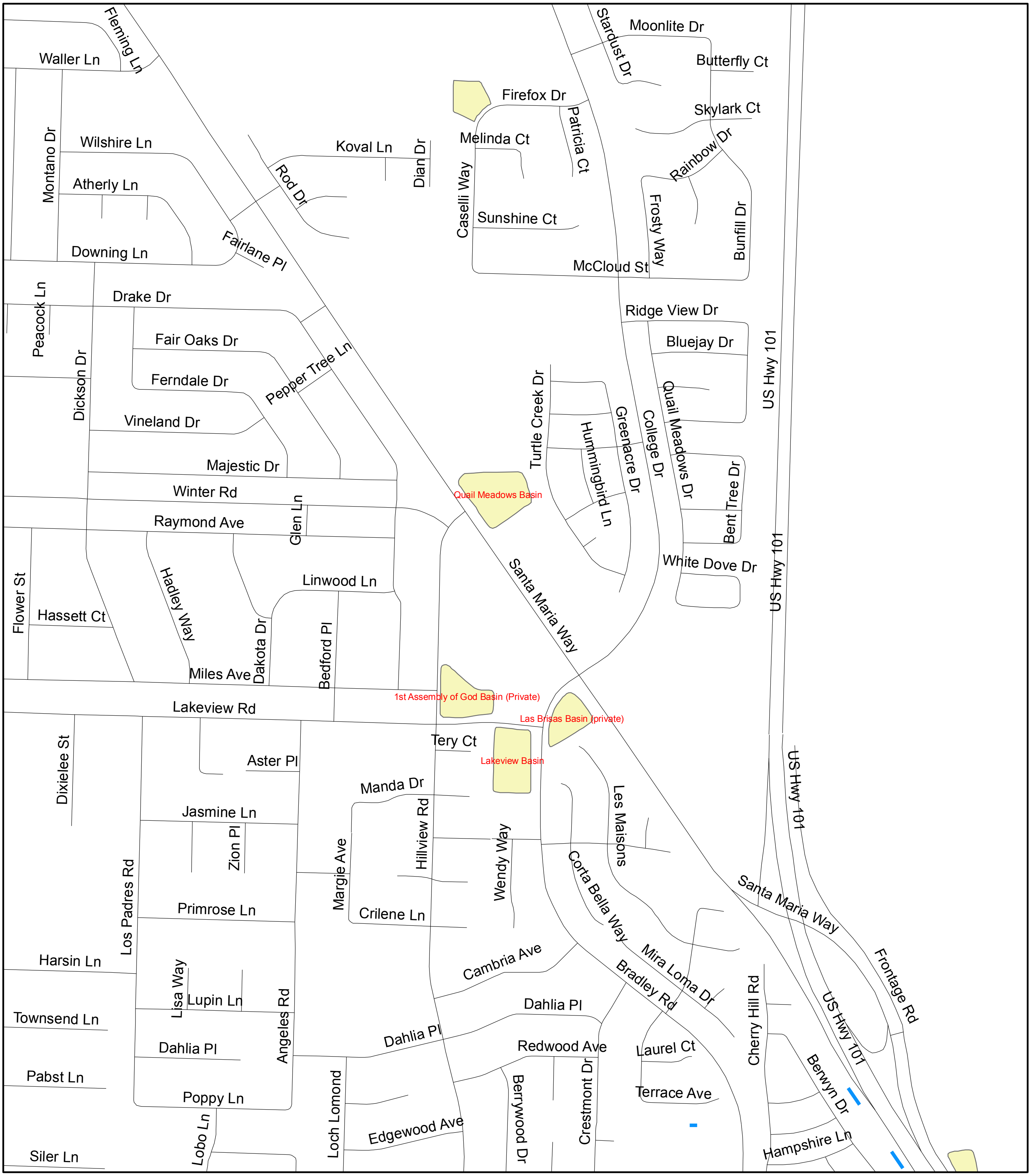
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Lakeview Basin
Quail Meadows Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet
650 325 0 650

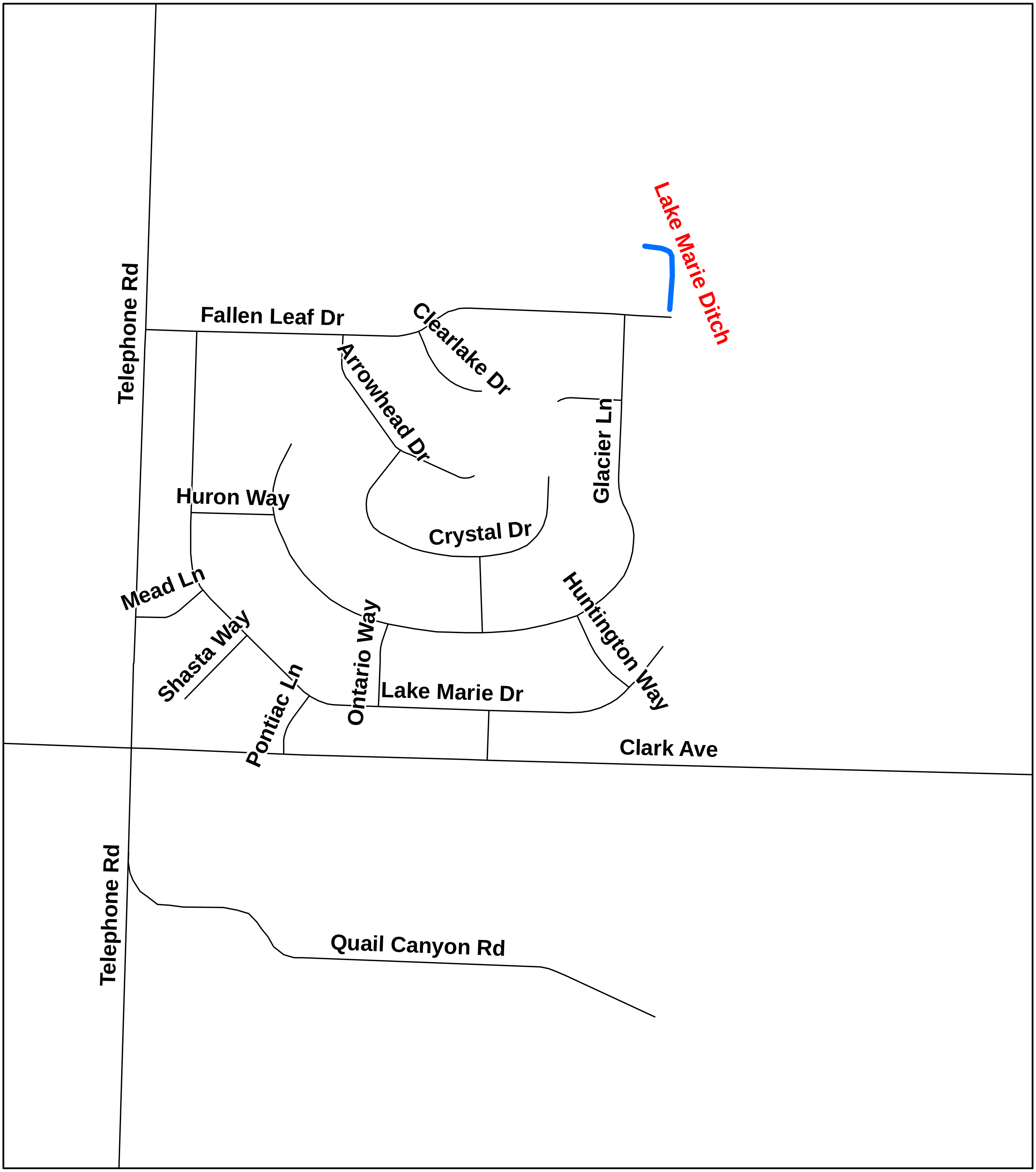
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department
of
Public Works
County
of
Santa Barbara

Lake Marie Ditch

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

560 280 0 560
Feet

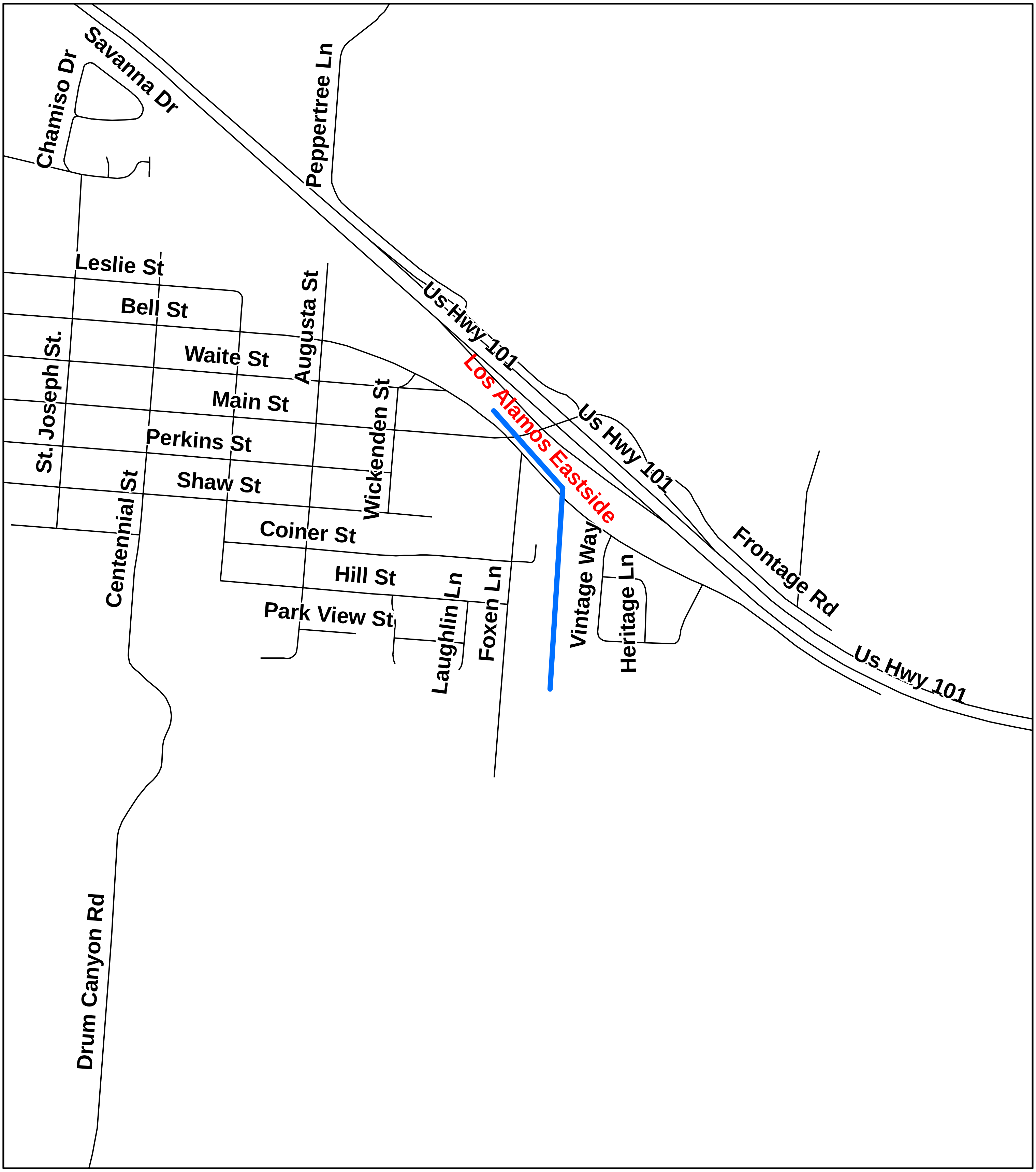
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Los Alamos Eastside Ditch

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

725 362.5 0 725

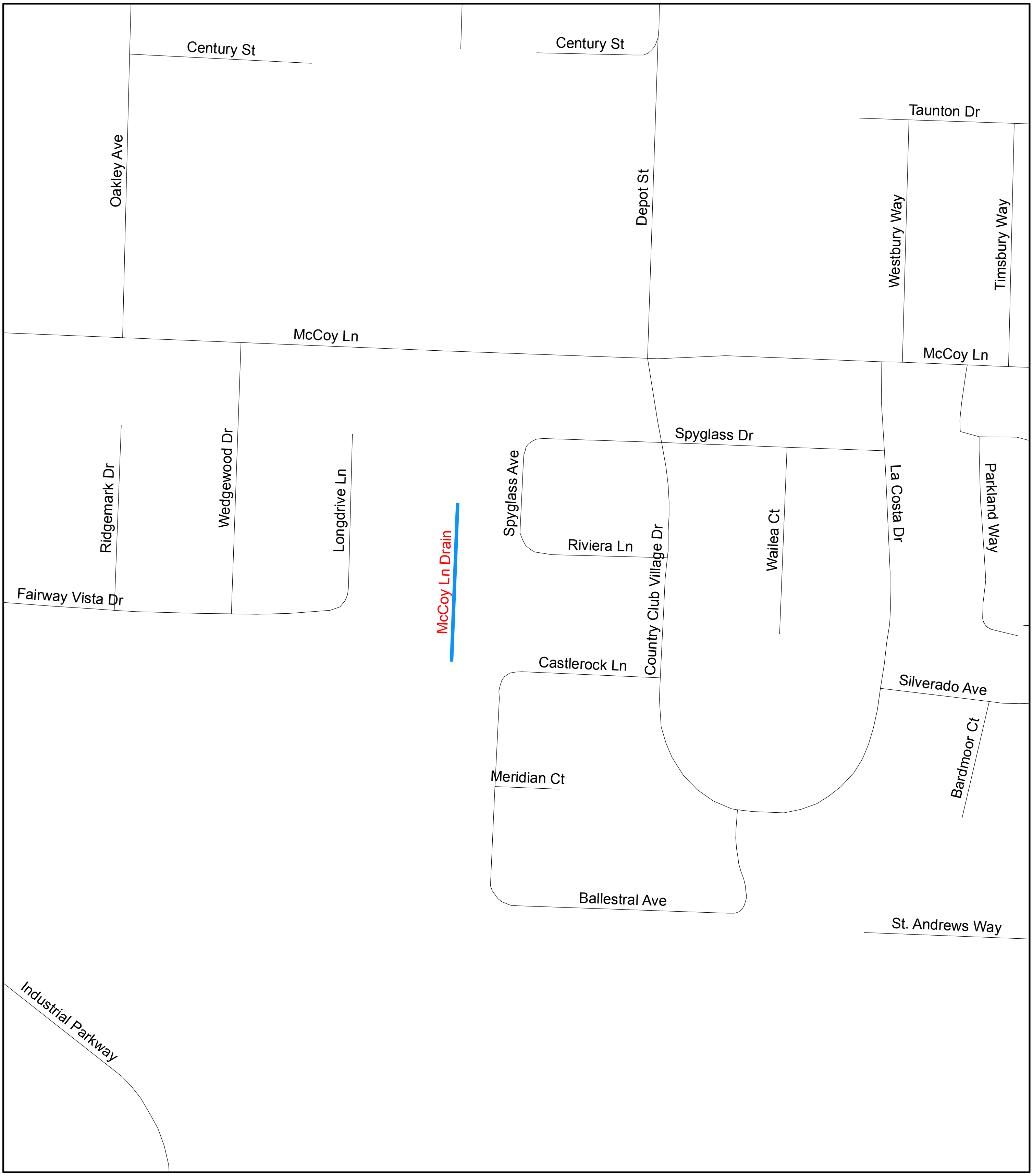
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

McCoy Lane Drain

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

275 137.5 0 275

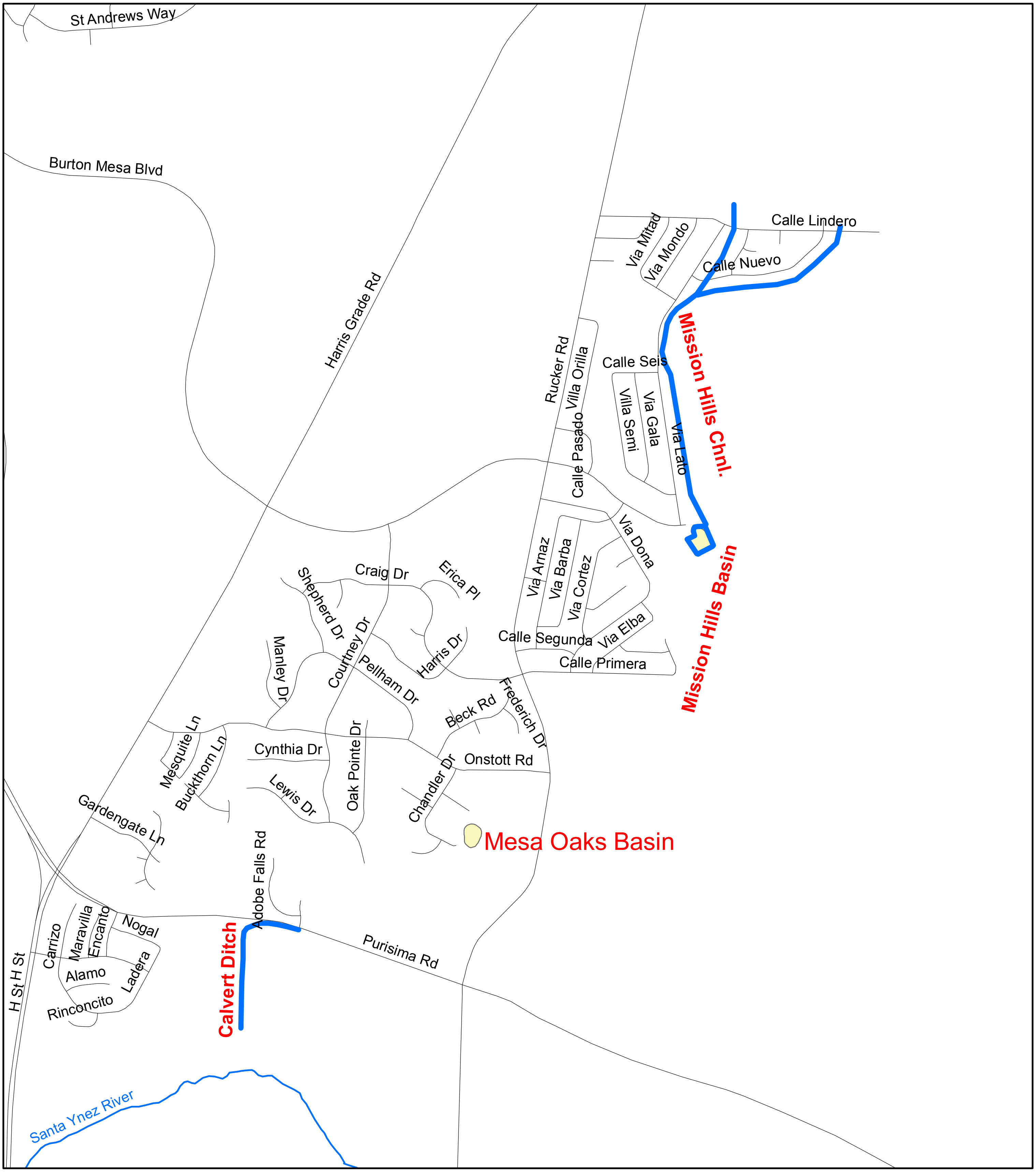
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Mesa Oaks Basin
Mission Hills Channel
Mission Hills Basin
Calvert Ditch

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

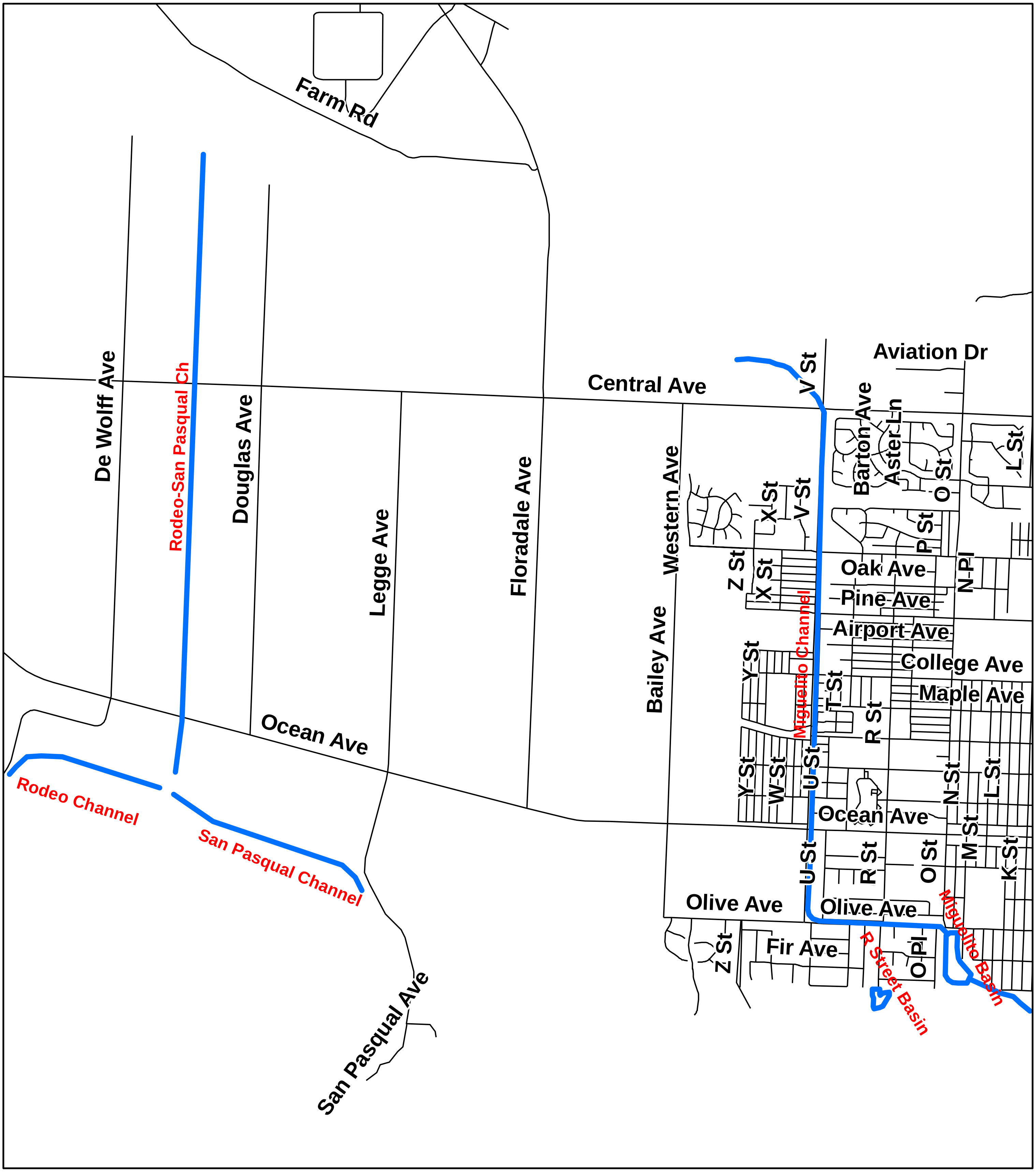
N W E S
Feet
1,300 650 0 1,300
Coordinate System: State Plane California Zone V NAD 1983

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.



Department of Public Works County of Santa Barbara

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

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

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

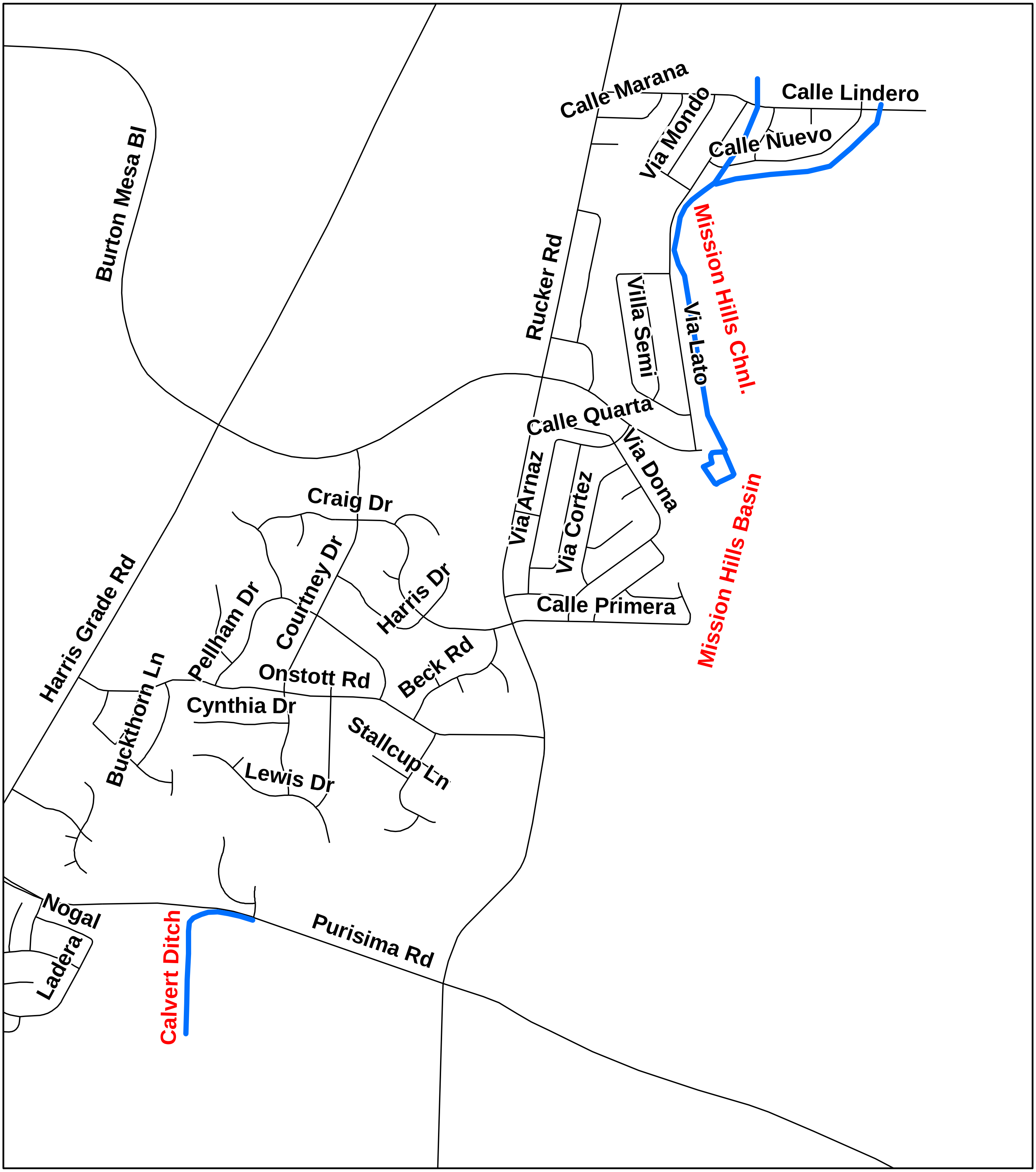
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Mission Hills Channel
Mission Hills Basin
Calvert Ditch

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet 1,200 600 0 1,200

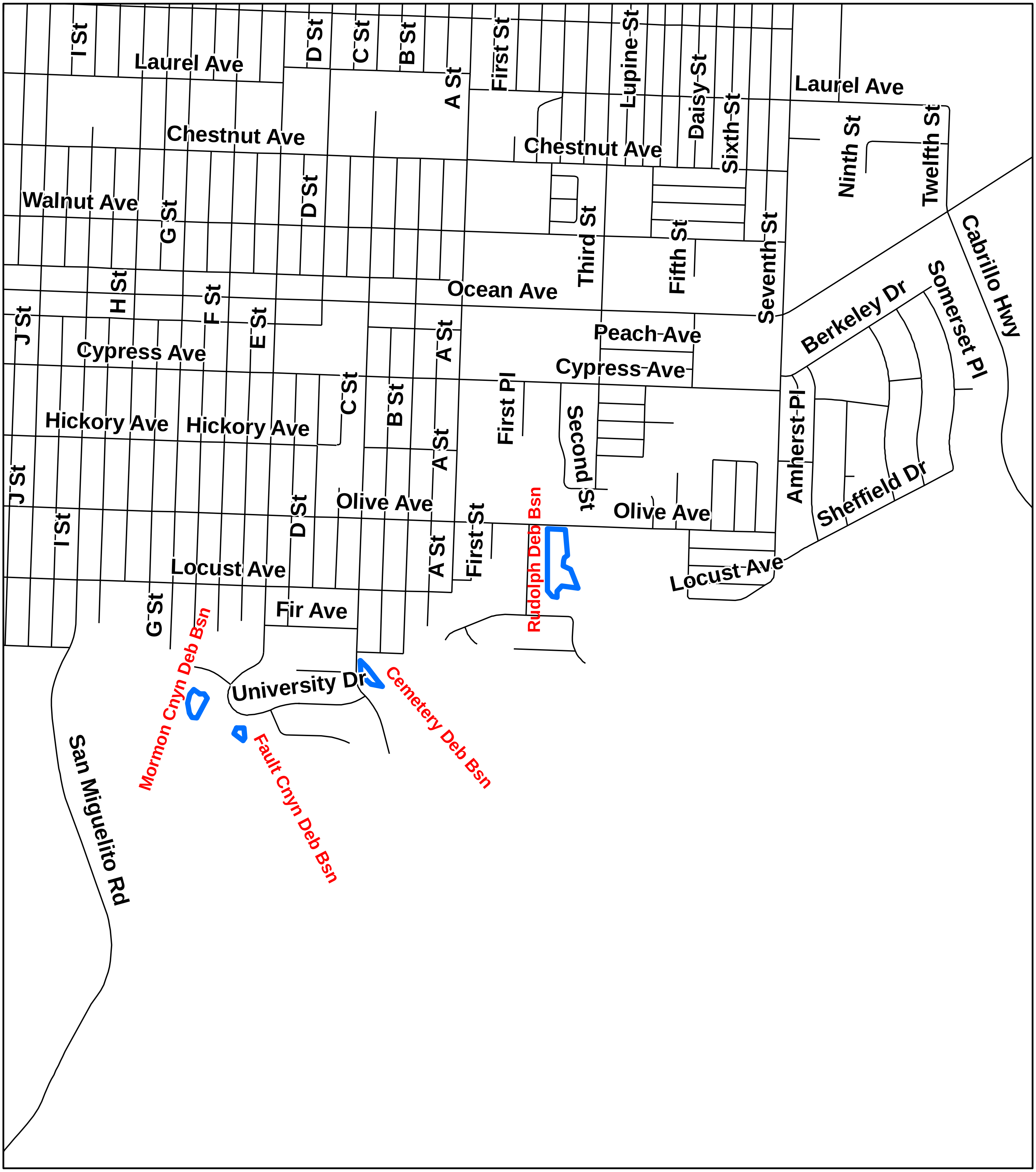
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department
of
Public Works
County
of
Santa Barbara

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

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

Feet
950 475 0 950

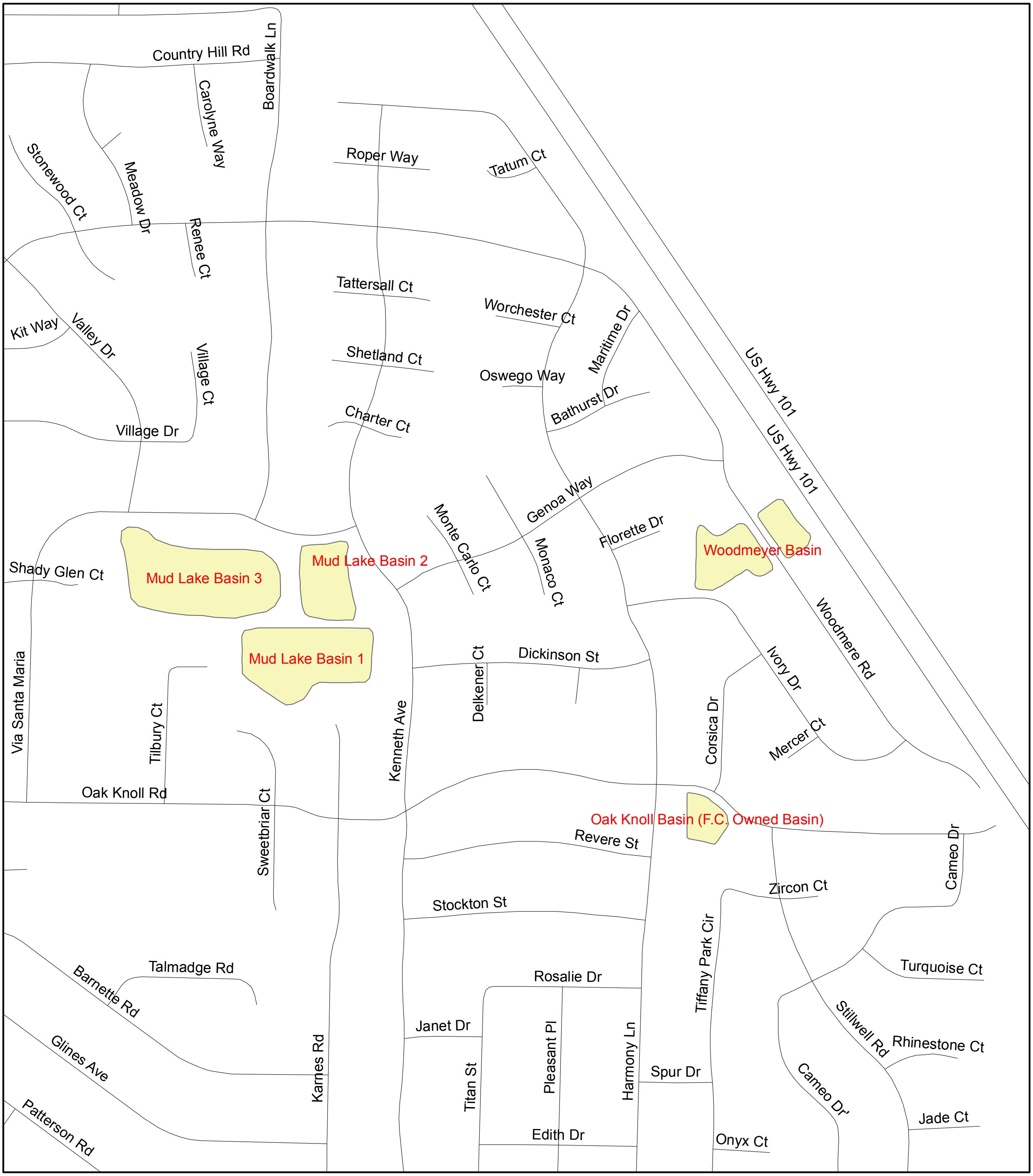
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Mud Lake Basins 1,2,3
Woodmeyer Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

450 225 0 450

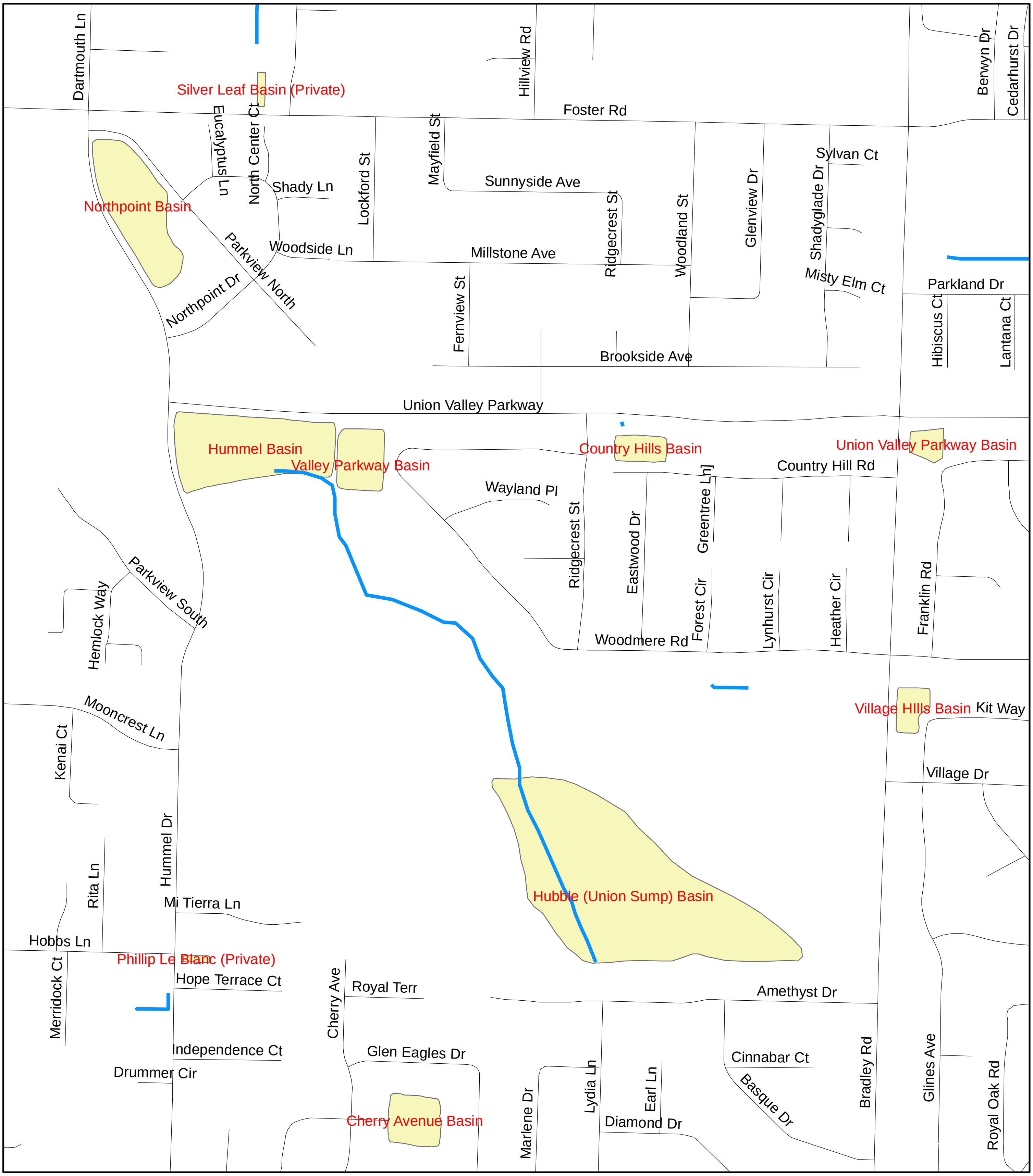
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

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

Public Works Enterprise GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet
490 245 0 490

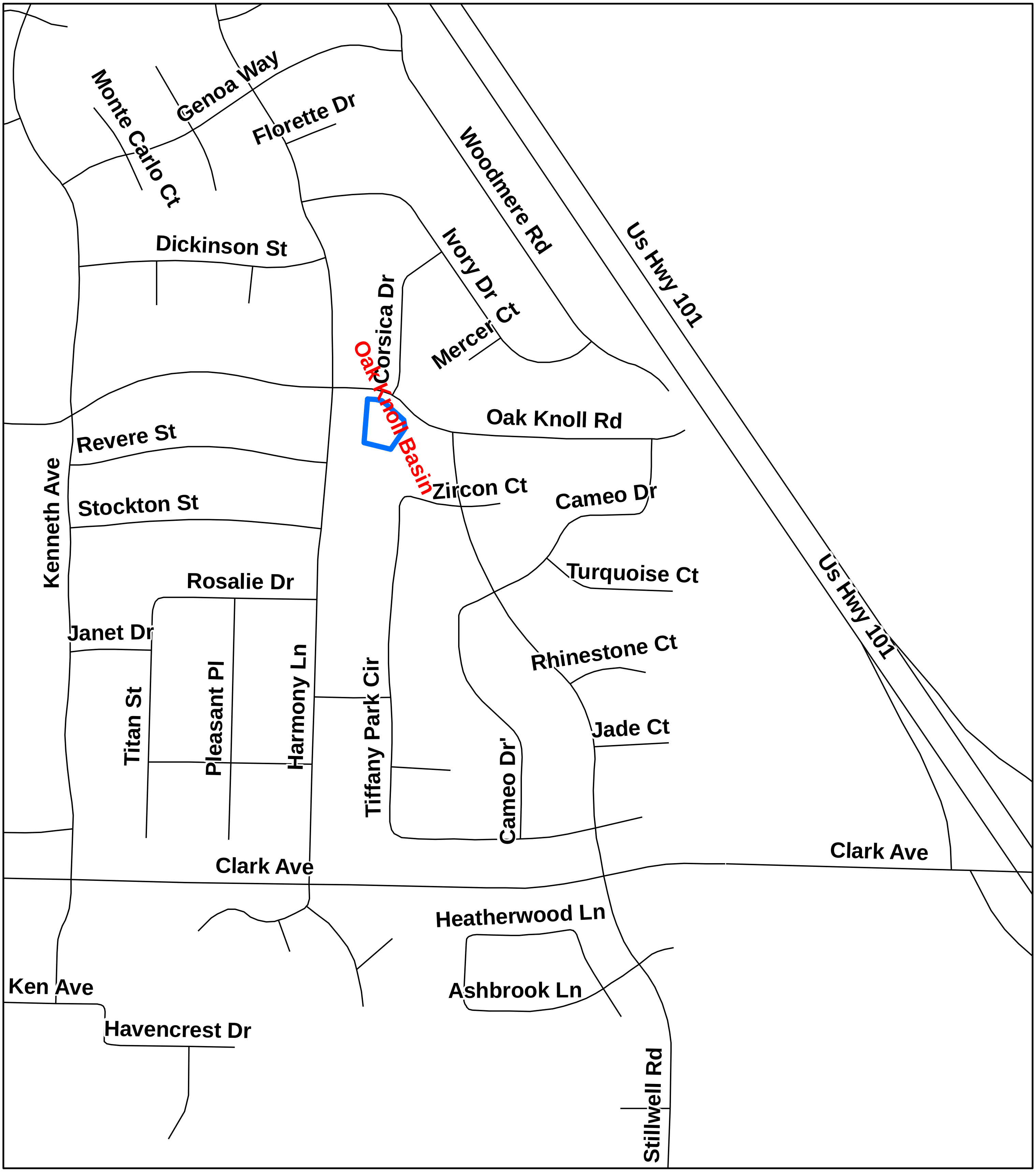
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Oak Knoll Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

460 230 0 460

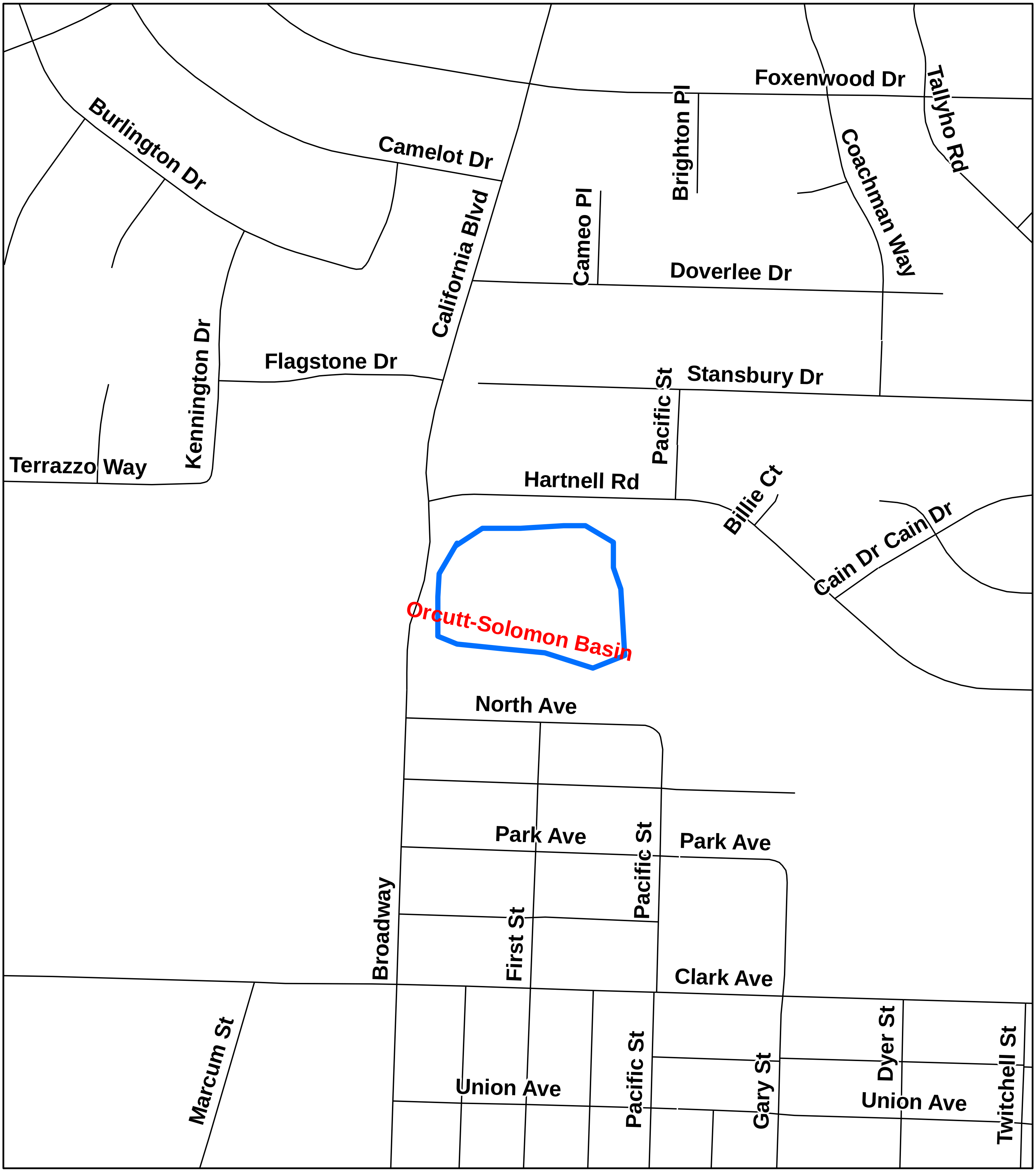
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Orcutt-Solomon Basin

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

325 162.5 0 325

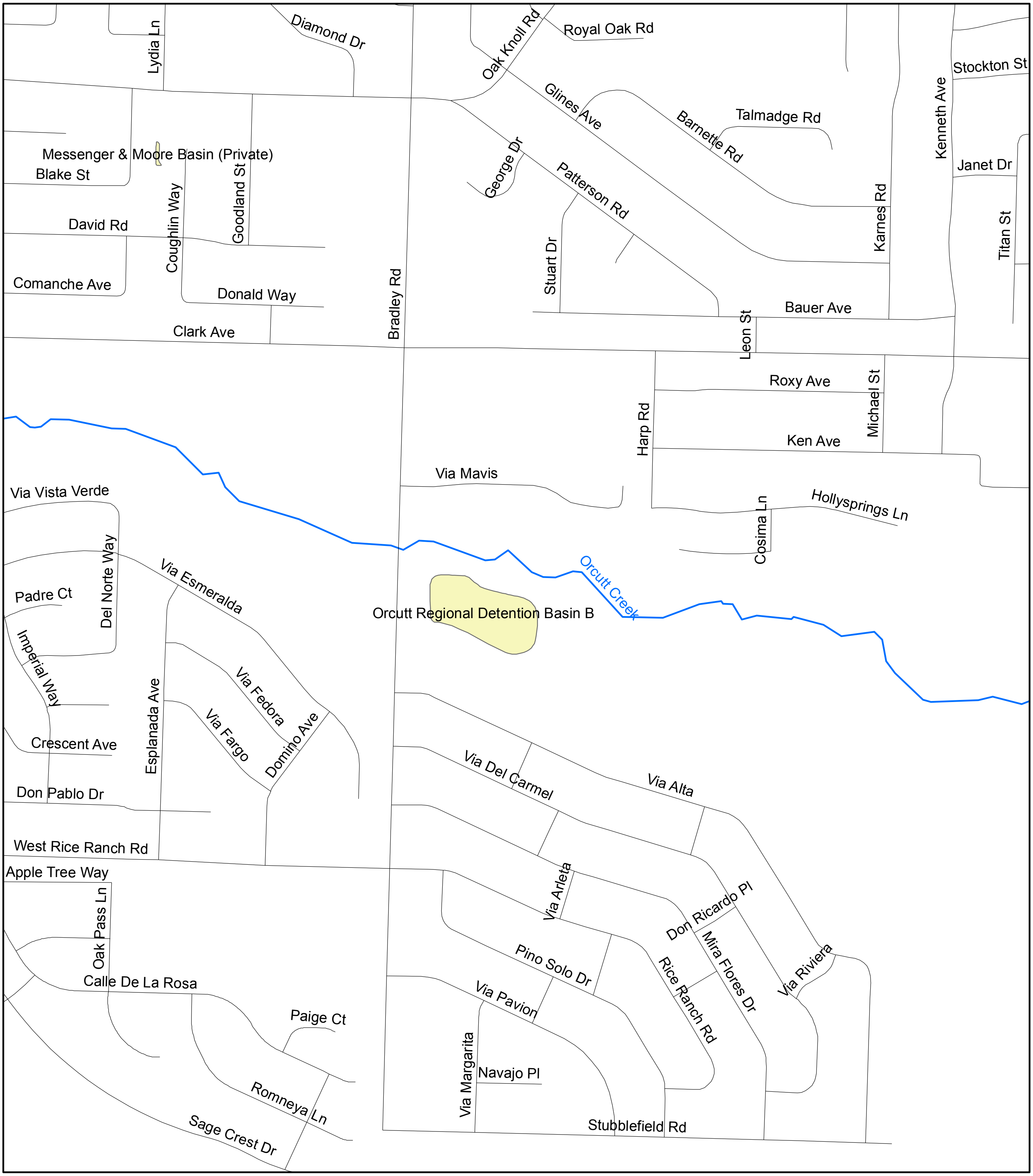
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Orcutt Regional Detention Basin B

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

550 275 0 550

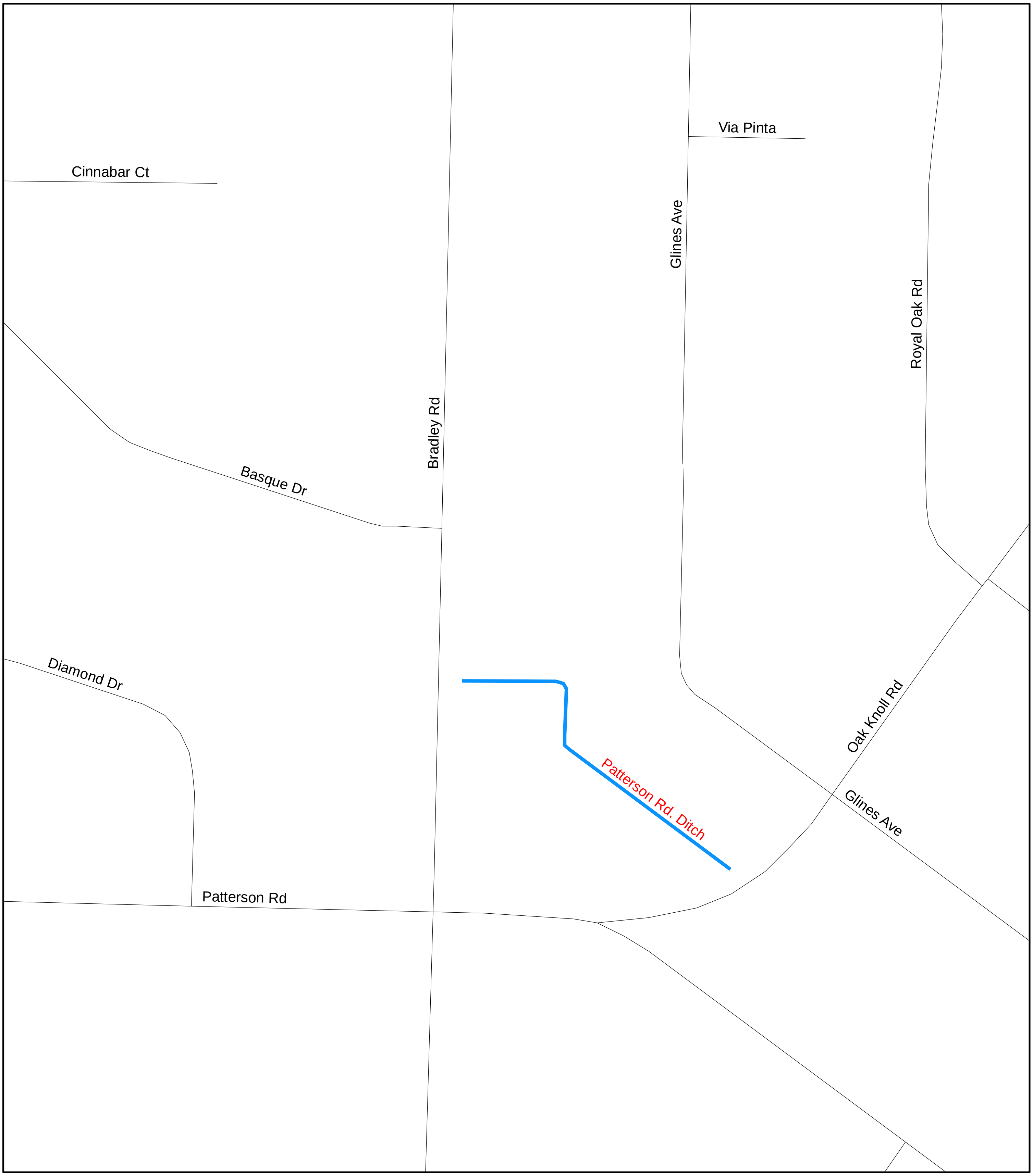
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department
of
Public Works
County
of
Santa Barbara

Patterson Rd. Ditch

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

Feet
130 65 0 130

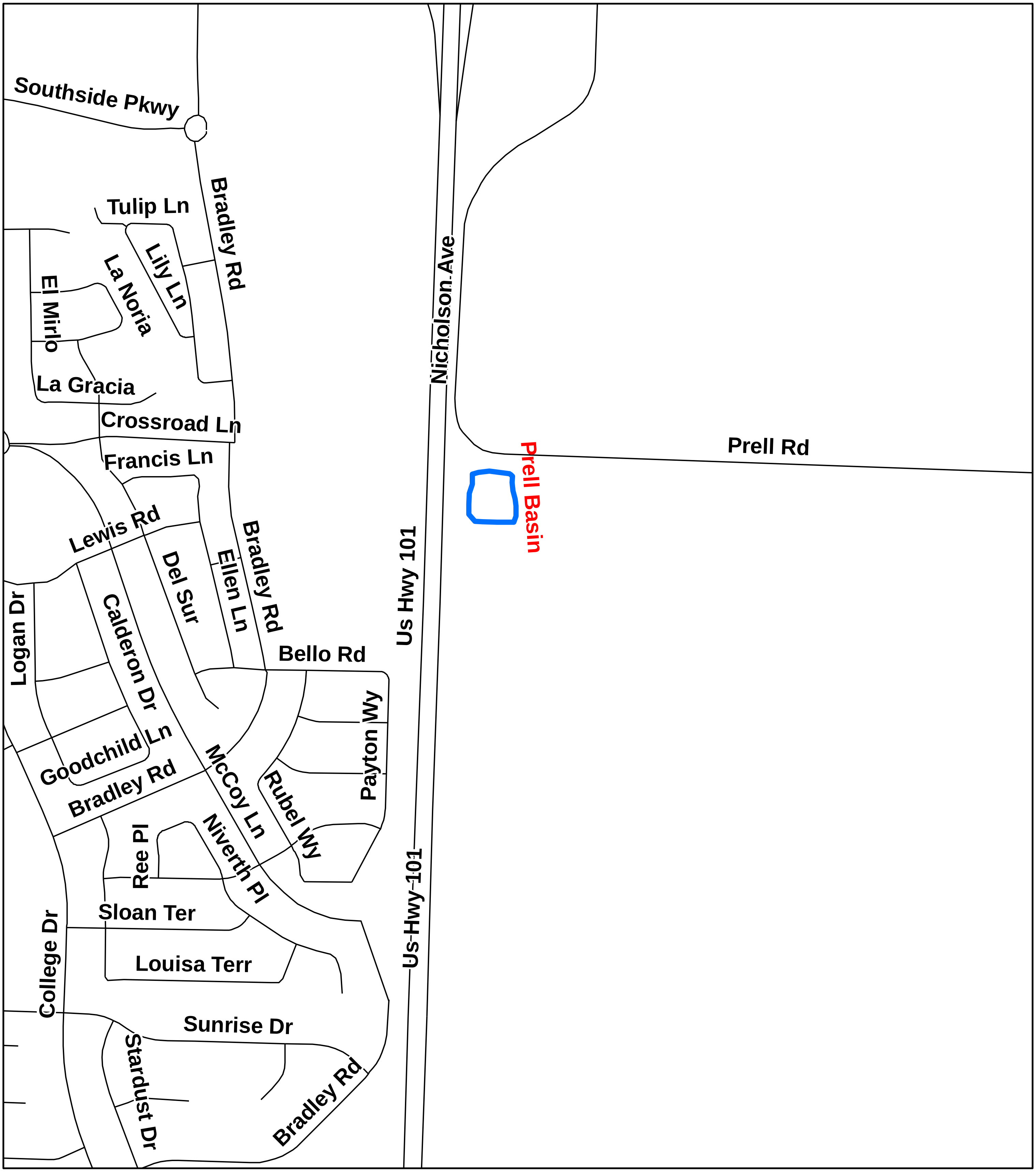
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Prell Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

525 262.5 0 525

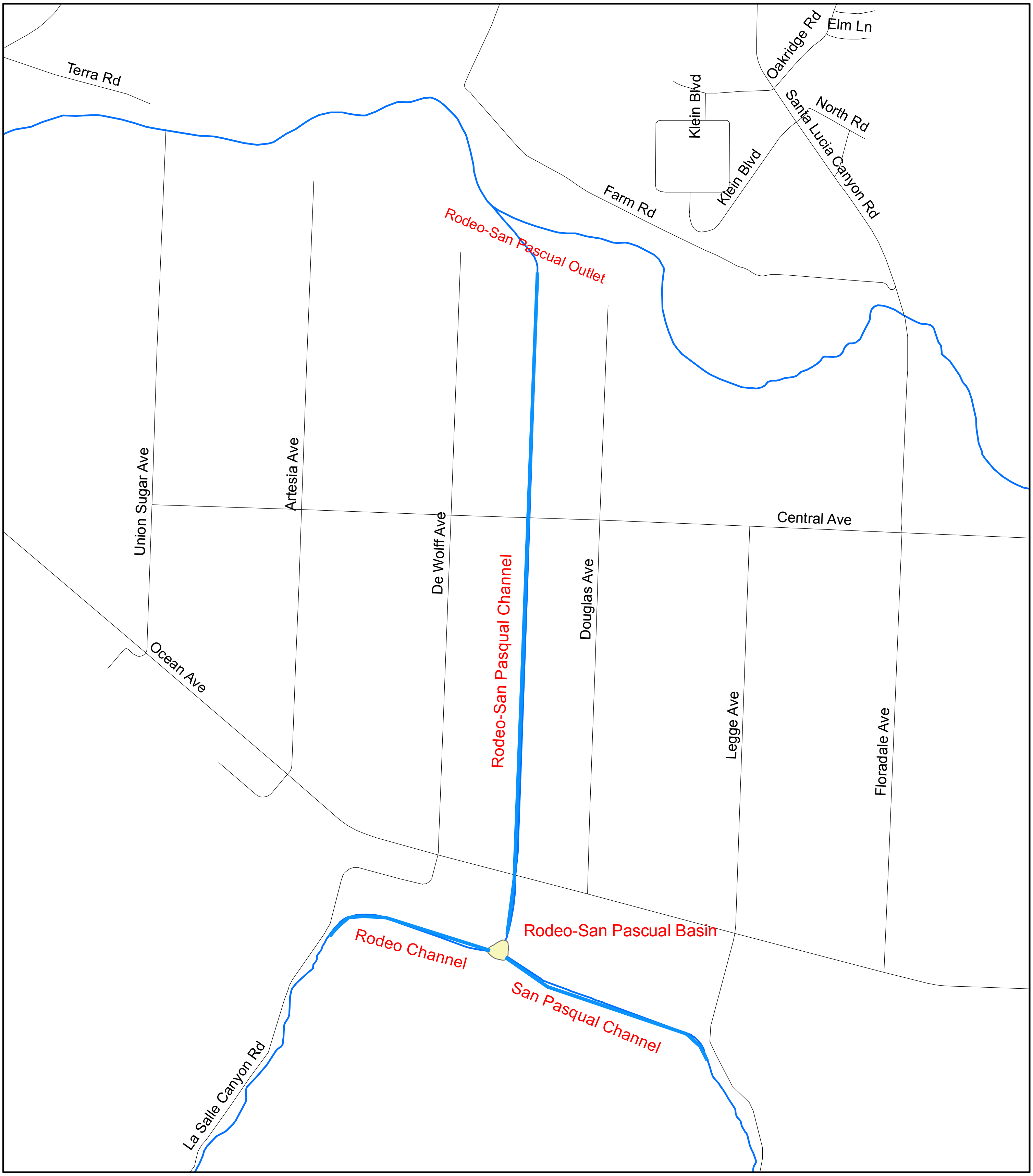
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

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

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S
Feet
2,000 1,000 0 2,000

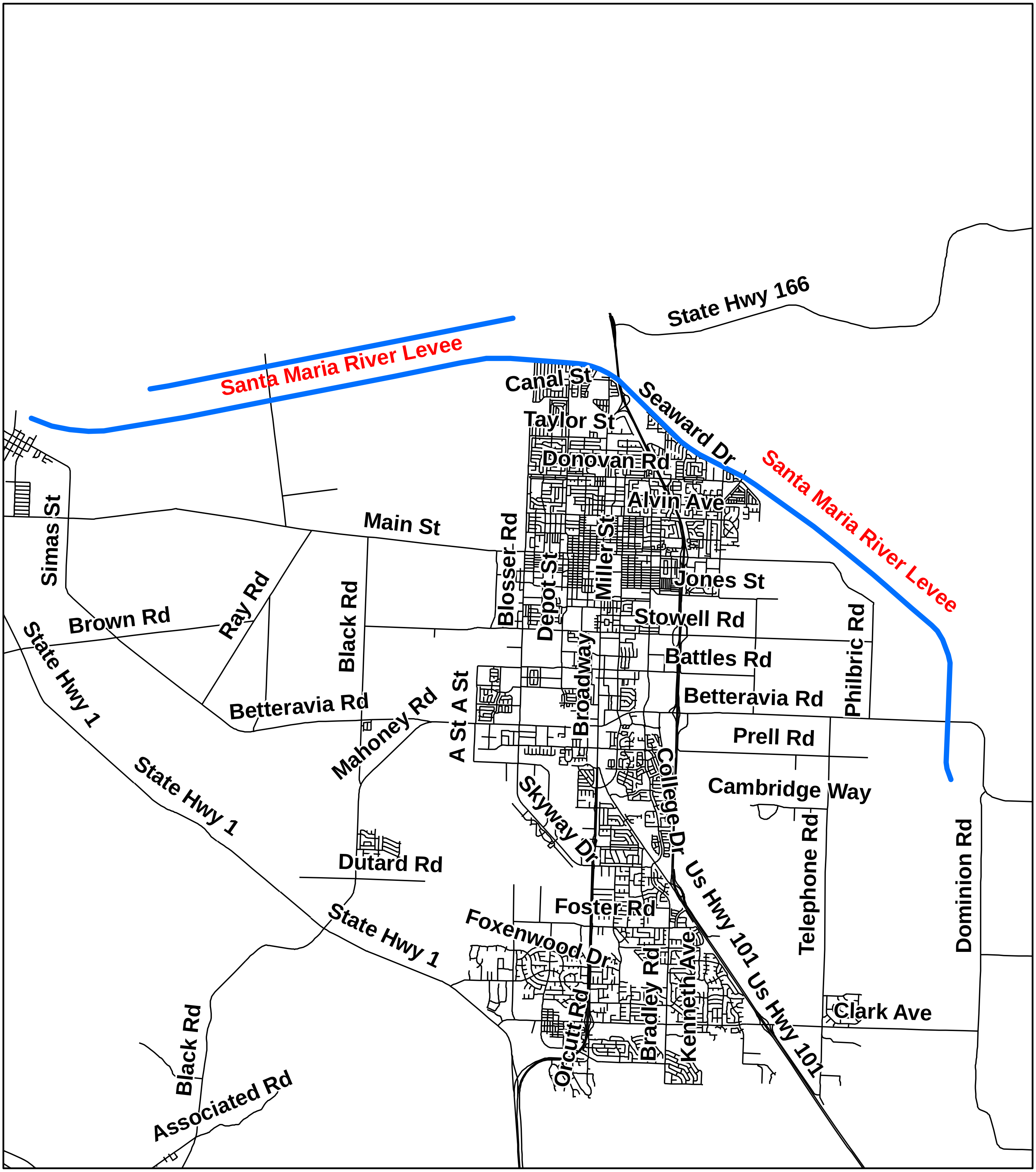
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Santa Maria River Levee

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

7,300 3,650 0 7,300

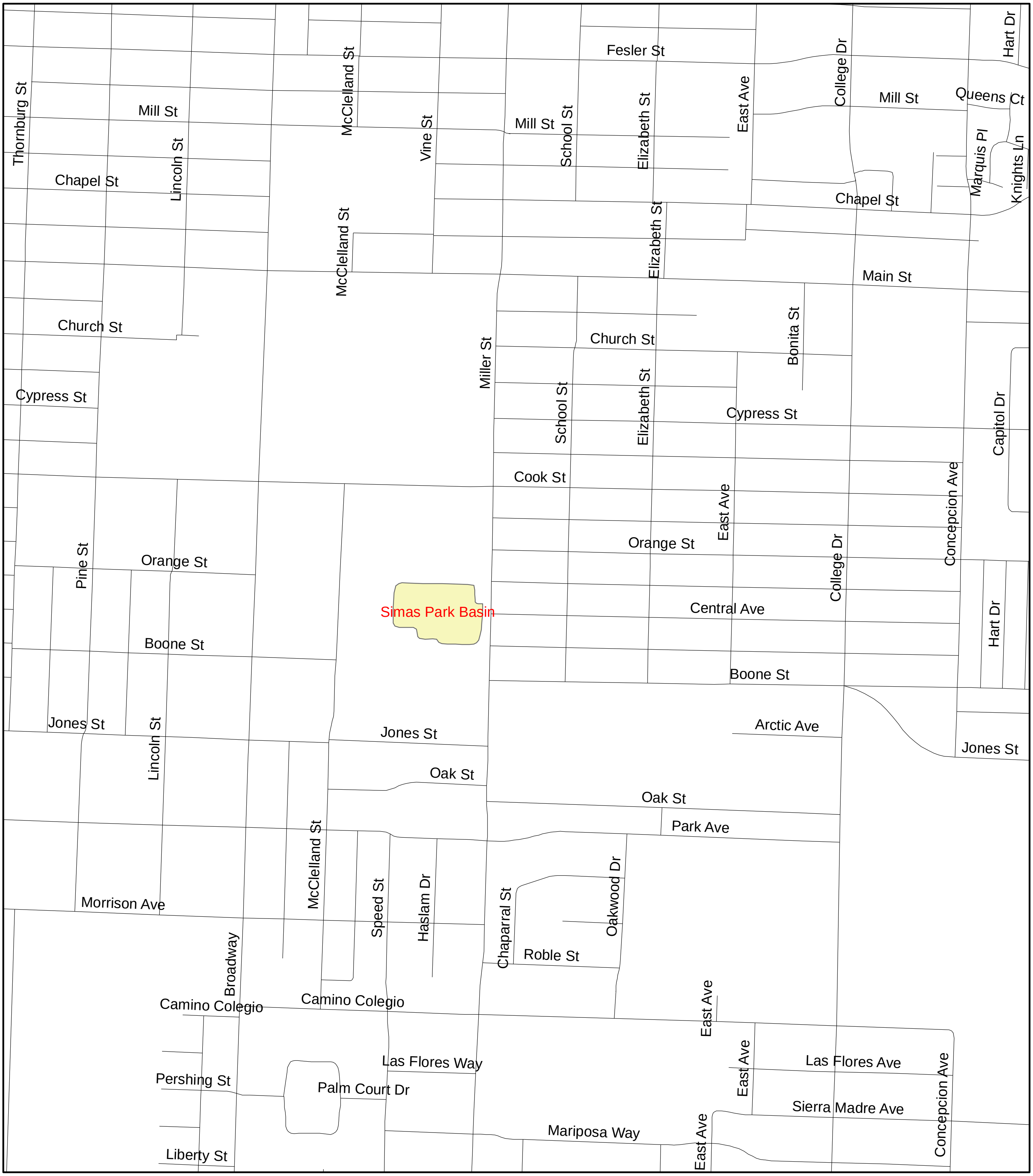
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Simas Park Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

570 285 0 570

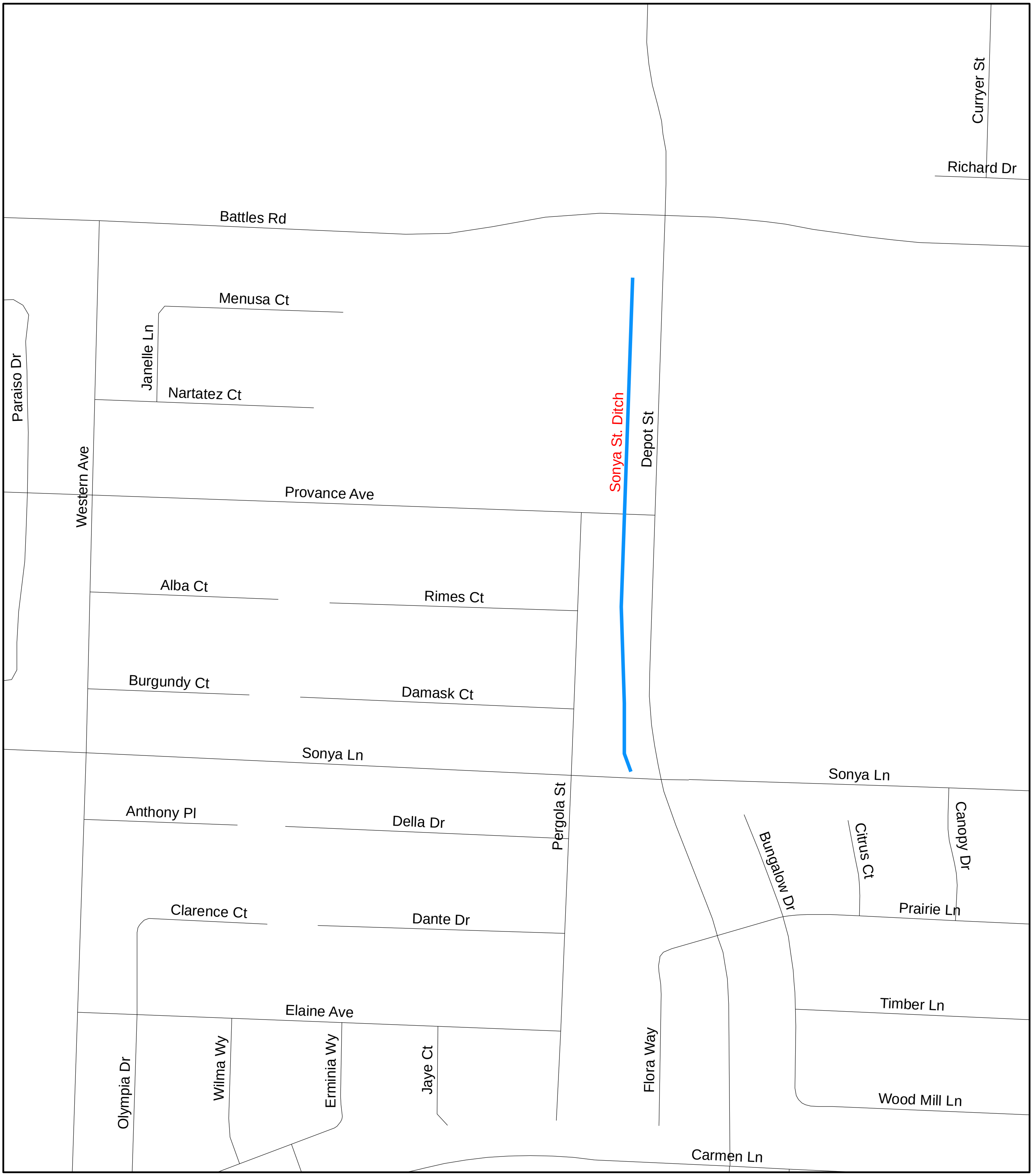
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Sonya St. Ditch

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

270 135 0 270

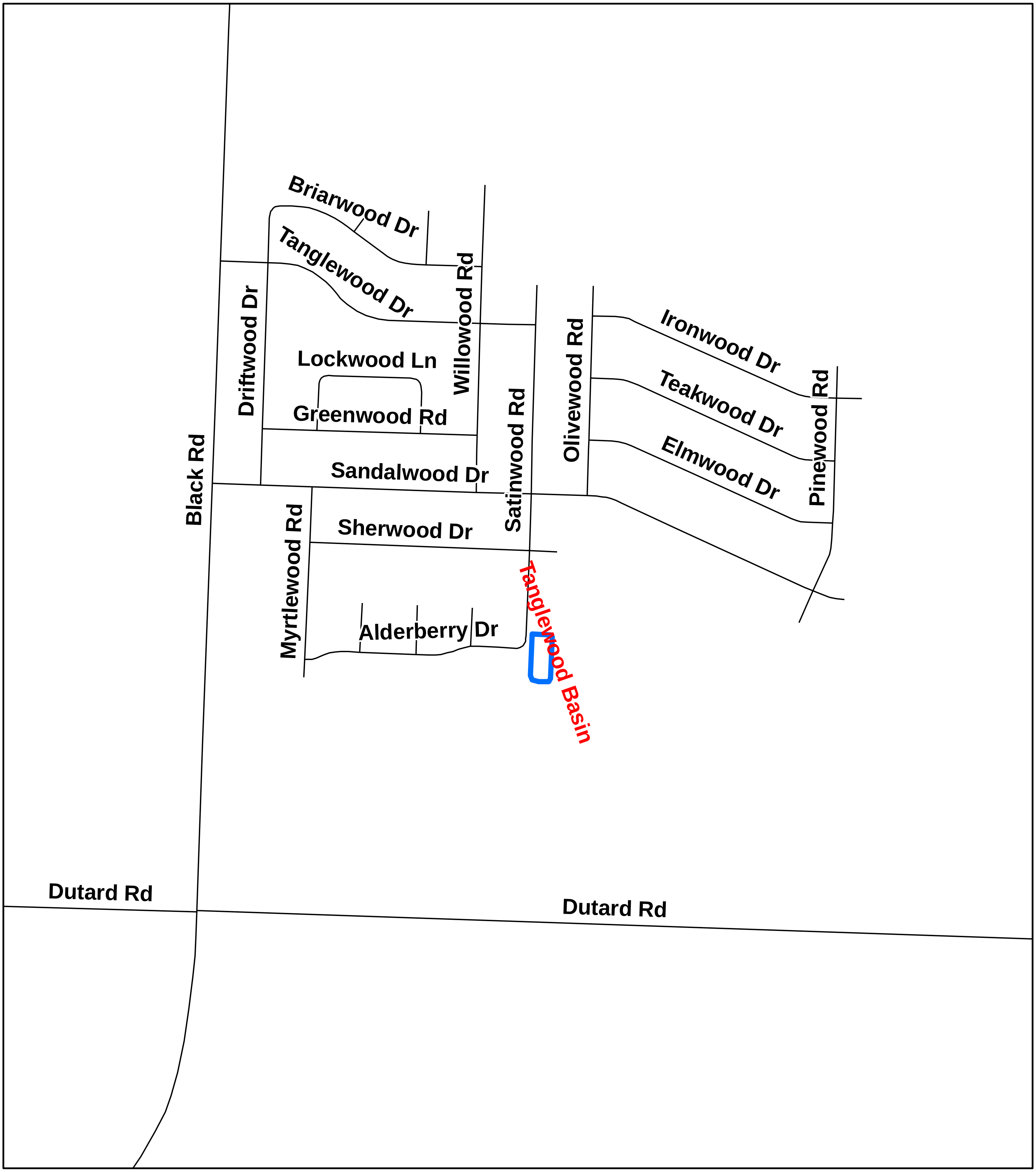
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Tanglewood Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S
Feet
510 255 0 510

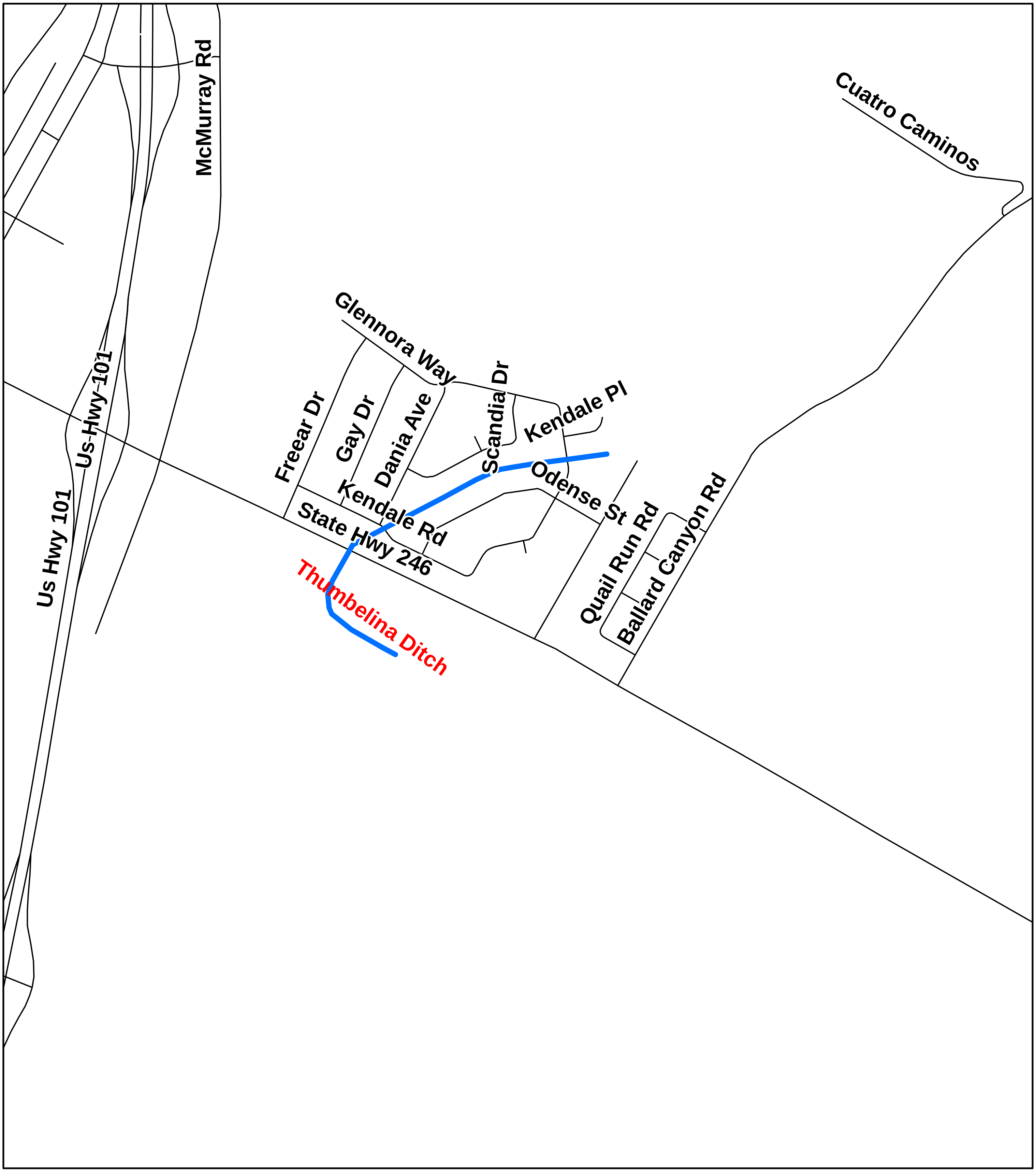
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department
of
Public Works
County
of
Santa Barbara

Thumbelina Ditch

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.

Feet
680 340 0 680

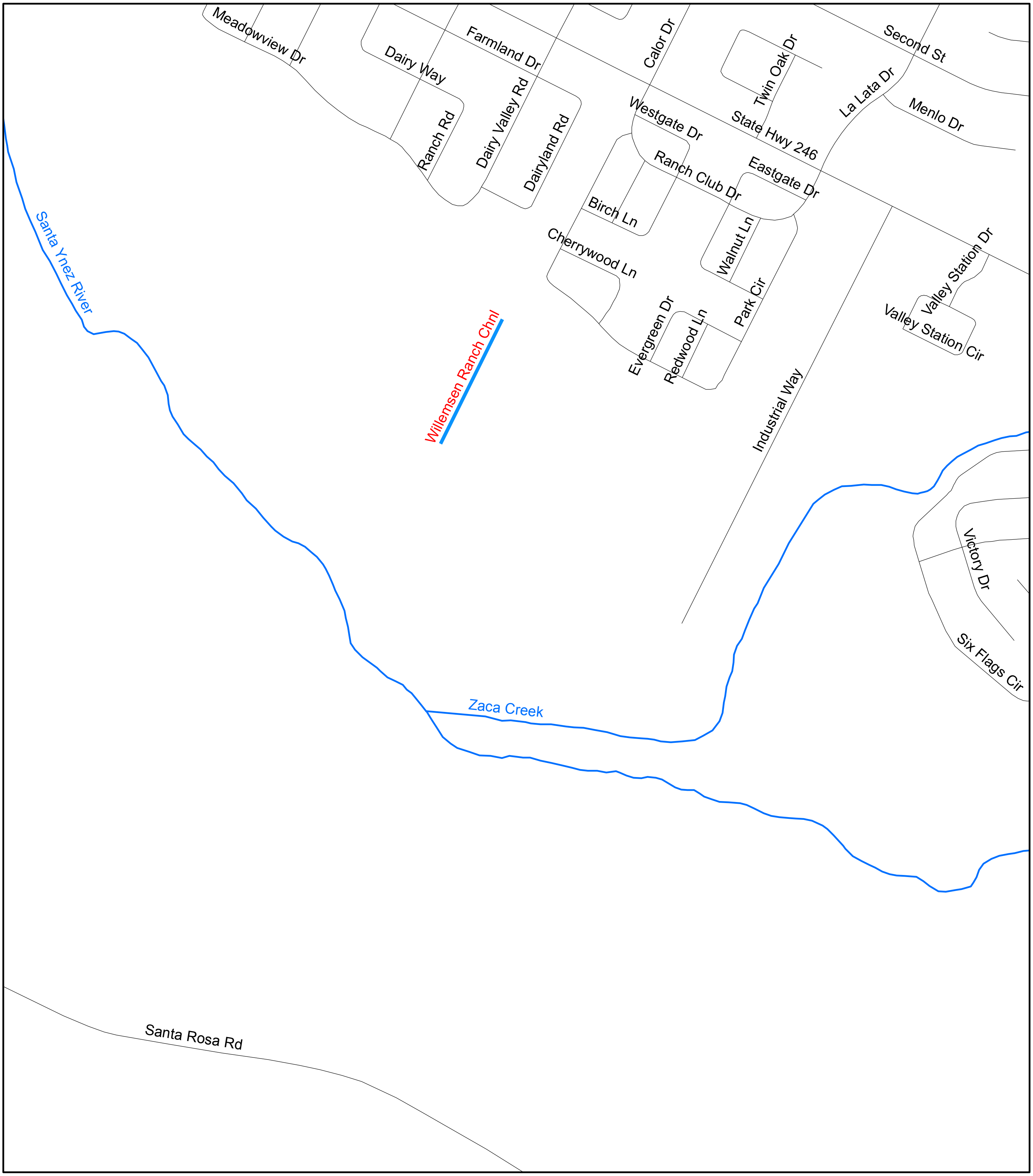
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Willemsen Ranch Channel

Public Works Enterprise GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

525 262.5 0 525

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.

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 of the year 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.

South County exempt facility maps immediately follow this section and associated map page numbers are referenced in each exempt facility discussion.

Concrete Channels:

1. **Arroyo Burro Channel:** From the confluence with San Roque Creek downstream to Calle Real Street, approximately 1,000 feet. On an annual basis the concrete channel is spot sprayed and 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 1,000 feet. 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. The channel is desilted every 3 to 5 years. 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. 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. Every 3 to 5 years sediment is removed from the channel. Franklin Channel will be desilted this year. Refer to Page 7.

8. **Fremont Channel:** From Queen Anne Road downstream 125 feet. Every 3 to 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 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 7.

10. **Hog Canyon Channel:** From the confluence with Carpinteria Creek upstream 500 feet. 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 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. Existing concrete panels are damaged and will be replaced in-kind to restore channel functionality. The channel is desilted every 3 to 5 years. Refer to Page 2.

12. **Las Positas Channel:** From Veronica Springs Road upstream 1,000 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 12.

13. **Los Carneros Channel:** From the Union Pacific Railroad downstream to Firestone Road, a distance of 2,200-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. Los Carneros Channel will be desilted this year. Refer to Page 13.

14. **Mission Channel:** From Los Olivos to Pedregosa St and from Valerio to Canon Perdido, a total distance of 5,641 feet. Garbage or debris, along with graffiti removal is conducted on a yearly basis. The channel is desilted every 3 to 5 years. Refer to Page 14.

15. **Montecito Channel (Casa Dorinda Channel):** From Hot Springs Road downstream to the Montecito Debris Basin, a distance of 1,000 feet. Every 3 to 5 years, sediment is removed from the channel. Refer to Page 15.

16. **Pace Park Drain:** Between Highway 101 and Pace Park Subdivision, a distance of 1,000 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 7.

17. **Patterson Drain:** This concrete swale runs parallel to Patterson Road for a distance of 150 feet. 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 Street 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 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 13.

21. **Romero Channel:** From Fernald Point Road to the ocean, a distance of 600 feet. 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 feet 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 1,600 feet. 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 feet. Debris and unwanted vegetation is removed on an annual basis. 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. The channel is desilted every 3 to 5 years. Refer to Page 7.

26. **Serenidad Drain:** From the confluence with Las Vegas Creek upstream 350 feet. 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 feet. 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 Micheltorena Street in Santa Barbara. This basin requires rock and debris (small woody debris) removal (approximately 5 cubic yards) approximately every 10 years. Refer to Page 4.

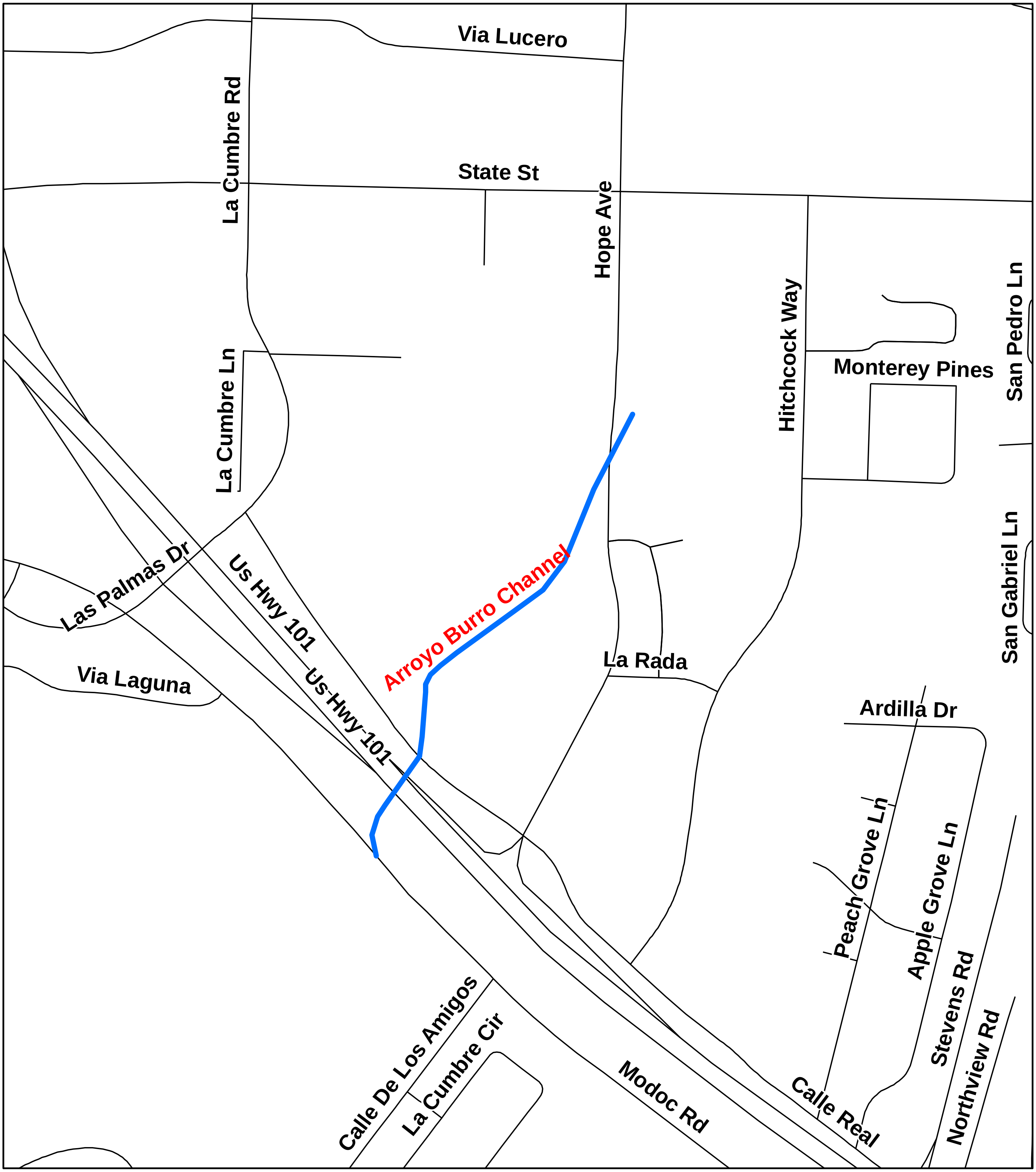
2. **Franciscan Basin:** This sediment basin is at the upstream end of Franciscan Culvert 1360 Cravens Lane in Carpinteria. This basin requires desilting approximately every 5 years to remove approximately 500 cubic yards of sediment and occasional spot spraying for weeds or cattails (approximately 5 square feet of cattails). Last year's desilted material stockpiled adjacent to the basin will be moved this year. Refer to Page 7.

3. **Hog Canyon Basin:** This basin requires desilting approximately every 5 years to remove between 100-200 cubic yards of sediment. Mustard and weedy vegetation are mowed annually within the basin for weed and fire control. The basin is also spot sprayed every other year if woody vegetation begins to colonize the basin. 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 to remove between 100-200 cubic yards of sediment. Mustard and weedy vegetation are mowed annually within the basin for weed and fire control. The basin is also spot sprayed every other year if woody vegetation begins to colonize the basin. 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 to remove approximately 1,000 cubic yards of sediment 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.



Department of Public Works County of Santa Barbara

Arroyo Burro Channel

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

380 190 0 380

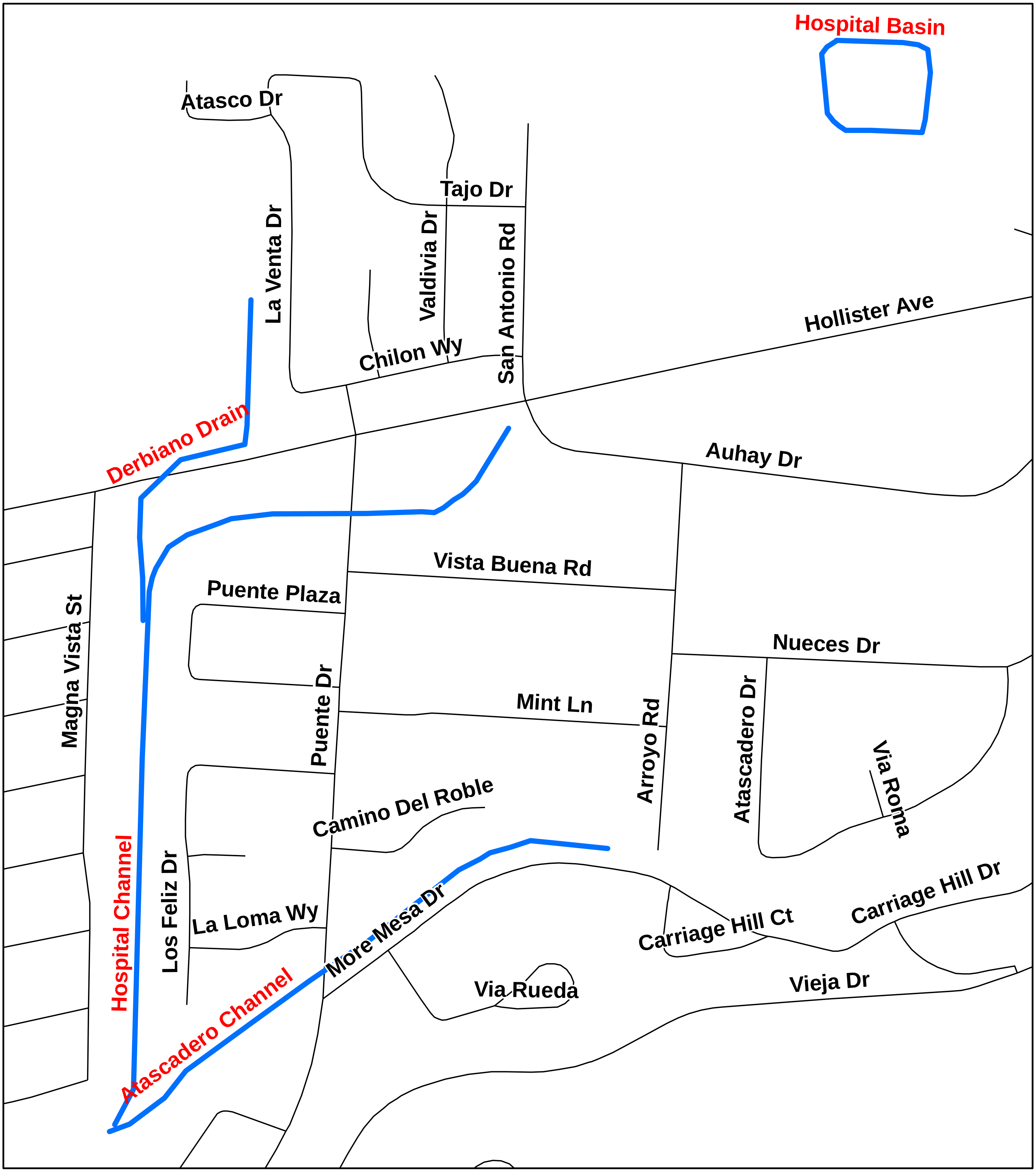
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Atascadero Channel
Derbiano Drain
Hospital Channel
Hospital Basin

78

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

375 187.5 0 375

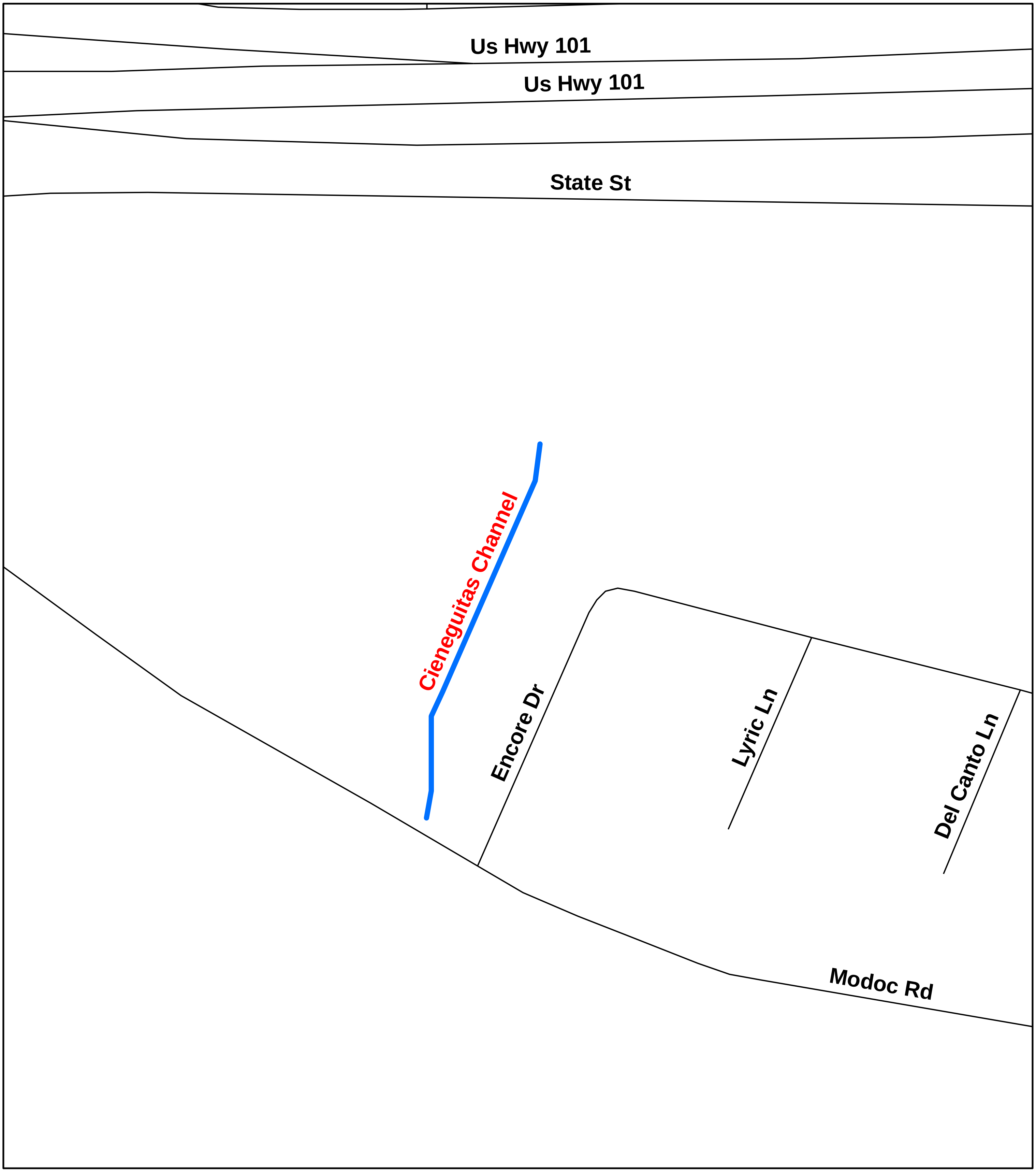
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department
of
Public Works
County
of
Santa Barbara

Cieneguitas Channel

PUBLIC WORKS
ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

Feet
140 70 0 140

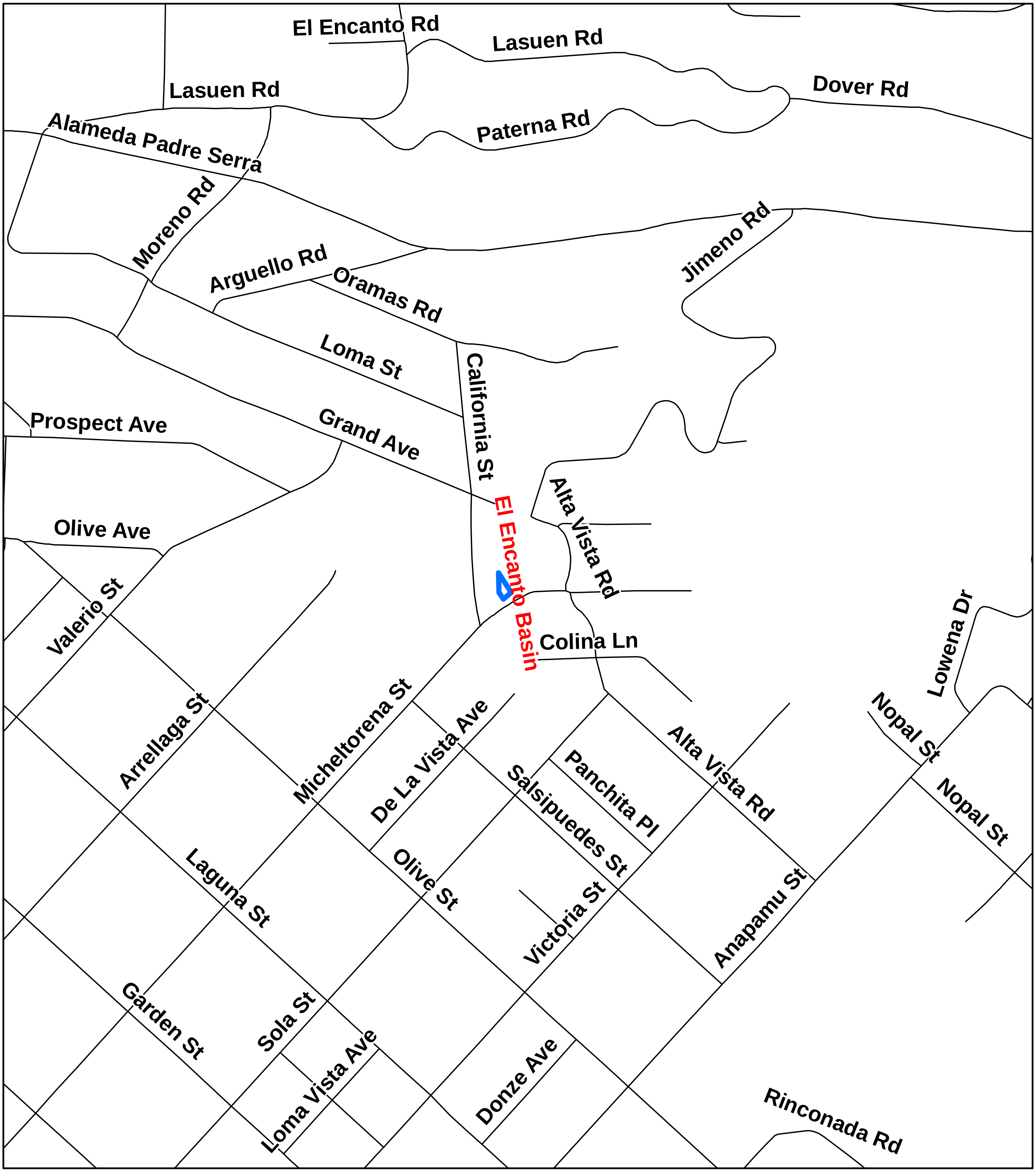
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

El Encanto Basin

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

390 195 0 390

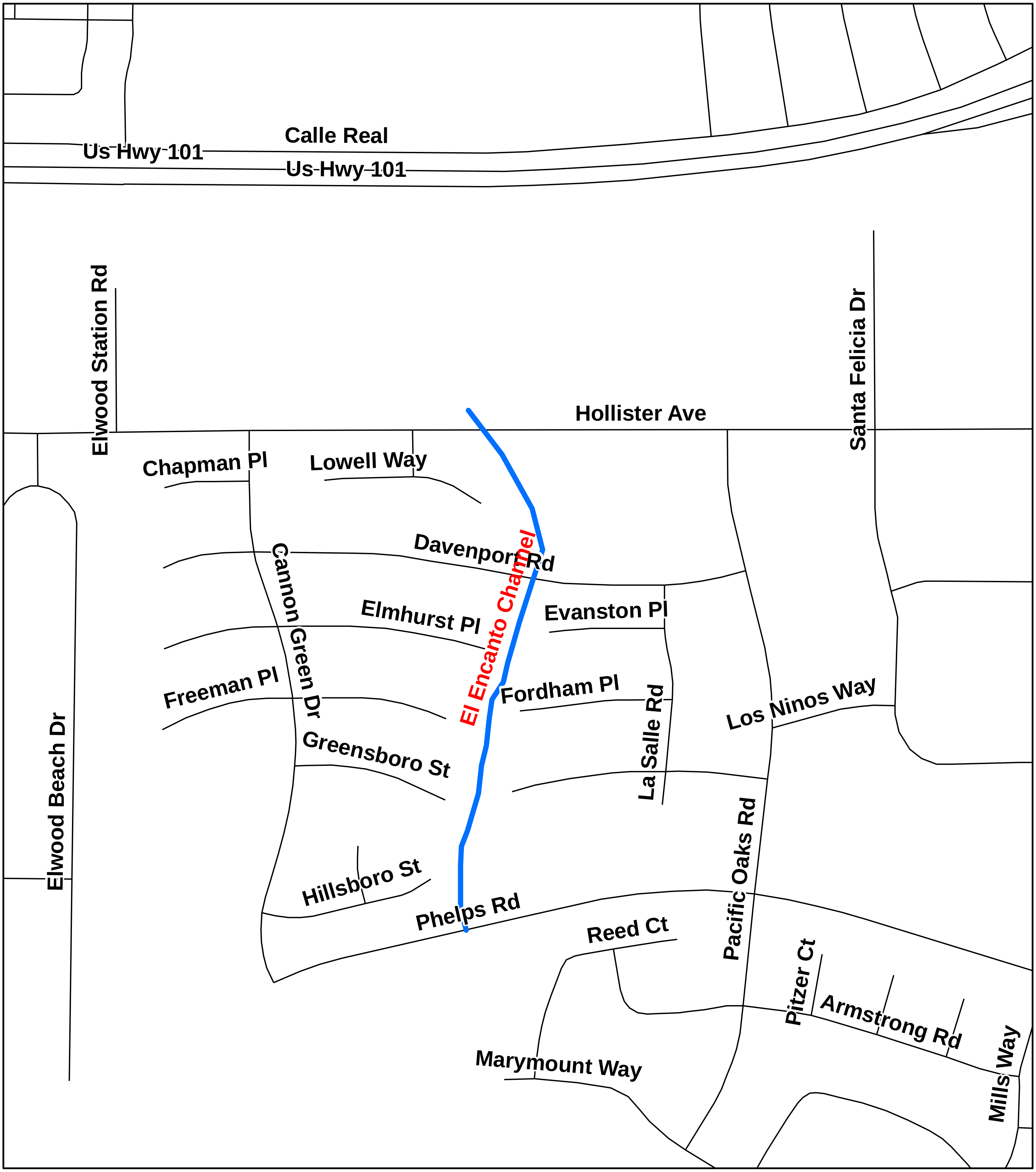
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

El Encanto Channel

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

400 200 0 400

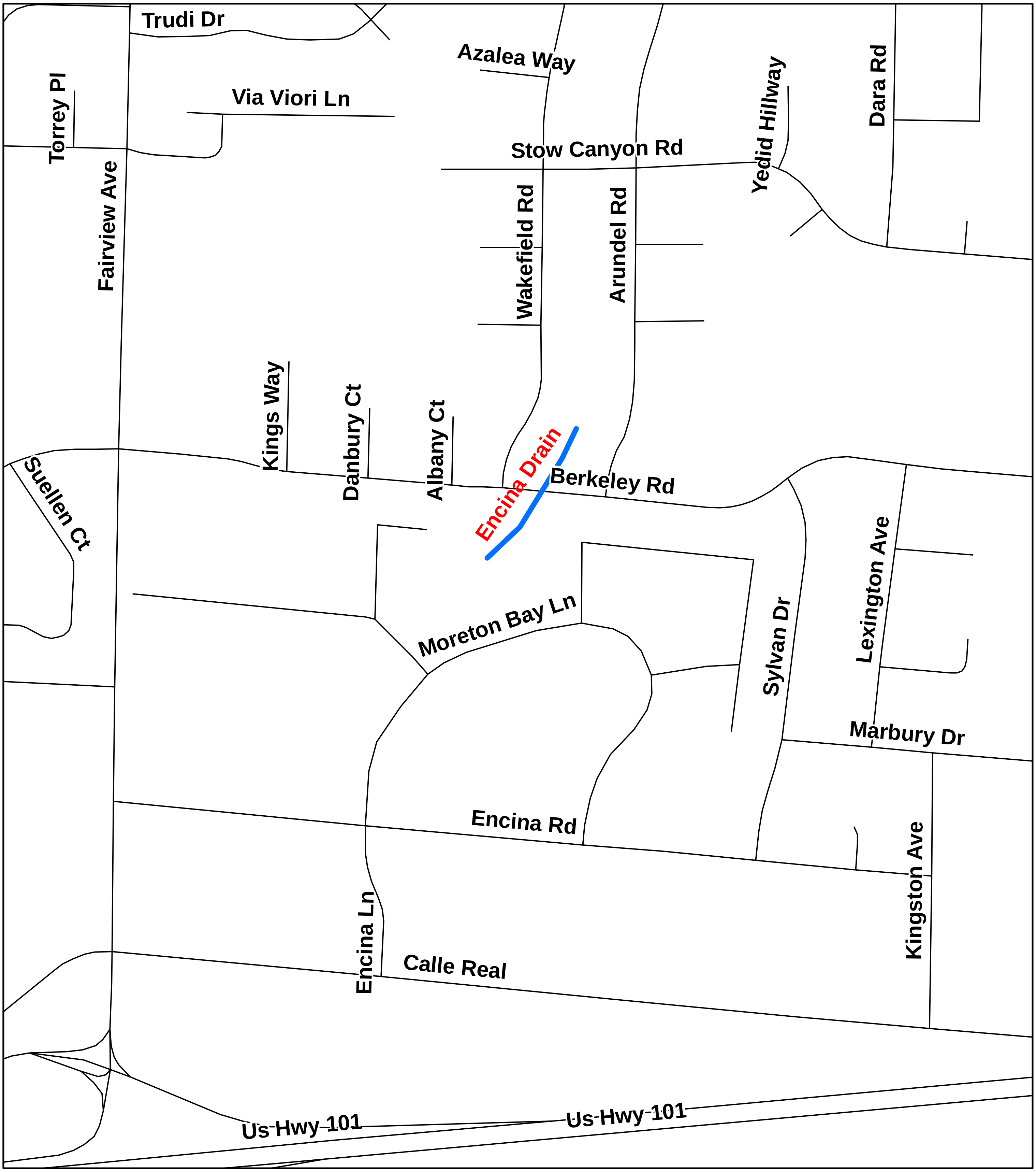
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department
of
Public Works
County
of
Santa Barbara

Encina Drain

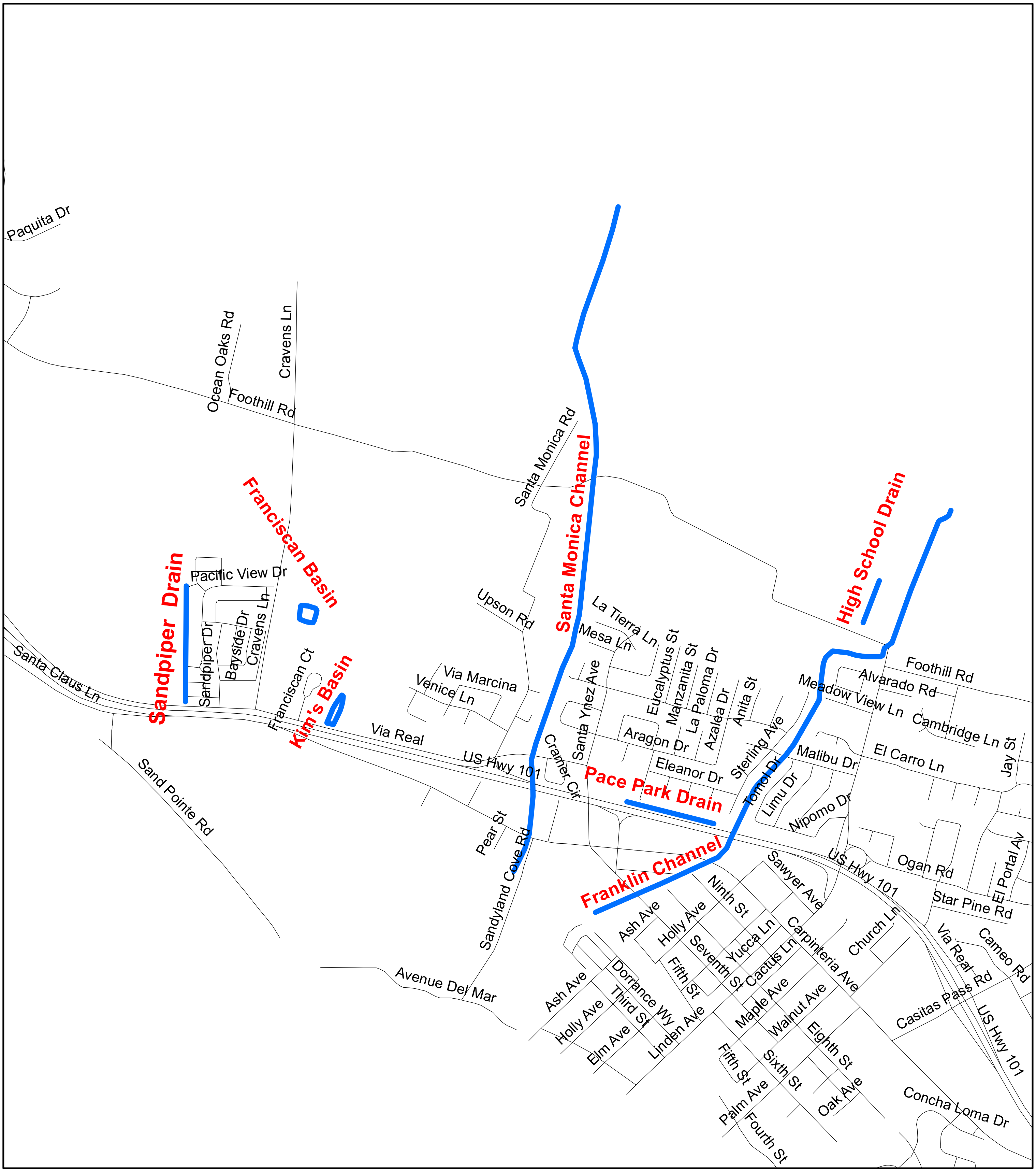
This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S
Feet
350 175 0 350
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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



Department of Public Works County of Santa Barbara

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

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

1,250 625 0 1,250

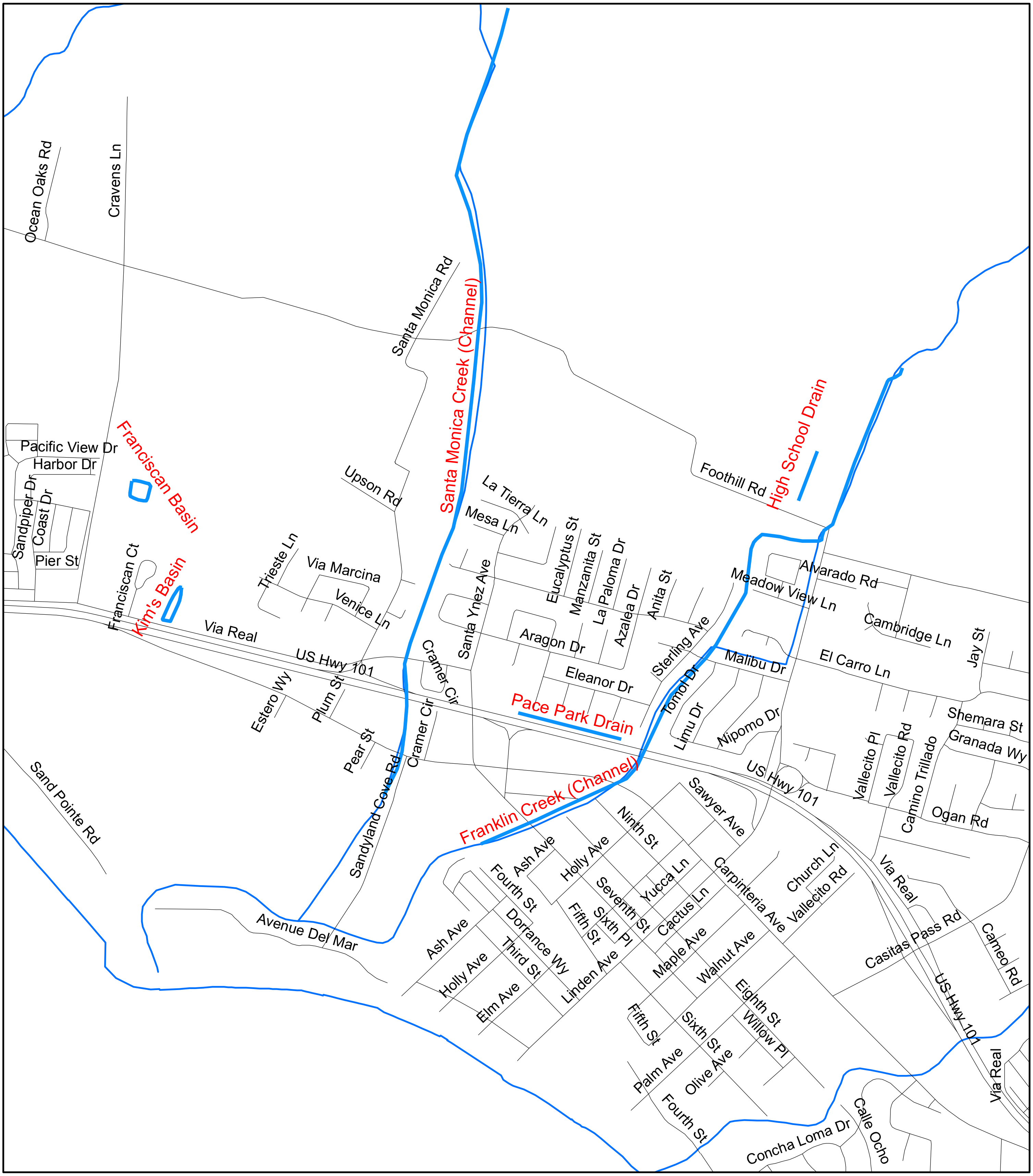
Coordinate System: State Plane California Zone V NAD 1983

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.



Department of Public Works County of Santa Barbara

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

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet 1,200 600 0 1,200

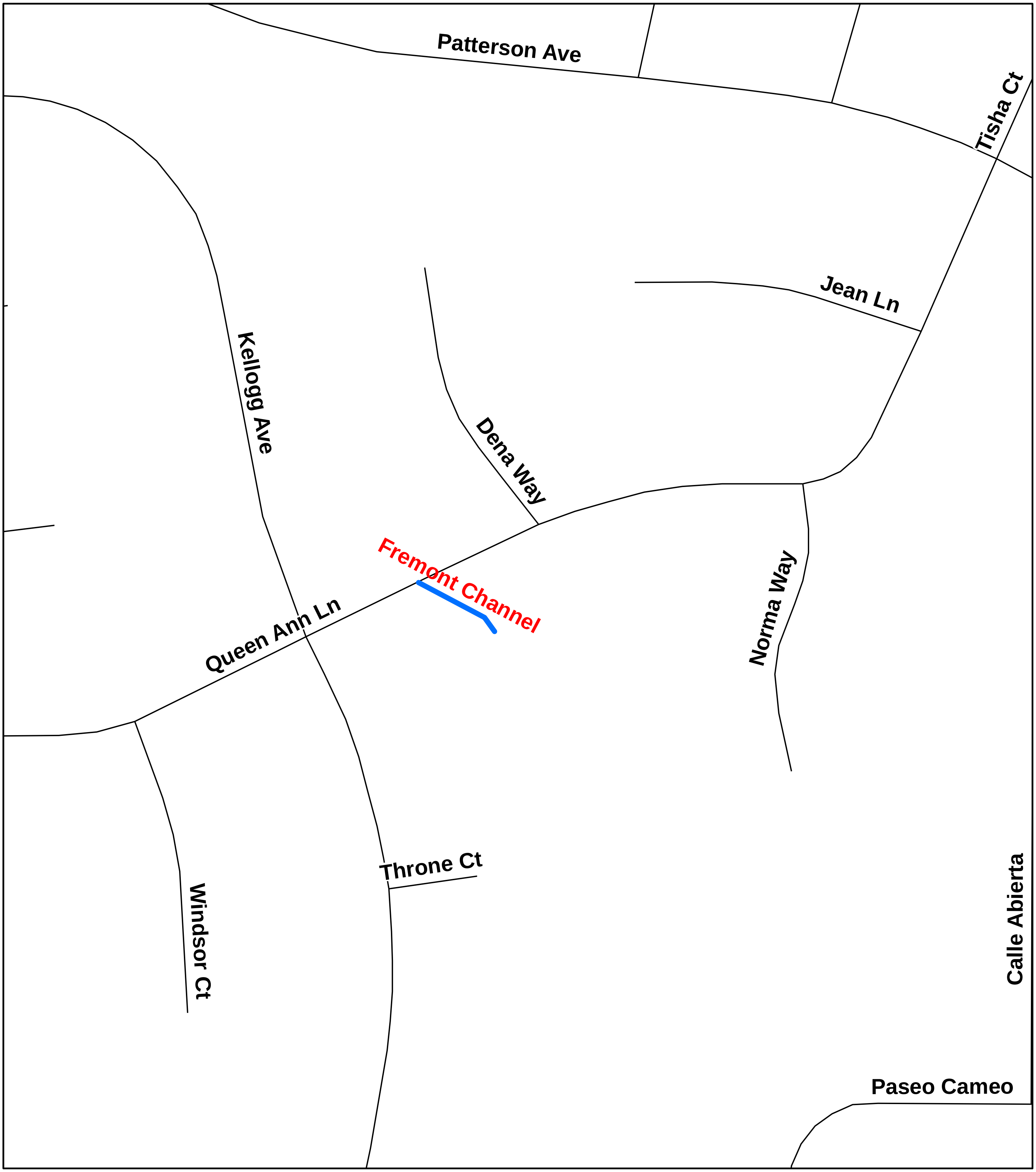
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department
of
Public Works
County
of
Santa Barbara

Fremont Channel

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S
Feet
150 75 0 150

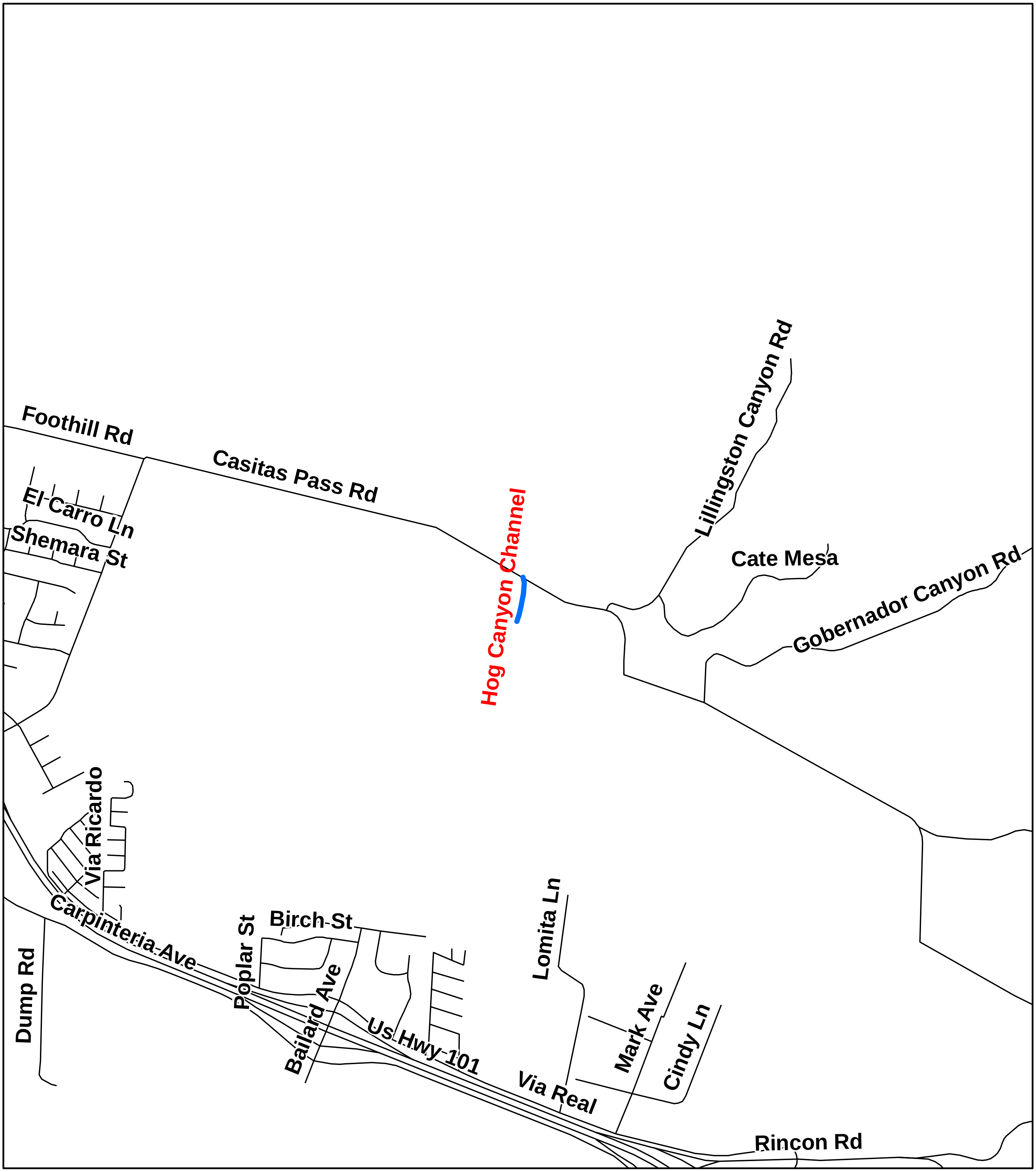
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department
of
Public Works
County
of
Santa Barbara

Hog Canyon Channel

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S
Feet
1,200 600 0 1,200

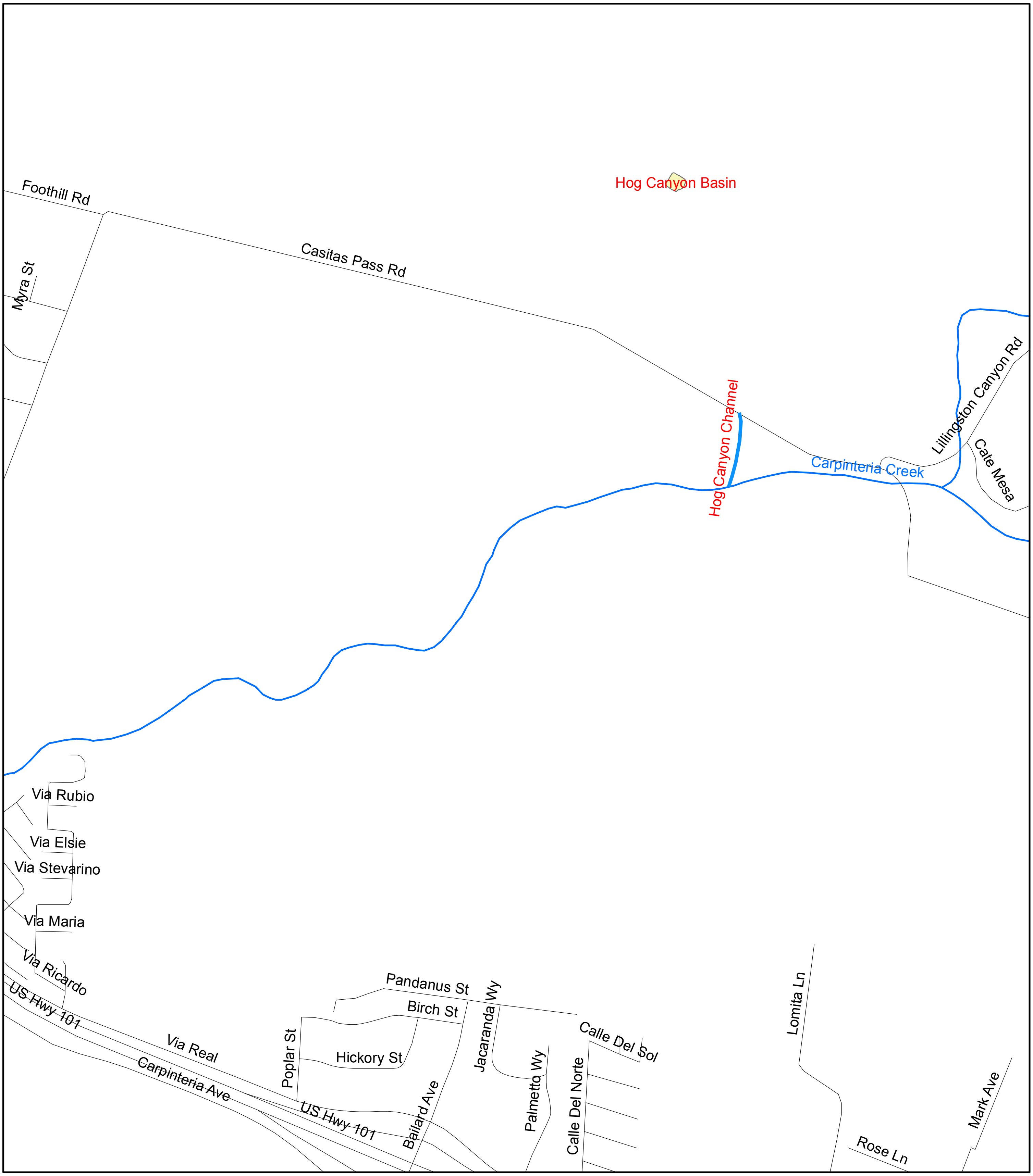
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Hog Canyon Channel
Hog Canyon Basin

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

750 375 0 750

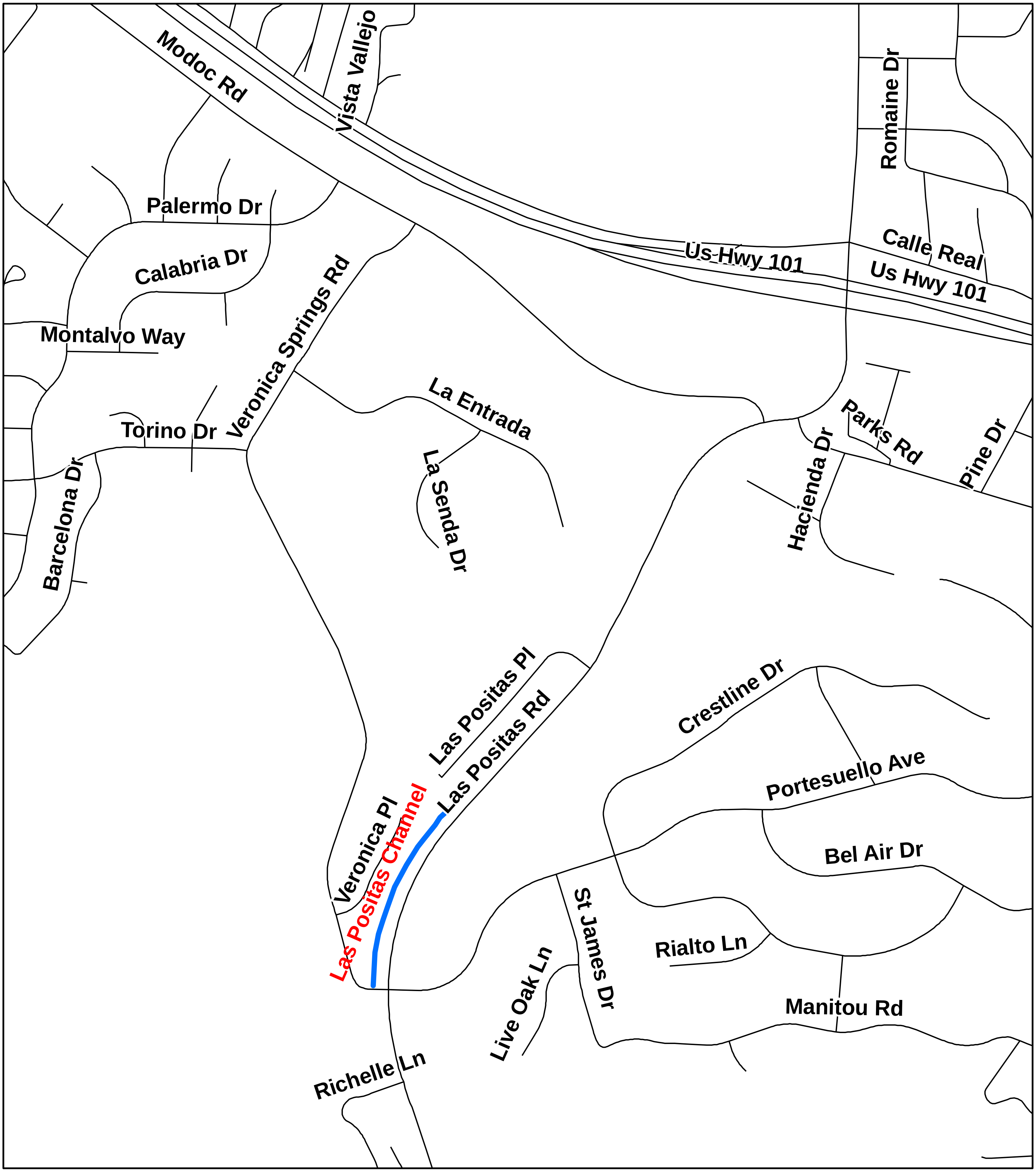
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Las Positas Channel

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

550 275 0 550

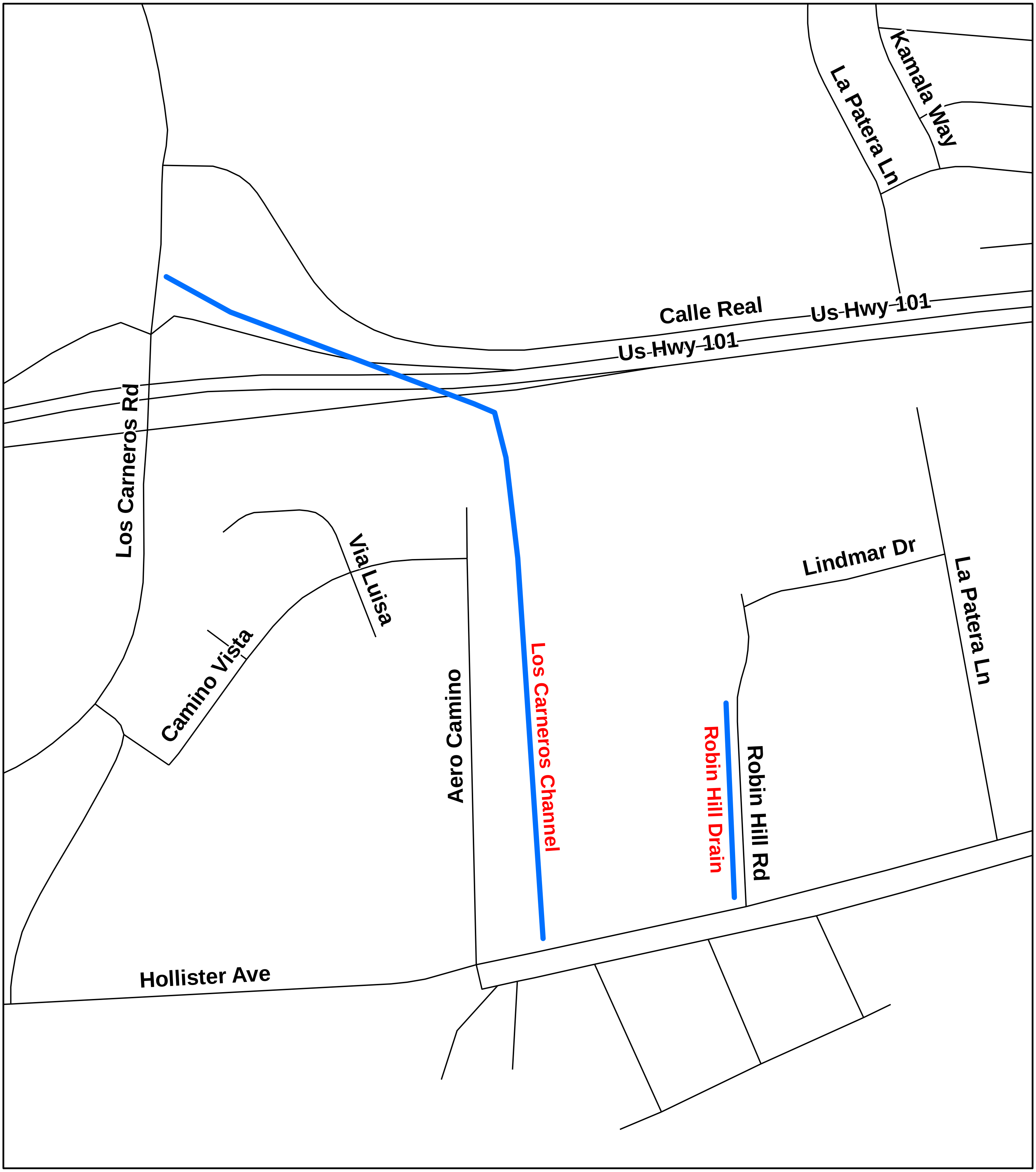
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department
of
Public Works
County
of
Santa Barbara

Los Carneros Channel
Robin Hill Drain

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

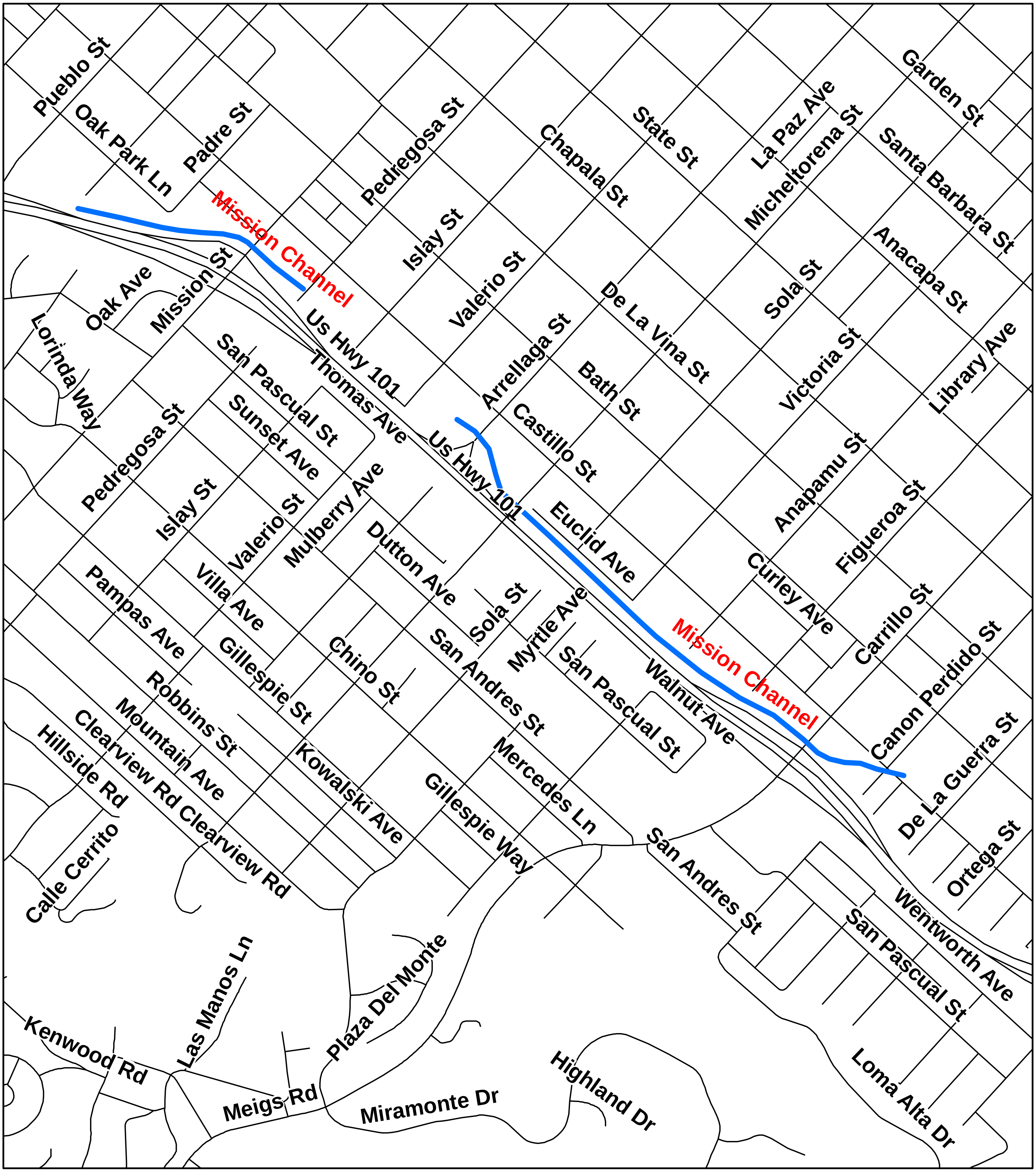
Feet
440 220 0 440

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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



Department of Public Works County of Santa Barbara

Mission Channel

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

730 365 0 730 Feet

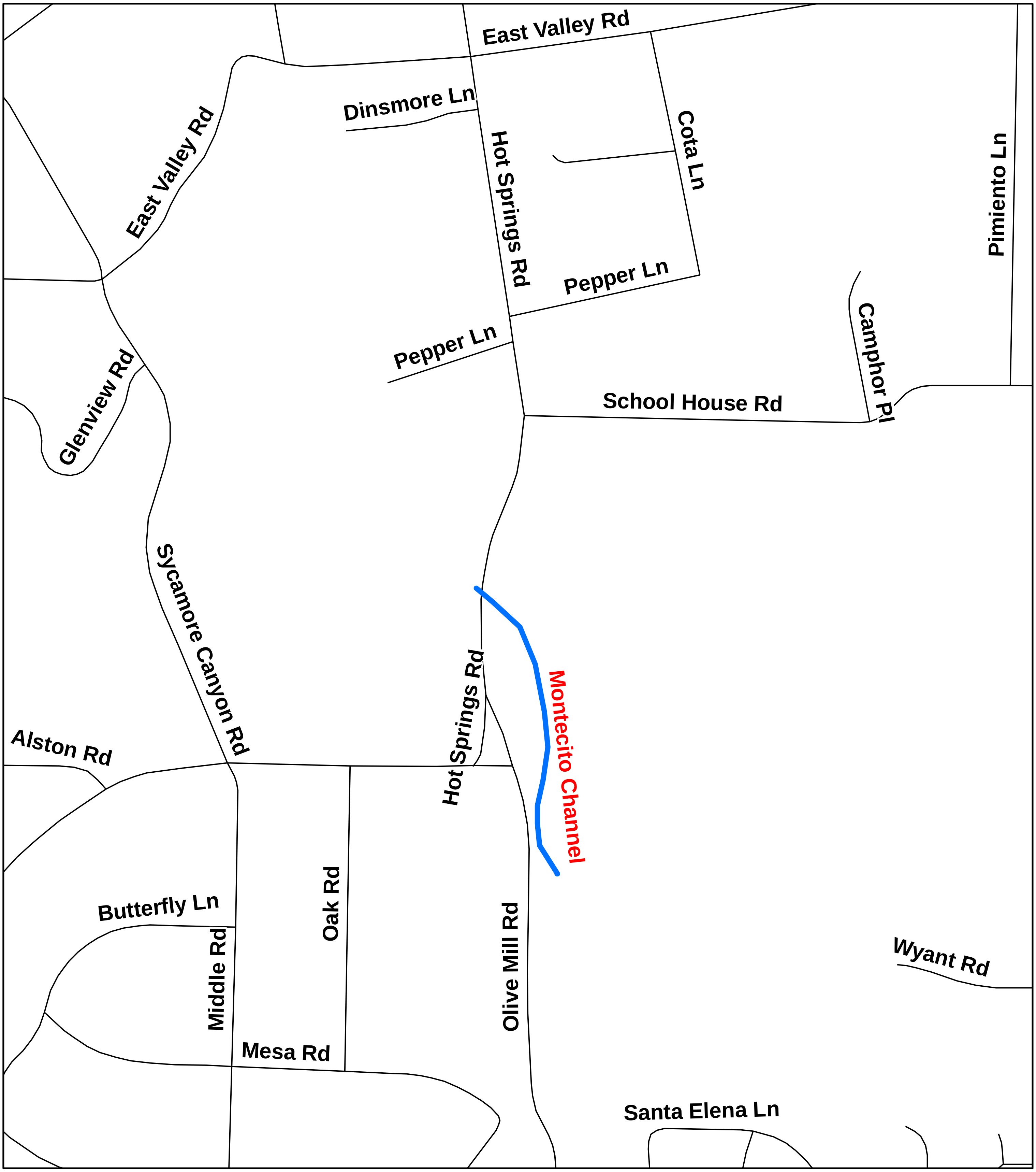
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Montecito Channel

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

390 195 0 390

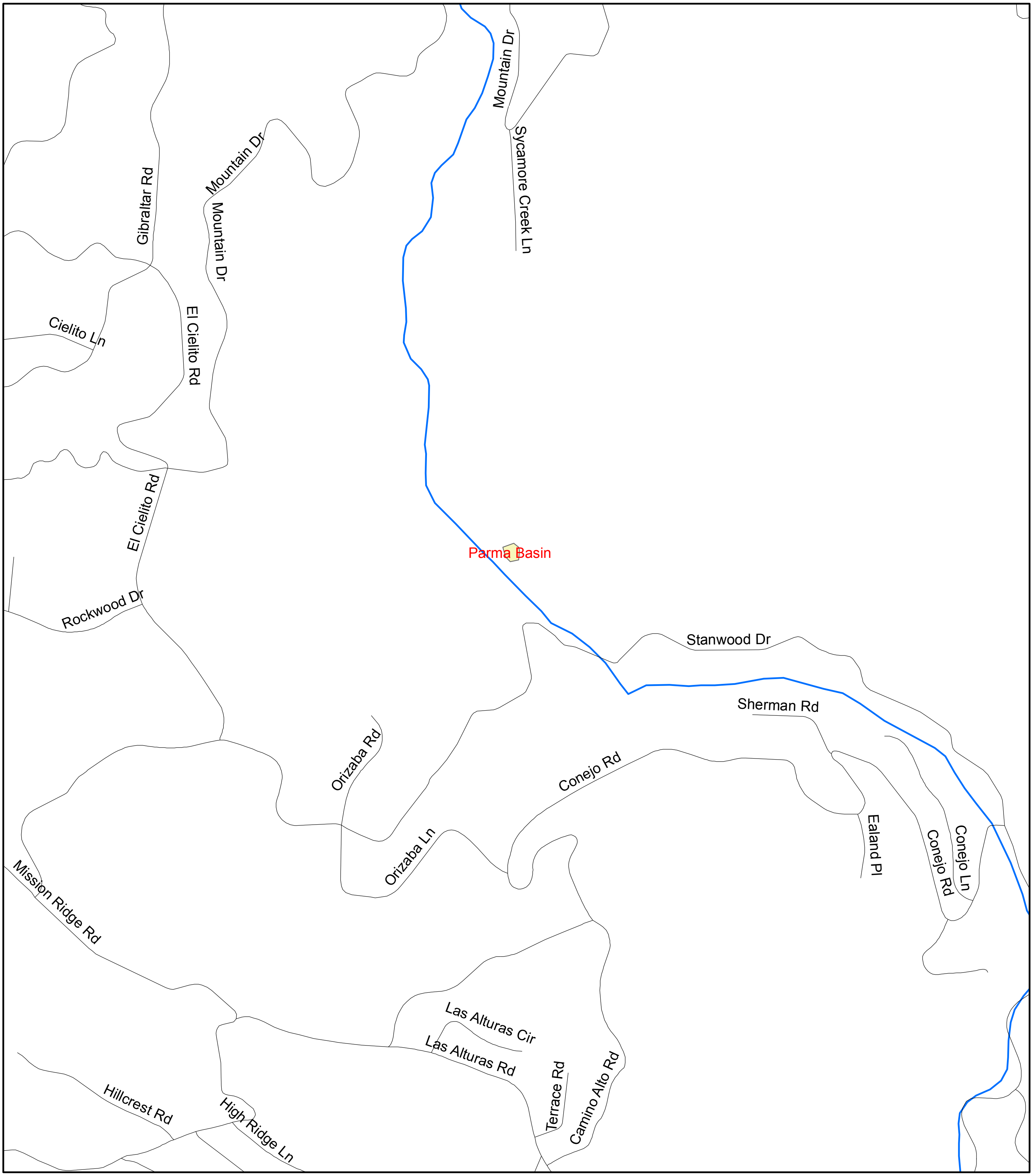
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

Parma Basin

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

580 290 0 580

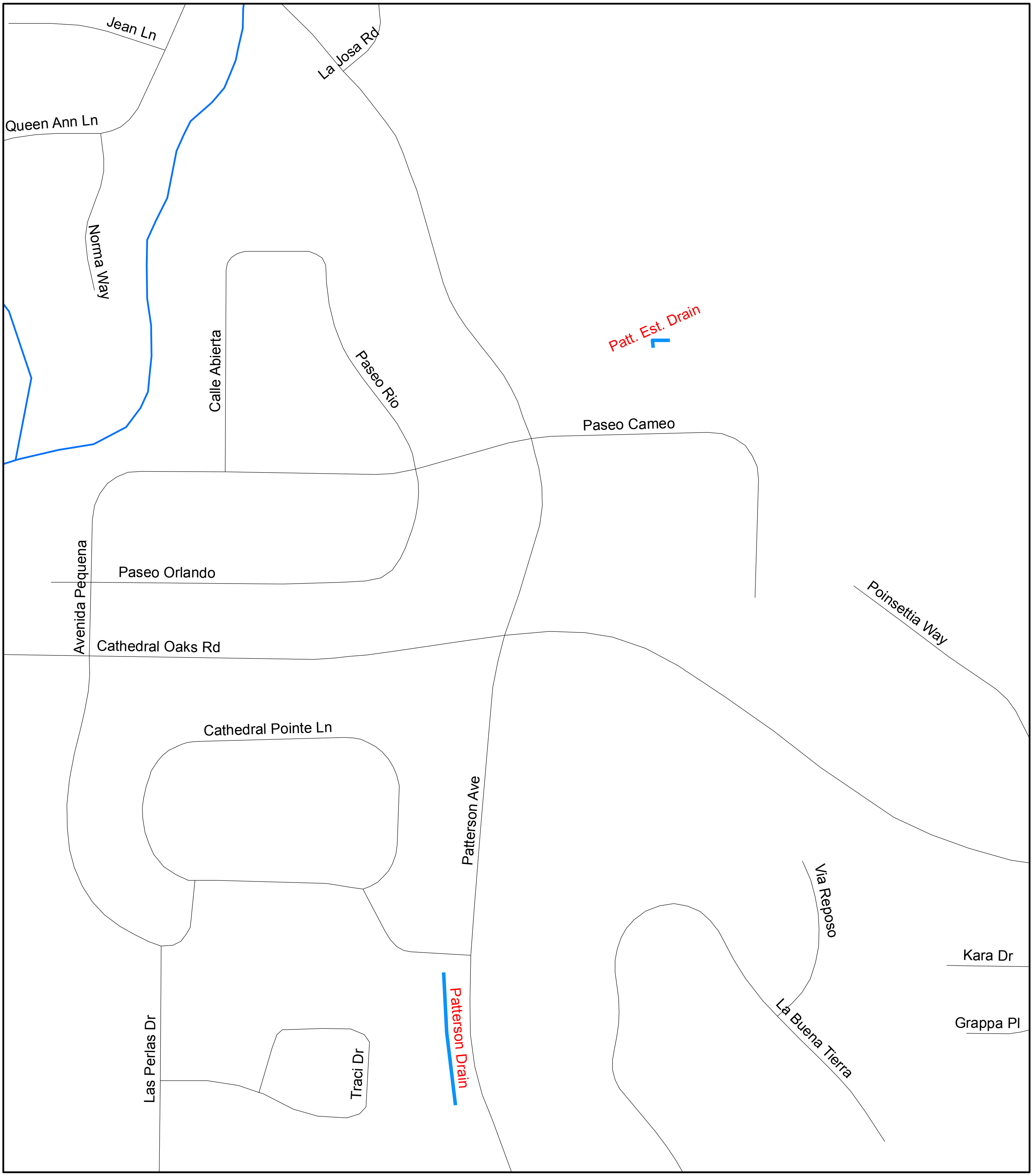
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department
of
Public Works
County
of
Santa Barbara

Patterson Drain
Patterson Estates Drain

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

Feet
300 150 0 300

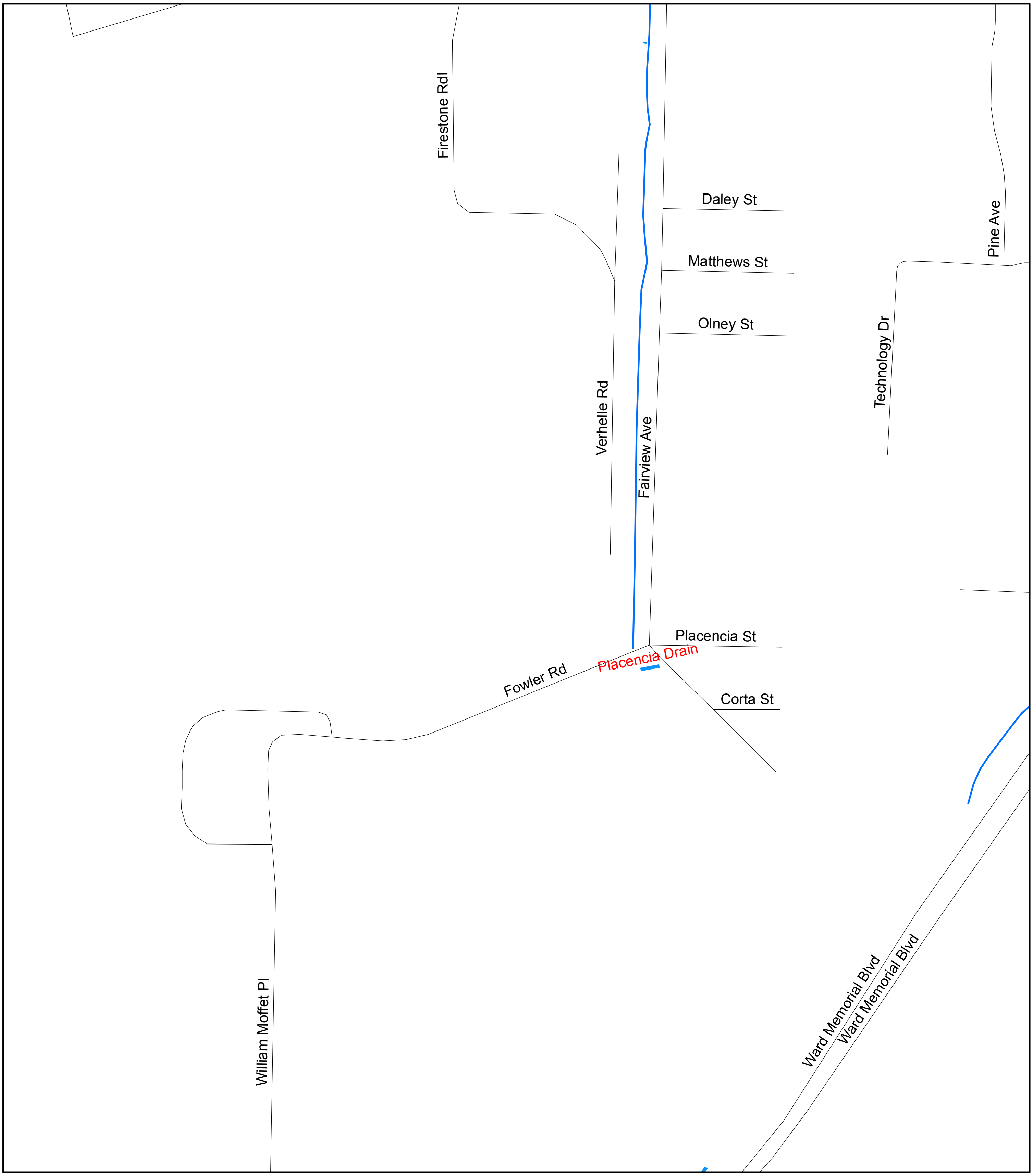
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department of Public Works County of Santa Barbara

Placencia Drain

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.

Feet 440 220 0 440

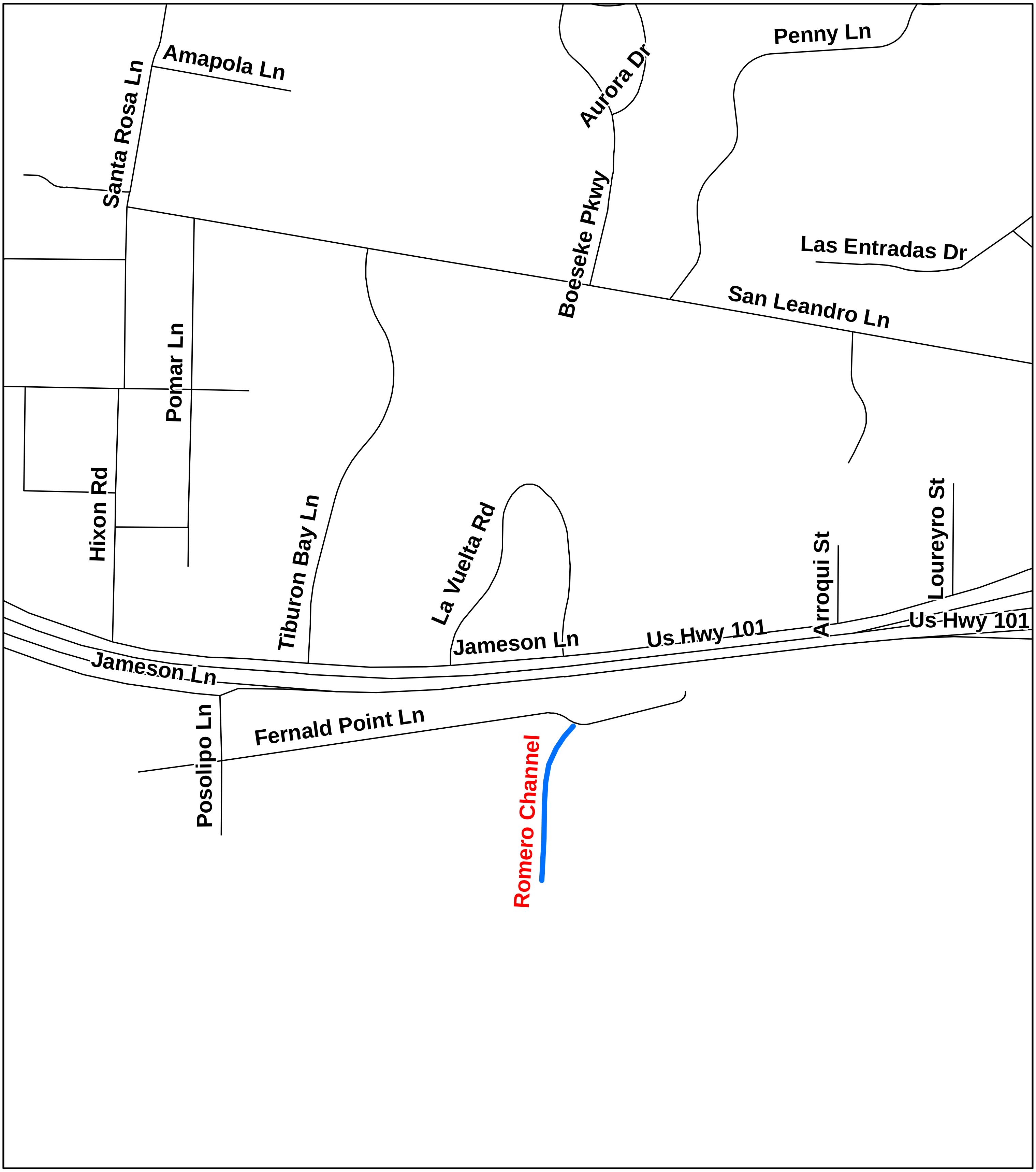
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department
of
Public Works
County
of
Santa Barbara

Romero Channel

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S

Feet
420 210 0 420

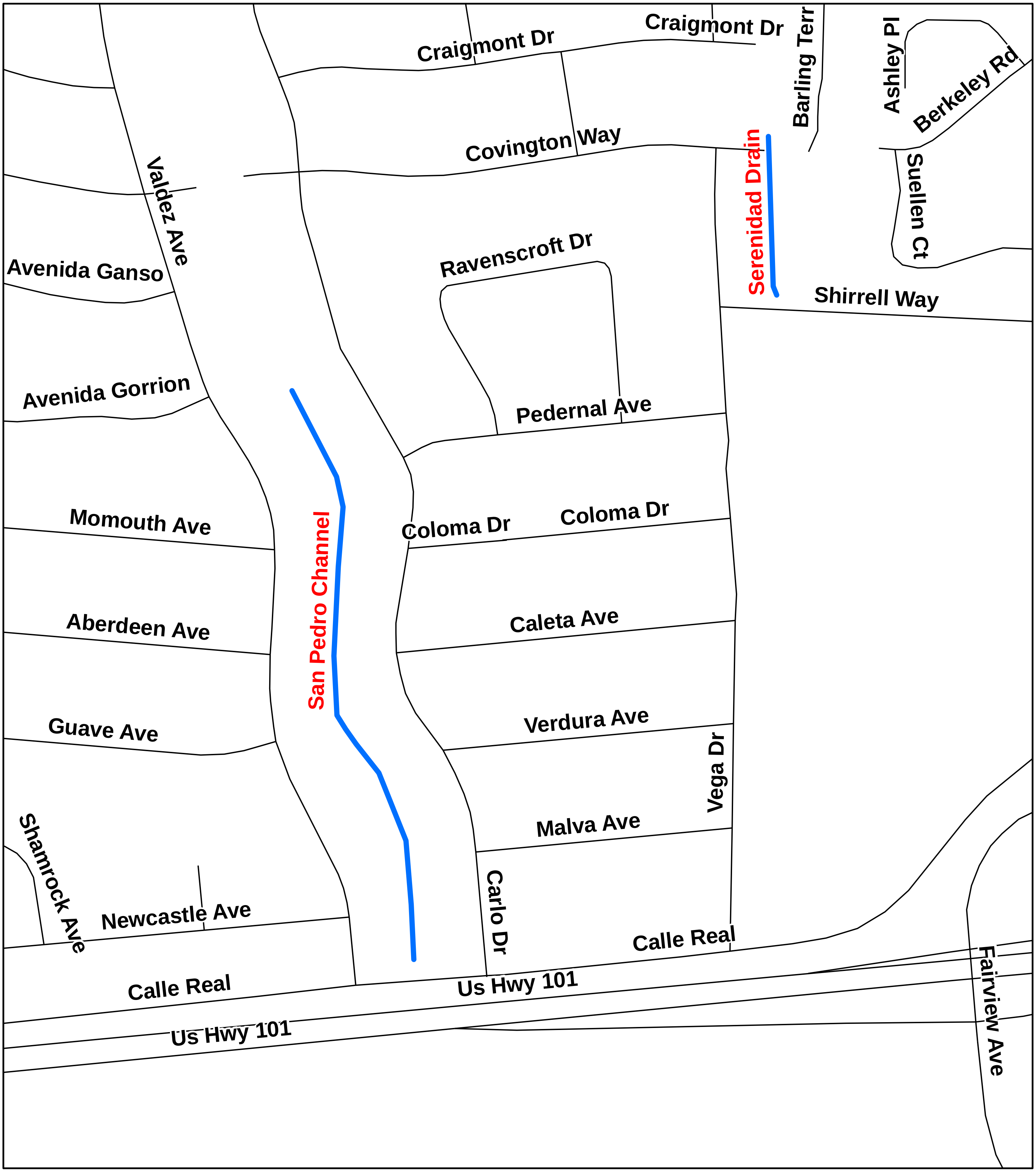
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

San Pedro Channel
Serenidad Drain

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

275 137.5 0 275
Feet

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.

Department of Public Works County of Santa Barbara

Shirrell Drain
Serenidad Drain

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

250 125 0 250

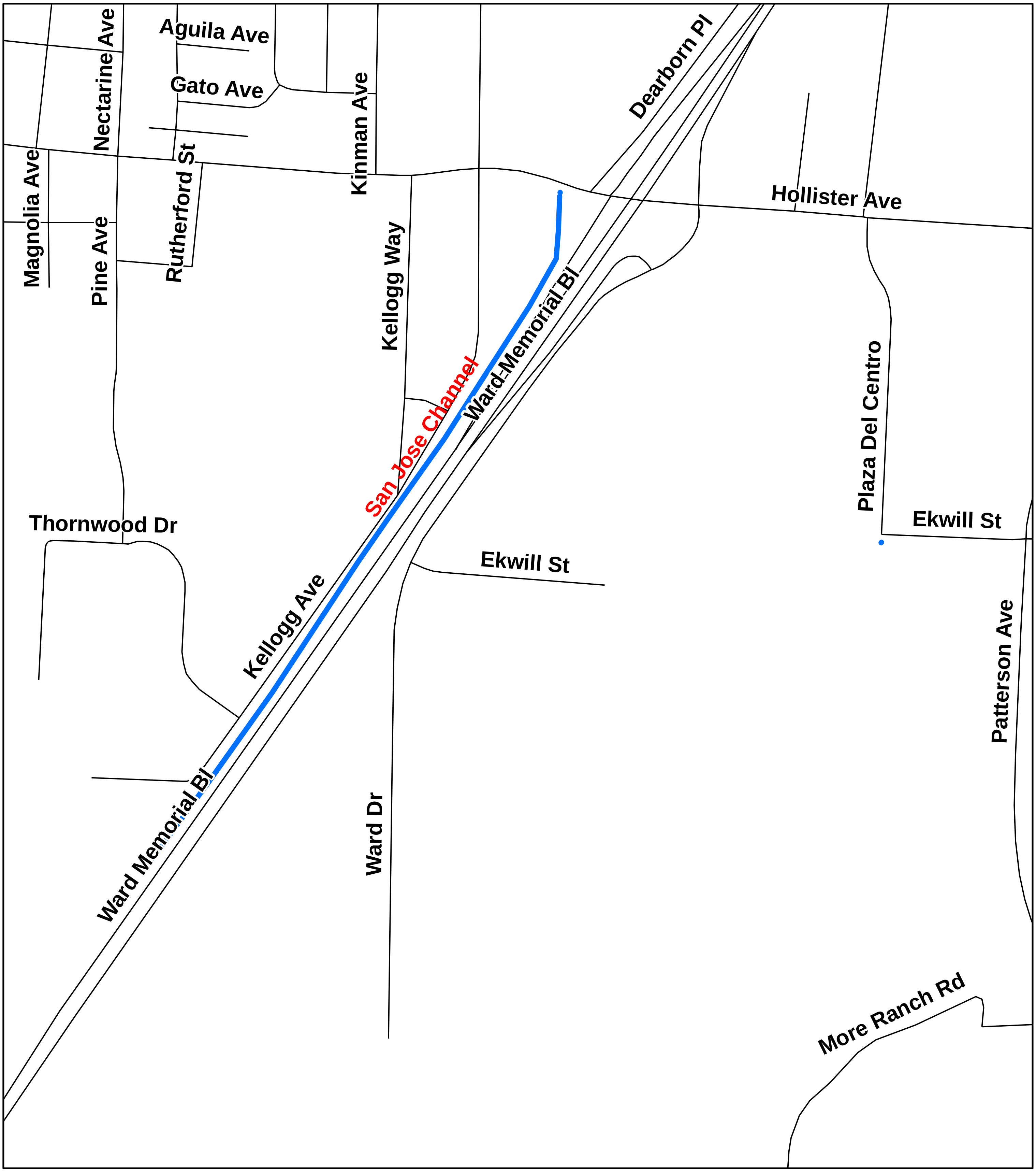
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.



Department
of
Public Works
County
of
Santa Barbara

San Jose Channel

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

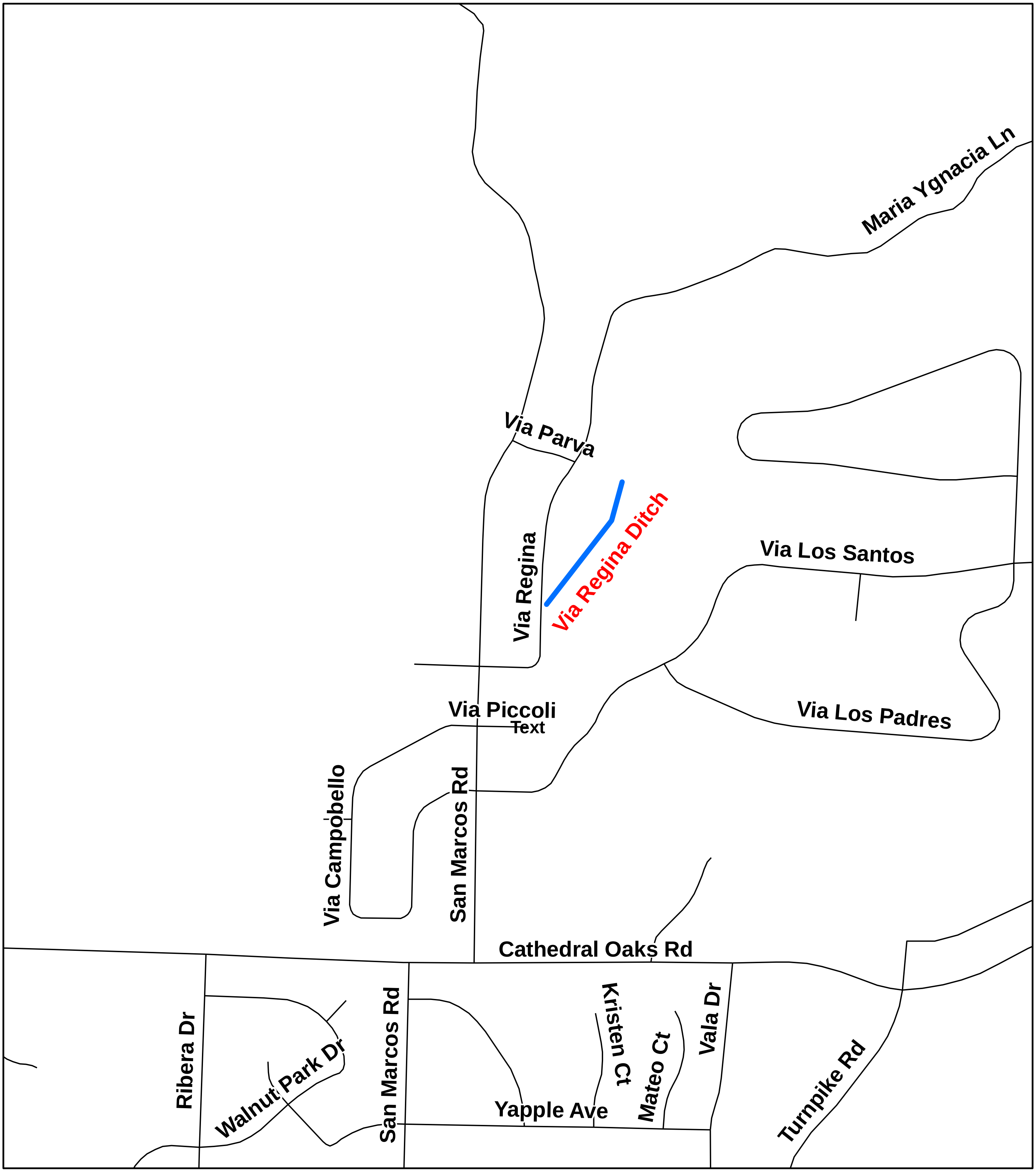
N
W E
S
Feet
550 275 0 550

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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



Department
of
Public Works
County
of
Santa Barbara

Via Regina Ditch

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N
W E
S
Feet
450 225 0 450

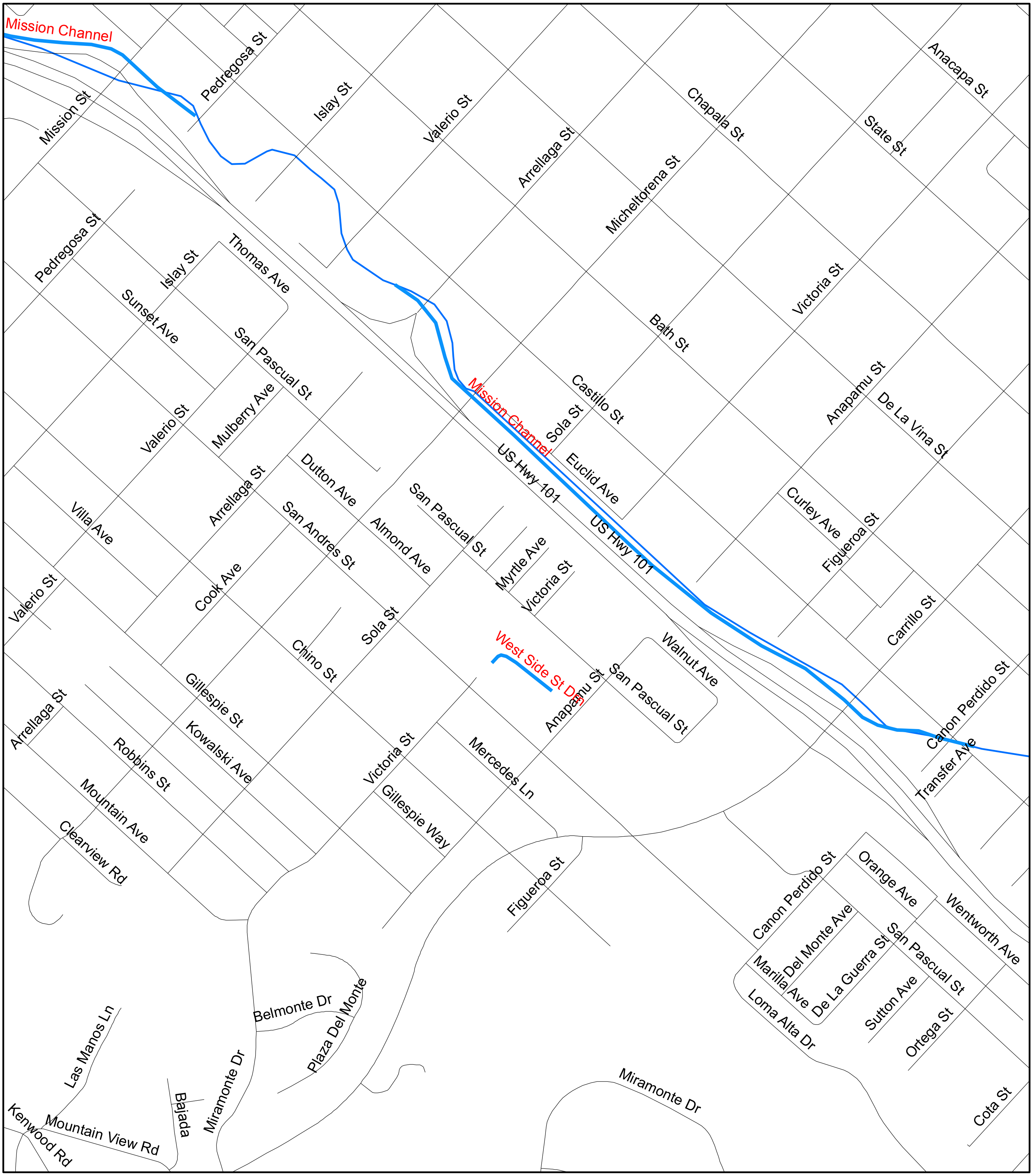
Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS in April 2011.



Department of Public Works County of Santa Barbara

West Side Storm Drain

PUBLIC WORKS ENTERPRISE GIS

This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. Santa Barbara County shall not be liable for any errors, omissions, or damages that result from inappropriate use of this document. No level of accuracy is claimed for the boundary lines shown hereon and lines should not be used to obtain coordinate values, bearings or distances.

N W E S

Feet

640 320 0 640

Coordinate System: State Plane California Zone V NAD 1983

Annual Routine Maintenance Plan

Santa Barbara County, California

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

Compiled by the Public Works Enterprise GIS.

Maintenance Description Summary

Maintenance Practices

Below is an explanation of typical Annual Plan maintenance practices for vegetation management and tabulation of impacts and compensatory mitigation. These explanations are provided here for reference and are not repeated in each corresponding creek description.

Maintenance tasks for each creek are identified by a “section number” and a maintenance task. Refer to the descriptions below for typical maintenance and mitigation requirements at each section. If a particular maintenance section in the Annual Plan requires more explanation, it will be stated as “Additional Info” within each creek addendum.

Down Trees/Limbs: Fallen trees and/or limbs that have accumulated within the bankful channel width are removed from the channel, cut into smaller pieces, and either hauled offsite or left within the riparian corridor for wildlife habitat and organic material along the upper banks.

Limbing: Low limbs and overhanging branches that project into the bankful channel and below a height of 6ft are trimmed to regain flow capacity. 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 cut the obstructive vegetation near the base. The vegetation will be removed with hand tools and a glyphosate herbicide registered for aquatic use may 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. The brushing area indicates the dimensions of the total area to be treated by brushing. The entire area is not typically uniformly vegetated, but rather has sporadic sprouts and clusters of vegetation within the perimeter. Brushing and spot spray is applied selectively to target only the obstructive sprouts and clusters within the larger work area.

Impacts and Mitigation: Impacts to native vegetation due to brushing or other live vegetation removal are tabulated for mitigation according to the Revegetation Plan. If a section includes brushing or removal of native vegetation, the associated mitigation quantity will be quantified in the associated table. For sites treated with brushing, the entire work area is not typically uniformly vegetated. The District calculates the total square footage of impacts to native vegetation within the work area using visual density estimates and the CNPS Relevé protocol.

Limbing trees and removal of down trees/limbs does not result in impacts to standing live vegetation, therefore the Annual Routine Maintenance Program does not mitigate for these tasks with riparian restoration. The Maintenance Program incorporates BMPs and other mitigation measures to reduce temporal impacts to a less than significant level.

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

Location:
The project begins at Del Prado Road and ends 250 feet upstream of Viborg Road in the Solvang area.

Setting:
Inspected on April 9, 2025.

Adobe Canyon Creek is a tributary to the Santa Ynez River which runs southward along Fredensborg Canyon and continues through Solvang. The upper reach is mostly a roadside ditch along a narrow suburban road, leading into a dense riparian/oak ravine running under several roads and bridges. The banks are well vegetated with mature coast live oak trees that are prone to dropping limbs. The understory is shaded and vegetated with a mix of native shrubs, weedy grasses, and oak sprouts.

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

Adobe Canyon Creek							
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Restoration Bank Credits Utilized*	Surplus Restoration (ft2)	Lg Tree Impacts	Tree mitigation installed
2004/2005	500	500	500		0		
2011/2012	70	0	0		-70		
2012/2013	50	0	0		-120		
2014/2015	50	0	0	170	0		
2017/2018	400	0	0	400	0	1 willow 6" DBH	
2019/2020	0	0	0	0	0		10:1 willows
2022/2023	50	0	0	50	0		
2025/2026	0	0	0	0	0		

*The District has undertaken a large bioswale/restoration project in Zanja De Cota watershed. The surplus square footage at this site is used to offset small impacts in the drainage network (Zaca, Zanja de Cota, and Adobe Creeks)

Engineering Analysis:

Obstructive vegetation impedes flows and adds to the debris load generated during high runoff. This drainage passes very close by several homes that are accessed by individual private bridges across the creek. This debris can plug these bridges and downstream culverts and cause flooding to adjacent properties. Additionally, since Adobe Creek generally has a narrow channel (approximately 4'-6'-wide through the residential areas), obstructive vegetation can direct flows against the banks and increase erosion and sedimentation. Removing obstructive vegetation and debris from the active channel can reduce the potential for flooding.

Project Description:

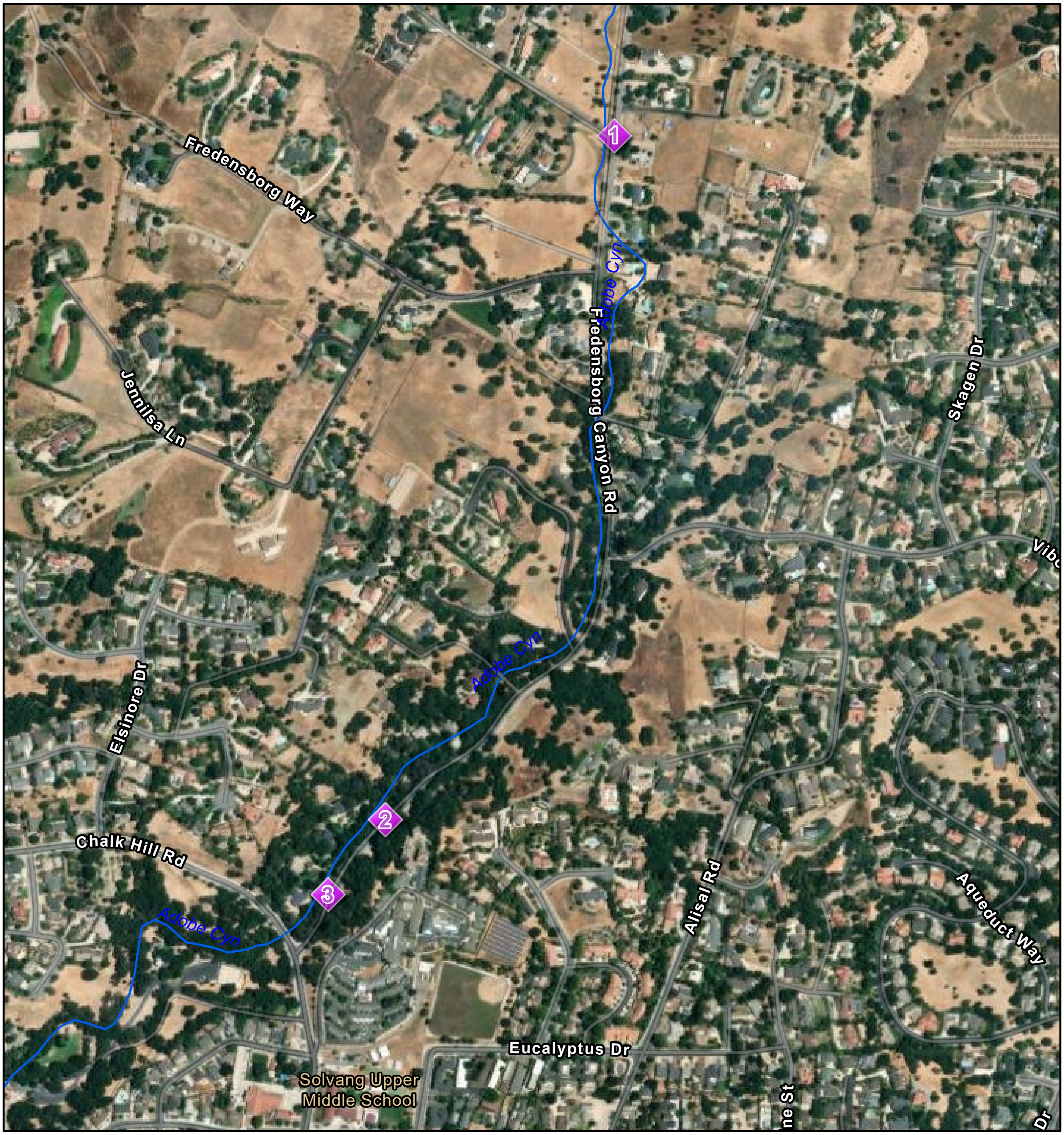
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (inches)	Length (feet)	Impacts to be Mitigated (ft2)	Additional Info
Section 1			x	willow, coyote bush				
Section 2	x			willow	3	10		
Section 3			x	palm				

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Adobe Canyon Creek



5/9/2025

Sites25

APCreeks

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community, Maxar

Section 1

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

Location:
The project begins at State Route 154 and terminates downstream of State Route 246 at the first road crossing in the City of Solvang.

Setting:
Inspected on March 27, 2025.

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 State Route 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. The creek had flowing water. The creek channel was mostly open under a dense willow canopy. Other characteristic tree species include sycamore and walnut. Based on the District's observations, downed trees 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 (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2002/2003	200	200	200	0
2004/2005	700	4,000	0	-700
2005/2006	700	3,000	3,000	1,600
2007/2008	1,650	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

Alamo Pintado Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2016/2017	0	0	0	4,850
2017/2018	20	0	0	4,830
2018/2019	0	0	0	4,830
2019/2020	0	0	0	4,830
2020/2021	50	50	0	4,780
2021/2022	0	0	0	4,780
2022/2023	30	0	0	4,750
2023/2024	0	0	0	4,750
2024/2025	0	0	0	4,750
2025/2026	150	0	0	4,600

Engineering Analysis:

There are many downed trees in various places along the channel. Several public and private bridges along the course of the creek 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:

The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

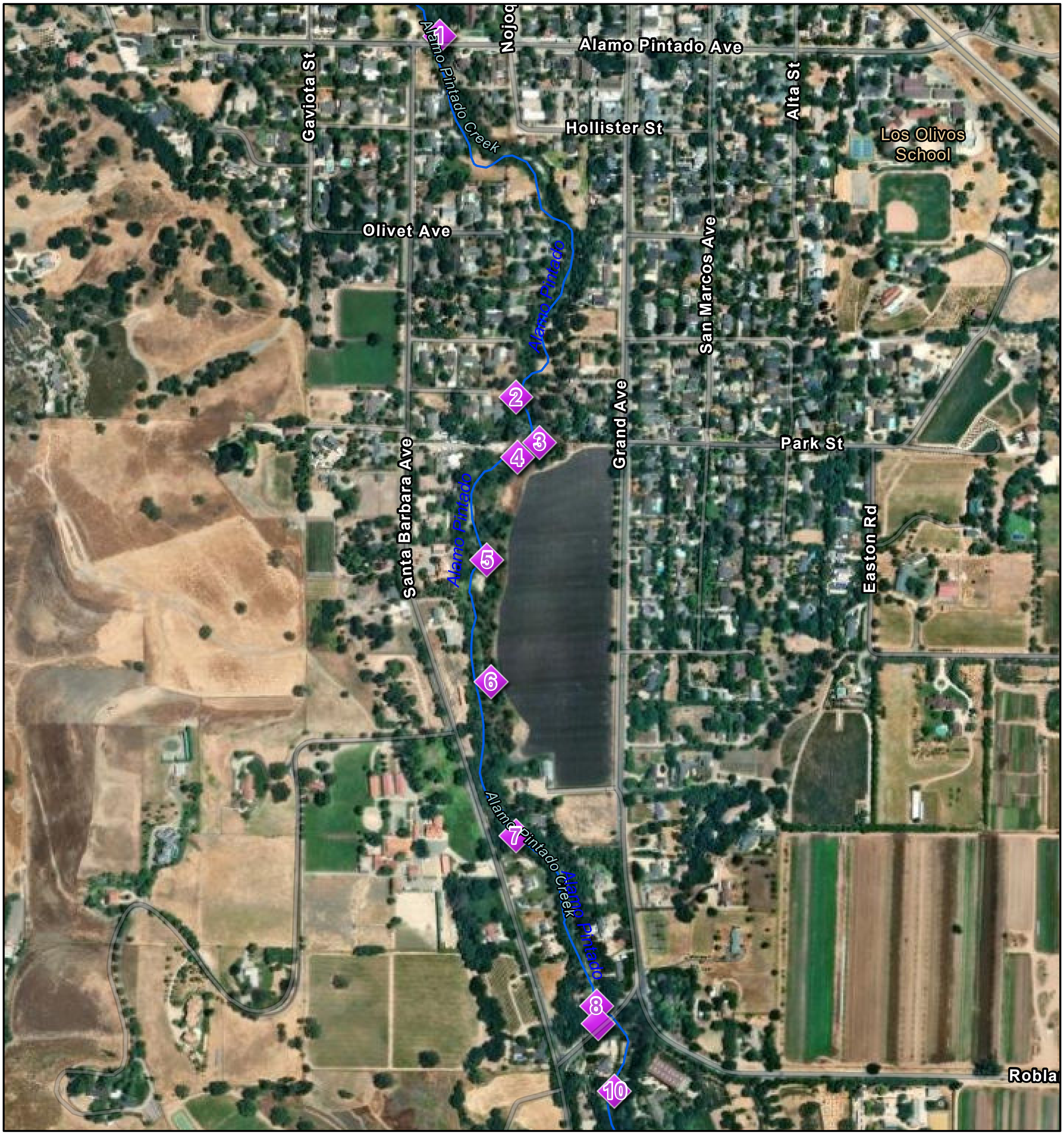
Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 1	x			willow				multiple branches
Section 2			x	willow				
Section 3	x			willow	5	12		
Section 4	x			willow	6	12		
Section 5	x			willow	4	15		
Section 6	x			willow	3	15		
Section 7			x	willow				
Section 8			x	willow				trim horizontal branch keep vertical shoots, also remove down willow
Section 9	x			willow				multiple branches and debris
Section 10			x	oak				

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 11		x		eucalyptus				
Section 12	x			oak				branch
Section 13		x		eucalyptus				
Section 14			x	willow				
Section 15	x			willow				multiple branches
Section 16		x		arundo				
Section 17	x		x	willow				branch
Section 18			x	arundo				
Section 19	x			willow	6	12		
Section 20			x	willow				
Section 21	x			willow				branch
Section 22	x			willow				multiple
Section 23	x			willow	16	8		
Section 24	x			willow				branch
Section 25	x			willow				branch
Section 26	x			willow				branch
Section 27		175x3		willow			100	
Section 28		20x8		willow			prior mitigation	
Section 29		15x5		willow			20	
Section 30		10x3		willow			10	
Section 31			x	willow				
Section 32		100x10		willow			20	

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Alamo Pintado Creek - A



5/9/2025

Sites25

APCreeks

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Alamo Pintado Creek - B

5/9/2025

Sites25

APCreeks

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Alamo Pintado Creek - C

5/9/2025

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sites25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Alamo Pintado Creek - D

5/9/2025

Sites25

APCreeks

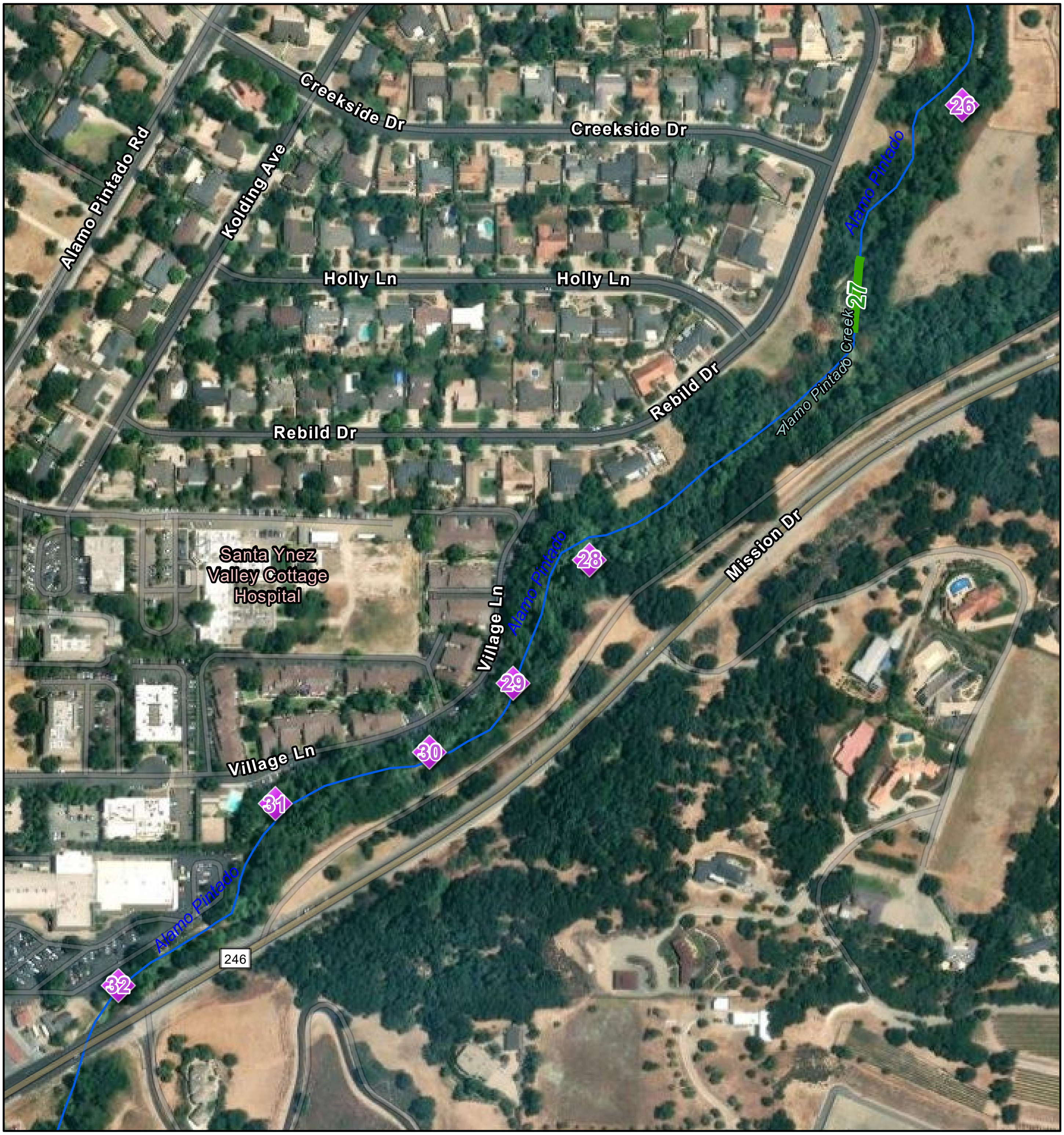
1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Alamo Pintado Creek - E



5/9/2025

1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sites25

Lengths25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 5

Section 8

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

Location:

Bradley Canyon Channel is located approximately 3.5 miles east of Santa Maria. The project begins near the intersection of Foxen Canyon Road and Dominion Road and extends to the confluence with Santa Maria River.

Setting:

Inspected on March 25, 2025.

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

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

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

Revegetation:

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

Bradley Canyon Channel				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2004/2005	2,000	2,000	2,000	0
2005/2006	500	500	500	0
2006/2007	0	0	0	0
2007/2008	1,000	42,688	42,688	41,688
2008/2009	14,800	14,800	0	26,888
2009/2010	0	0	0	26,888
2010/2011	0	0	0	26,888
2011/2012	0	0	0	26,888
2012/2013	0	0	0	26,888
2013/2014	0	0	0	26,888
2015/2016	210	0	0	26,678
2016/2017	100	0	0	26,578
2017/2018	1,200	0	0	25,378
2019/2020	2,000	2,000	0	23,378
2020/2021	1,750	0	0	21,628
2021/2022	0	0	0	21,628
2022/2023	0	0	0	21,628
2023/2024	0	0	0	21,628
2024/2025	0	0	0	21,628
2025/2026	0	0	0	21,628

Wildlife Survey:

As described in the project description, maintenance will involve using equipment to excavate and move sediment in the channel. This type of maintenance has the potential to impact wildlife, particularly the California red-legged frog (RLF).

RLF individuals of various age classes have been detected in segments of Bradley Canyon Channel since 2004. The District assumes that RLF may be present and implements mitigation measures and best management practices to protect the species. The District has developed a management strategy and special conditions through a Biological Opinion issued by the US Fish and Wildlife Service.

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

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

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

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

Engineering Analysis:

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

Project Description:

Section 1:

Bradley Canyon is typically maintained with a narrow trench installed in the center of the wider channel to allow low-flows to drain through to the Santa Maria River. This center trench periodically becomes colonized with weedy vegetation, which traps sediment and impedes drainage.

The work area is defined as an approximately 3,000-foot long reach of the low flow channel, within which there are patchy accumulations of sediment and weedy vegetation. Using an excavator staged on the adjacent dry terrace, the District crew will desilt obstructive sediment where needed to return the low flow channel to approximately 3 feet deep and 8 feet wide. Material will be deposited behind the excavator on the flat terrace and once dry, groomed back into the existing soil. The work area is partially vegetated with a blend of non-native grasses, wild radish, and curly dock. There are no trees or riparian canopy that would be affected. The District crew will spot-treat with a registered approved product approximately every 4-6 weeks during the maintenance season. Follow-up spring/summer treatments will be made as necessary to retain the center trench. A buffer of vegetation will be left along the edge of the channel for wildlife habitat and to help the channel retain the shape of its banks.

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Bradley Canyon Channel

5/9/2025

Lengths25

APCreeks

1:18,261

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 1

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

Location:
The proposed project is the short portion of Cat Canyon Creek that flows through the town of Sisquoc between Foxen Canyon Road and ~200 feet downstream of Depot Street.

Setting:
Inspected on March 25, 2025.

Cat Canyon Creek originates in the Solomon Hills to the south of the town of Sisquoc and flows to the Sisquoc River just south of the town. Cat Canyon Creek is a relatively shallow dry drainage that only flows for a short time after a rain event. Due to its dry regime, the creek banks are not vegetated with typical riparian vegetation but are instead vegetated with more drought tolerant species such as grasses, coyote bush, goldenbush, tree tobacco and an occasional willow. As the drainage flows through the town of Sisquoc, it deepens and contains both native and non-native species, with the predominance in the non-native category. This reach is most likely an important wildlife movement corridor between the Sisquoc River and the Solomon Hills.

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.

Cat 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
2010/2011	0	0	0	0
2013/2014	0	0	0	0
2022/2023	100	0	0	-100
2025/2026	0	0	0	-100

Engineering Analysis:
Obstruction of the active channel by vegetation causes several problems in creeks such as Cat Canyon. First, the vegetation reduces capacity of the channel which increases flood risks to surrounding areas. Second, many creeks like Cat Canyon can sustain severe erosion from flood flows redirected to the banks when the active channel has become obstructed. This erosion also can create additional flood hazards downstream as ultimately the eroded material will deposit in a lower reach of the creek thereby causing additional flood hazards due to reduced channel capacity in downstream reaches.

Project Description:

The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (inches)	Length (feet)	Impacts to be Mitigated (ft2)	Additional Info
Section 1		15x5	x	mulefat, sandbar willow			prior	
Section 2			x	mulefat				

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Cat Canyon

5/9/2025

Sites25

APCreeks

1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 1

Section 2

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

Location:
The project begins where Corralitos Canyon enters an agricultural ditch near State Route 1 and continues downstream 2,400 feet to the confluence with Orcutt/Solomon Creek.

Setting:
Inspected on April 1, 2025.

Corralitos Creek originates in the Casmalia Hills and drains a 2,800-acre watershed. The creek flows through agricultural fields and undeveloped land in the Santa Maria Valley, joining Orcutt Solomon Creek west of State Route 1.

Near the beginning of the maintenance area, the creek is very similar to an agriculture tailwater ditch that flows only when the landowner irrigates or during storms. The streambed is mostly bare sandy substrate with sprouts of tree tobacco, hemlock, mustard, annual grasses, and willow saplings along the banks.

Further downstream in the maintenance reach, the west bank is well vegetated with willows and a healthy understory of blackberry and weeds such as poison hemlock and fennel while the east bank is well vegetated mostly with weedy, non-native, annual species and only an occasional willow.

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.

On Corralitos Creek, maintenance since the 2002/2003 Annual Routine Maintenance Plan (including this year's plan) has not resulted in the complete removal of native vegetation but rather the trimming of overhanging limbs and desilting within the dry channel that is not vegetated with native vegetation. In 2007, a 6,000 square foot restoration site was implemented as replacement for a damaged mitigation site on Orcutt/Solomon Creek in 2006, and is not credited as surplus for the Corralitos watershed. This site was subsequently re-planted with additional willows in 2010, heavy rains in March 2011 damaged some of the plantings. Maintenance and plant replacement resulted in success at one half of the site, therefore 3,000 square feet of mitigation was tabulated for Orcutt/Solomon Creek.

Corralitos Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2006/2007	0	6,000	6,000	0
2007/2008	0	0	0	0
2008/2009	0	0	0	0
2010/2011	0	0	0	0
2011/2012	0	0	0	0
2014/2015	0	0	0	0
2017/2018	0	0	0	0
2019/2020	0	0	0	0
2023/2024	0	0	0	0
2025/2026	0	0	0	0

Wildlife Survey:

As described in the project description, maintenance within Section 1 will require limbing. The project area is within potential RLF habitat. The work area will be dry during the maintenance season and the District Biologist will monitor for RLF and other species that may be present near the confluence with Orcutt/Solomon Creek.

Engineering Analysis:

Corralitos Creek has a relatively high gradient as it flows out of the Casmalia Hills. As the creek reaches the valley floor, the bed slope flattens significantly.

The capacity of Corralitos Creek immediately upstream of the confluence with Orcutt/Solomon Creek has been reduced due to low gradient and sedimentation. The streambed is in a leveed section and is higher than the farm fields to the east. In previous years, stream flows have broken out of the channel and flooded adjacent areas. The channel capacity periodically needs to be restored to reduce the frequency of flooding the adjacent properties. Accumulated sediment will be removed from the main channel at to provide conveyance of flood waters as well as reduce the debris load which can form debris plugs, block flows, increase water surface elevation and lead to erosion.

Project Description:

The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section 1:

Willow and coyote brush are obstructing the channel and will be limbed to ensure that flows can reach Orcutt/Solomon Creek downstream.

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program

EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Corralitos Canyon

5/9/2025

Lengths25

APCreeks

1:18,261

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

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

Location:
The project is located north of the City of Lompoc between the communities of Vandenberg Village and Mission Hills immediately north of Highway 1, approximately 0.8 miles from the intersection of Highway 1 and Purisima Road.

Setting:
Inspected on March 20, 2025.

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 and leased to the California Department of Fish and Wildlife. This drainage is a tributary to Santa Ynez River; however, development and agriculture downstream of Highway 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 Highway 1 and downstream of Highway 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 a paved access road leading to VVCSD facilities. Between the west side of the creek and Highway 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-feet to 12-feet 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.

Davis Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2017/2018	4,800	6,000	16,300	11,500
2018/2019	600	0	0	10,900
2019/2020	0	0	0	10,900
2020/2021	0	0	0	10,900
2022/2023	1,000	0	0	9,900
2025/2026	0	0	-	9,900

Wildlife Survey:
A biological assessment was completed in 2016, including protocol level surveys for California red-legged frog (RLF), by the consulting firm Althouse and Meade. No sensitive animal or plant species were found within the maintenance areas. The potential exists for RLF to be present near the site, as the habitat is considered suitable for this species. The work area will be assessed prior to maintenance to 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 7,400 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.

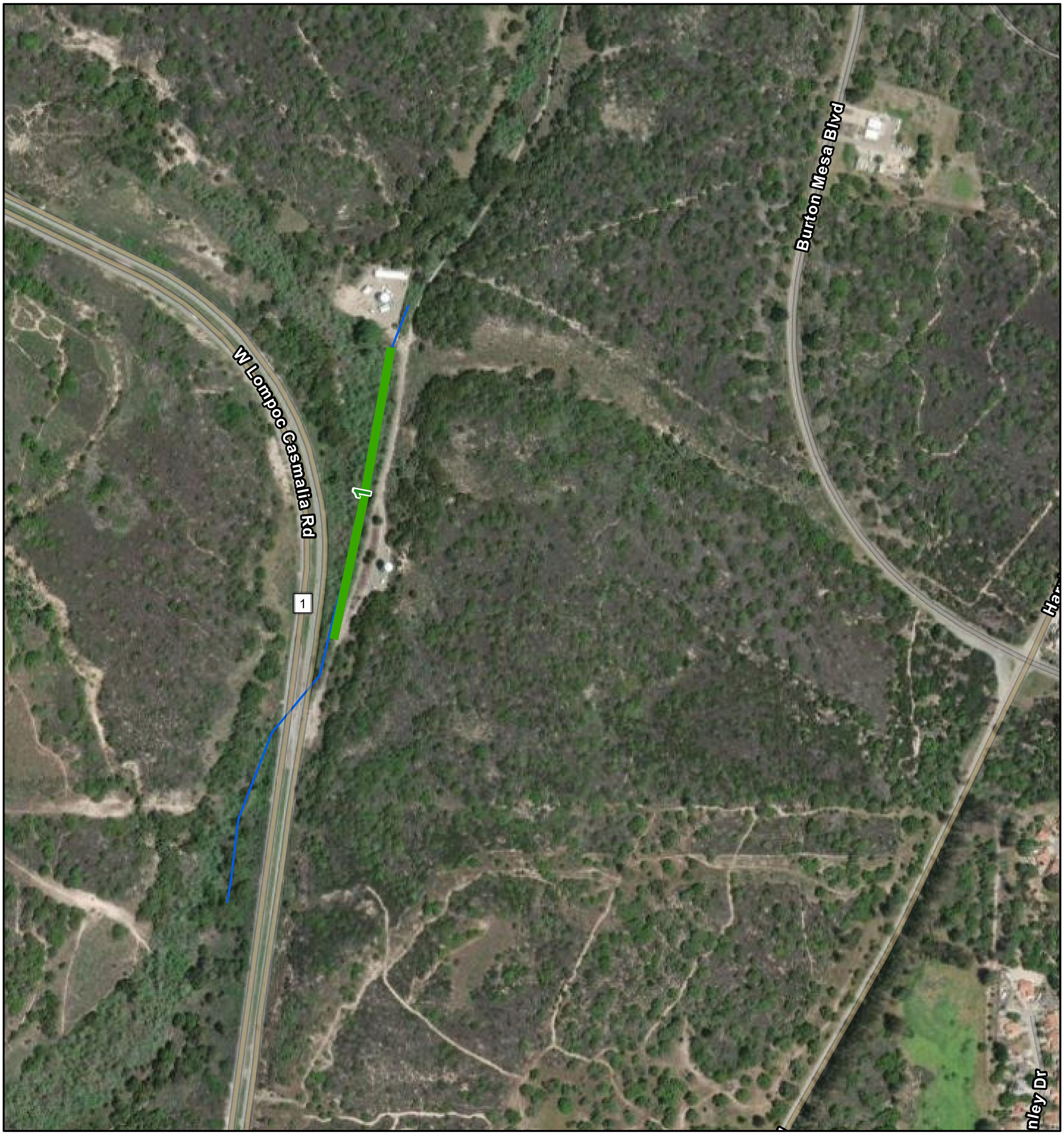
Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section 1:
Section 1 involves approximately 1,300 linear feet of the channel upstream from the Highway 1 culvert. This area has a braided drainage channel with a narrow but mature willow riparian corridor. The aging willow trees periodically drop limbs and trunks into the center channel.

Using chain saws and hand tools, the crew will cut downed trees, limbs, and debris limbs from the active channel. Woody material will be cut into smaller pieces and left in the upper banks, and/or gathered and winched out of the work zone at established gaps in the willow corridor for offsite disposal.

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Davis Creek



5/9/2025

Lengths25

APCreeks

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 1

FOXENWOOD 3 BASIN ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
Foxenwood 3 Basin is located within the Foxenwood Subdivision in Orcutt near the intersection of Clubhouse Drive and Foxenwood Drive.

Setting:
Inspected on March 25, 2025.

Foxenwood 3 Basin collects runoff from the surrounding residential development where it slowly evaporates over the summer months, rarely going completely dry due to a hard pan underlying the basin. The basin receives runoff even during the summer months from residential landscape irrigation and urban tailwater. If the basin overflows, the water exits via a concrete spillway and flows into the large surrounding open space owned by the Airport where it seeps into the ground. Water can be released via a pipe and flow to Getty Basin where it contributes to groundwater recharge of the Santa Maria Valley.

Revegetation:
Routine maintenance in the concrete V-ditches does not affect habitat value, while the basin itself is a man-made feature that provides aquatic habitat year-round. The District allows and encourages natural regrowth in the basin and the perimeter of the wetted area. The District also performs mowing and weed control on the banks. Willow and cattail habitat at the constructed basin serve as surplus “revegetation” for any small incidental effects due to clearing sprouts in the V-ditches. While the amount of riparian/wetland habitat created by the Basin has not been formally quantified, the extent of the created habitat far exceeds the small amount of disturbance that occurs every few years to manage the ditches.

Wildlife Survey:
The basin is full of water and is estimated to be approximately 6 feet deep at the deepest point. A short fringe of vegetation is present along the perimeter and a willow thicket occurs in the northeast corner of the basin. When the water depth is suitable, tule and cattail grow towards the center of the basin. Otherwise, the basin is open water with mowed grassy banks.

California red-legged frog (RLF) has been detected in the past at this facility. Depending on annual weather, this basin sometimes goes completely dry in summer (likely extirpating any local RLF), and in other years the basin may retain water for the entire year. Based on previous surveys and habitat suitability, the District presumes that RLF could be present when standing water is present for prolonged periods. The District will implement mitigation measures and special conditions described in the Biological Opinion issued by the United States Fish and Wildlife Service.

Work will be scheduled in the fall to avoid the RLF breeding season, per the Biological Opinion. Direct impacts to the individual RLFs as well as species discussed in the Program EIR are expected to be minor and temporary incidental response such as flushing away from District crews when walking through the site.

Engineering Analysis:
Retardation basins are engineered to reduce runoff from developed areas. Without an operable basin, downstream areas can suffer flood damages from the increased flows from development. This basin was designed to reduce the impacts of the development of the Foxenwood Tract in Orcutt.

Project Description:

Section 1:
Two concrete v-ditches enter the basin from the northeast and southeast. Stands of tule and cattail have grown in the ditches, blocking the flow of water. Maintenance will consist of trimming back this obstructive vegetation and spot spray of aquatic herbicide as needed.

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Foxenwood 3 Basin

5/9/2025

Lengths25

APCreeks

1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 1

MIGUELITO CHANNEL OUTLET ROUTINE MAINTENANCE ADDENDUM TO THE PROGRAM EIR FOR SANTA BARBARA COUNTY FLOOD CONTROL ROUTINE MAINTENANCE

Location:
The project is located adjacent to the Lompoc Regional Wastewater Reclamation Plant northwest of the intersection of North V Street and West Central Avenue.

Setting:
Inspected on March 20, 2025.

Miguelito Creek runs through Lompoc and is a tributary to the Santa Ynez River. Miguelito Creek drains an 11.6 square mile watershed capable of producing 4,200 cfs during a 100-year return period event.

The upper portions of Miguelito Channel running through the City do not contain riparian habitat, however the lowest portion of the channel (most downstream portion of the channel), proposed for maintenance, traverses the riparian corridor on the southern bank of the Santa Ynez River. Over many years, the channel has become overgrown and plugged with downed trees, other vegetation, debris and trash. Flows through Miguelito Channel are forced to slow down and spread through the riparian corridor. Because the channel is blocked with debris and vegetation, it also contains stagnant pools. The riparian corridor surrounding the channel is densely vegetated. Native plant species include willows, cottonwood, sycamore, blackberry, mugwort, stinging nettle, poison oak, creek clematis, and coyote brush.

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.

Miguelito Channel drains mostly urban properties into the Santa Ynez River; therefore, restoration opportunities in the River may be utilized as mitigation for impacts associated with Miguelito Channel.

Miguelito Channel				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2019/2020	150	0	0	-150
2020/2021	0	200	200	50
2021/2022	0	0	0	50
2022/2023	0	0	0	50
2023/2024	0	0	0	50
2024/2025	0	0	0	50
2024/2025	0	0	0	50
2025/2026	0	0	-	50

<u>Wildlife Survey:</u>
Miguelito Channel connects to the Santa Ynez River, an area with dense wildlife habitat. In particular, the California red-legged frog is known to occur within the adjacent Santa Ynez River. A nighttime survey of Miguelito Channel was conducted by the District Biologist on May 23, 2006 to look specifically for red-legged frogs. No red-legged frogs were seen during the survey. Species observed during the survey and creek inspections include California treefrog, raccoon tracks, deer (tracks), and mosquito fish.

Impacts to the observed species as well as those discussed in the Program EIR are expected to be less than significant with the incorporation of proposed mitigation measures. Maintenance will not involve disturbance to the wetted channel. Crews will enter the channel on foot and use only hand tools to trim fallen limbs and debris.

<u>Engineering Analysis:</u>
Miguelito Channel is an engineered facility protecting most of the City of Lompoc. For the channel to function as designed, the outlet must be open to allow these flows to be conveyed to the Santa Ynez River. The buildup of sediments and blockage of the outlet can result in overflows in the City additionally threatening the Lompoc Regional Wastewater Reclamation Plant.

<u>Project Description:</u>
<u>Section 1:</u>
This deep V-shaped channel has multiple willow and branches that will be limbed up to prevent the flow of water from being obstructed.

<u>Impact Analysis and Mitigation Measures:</u>
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Miguelito Channel

5/9/2025

Sites25

APCreeks

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 1

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

Location:
The project begins at Stillwell Road and ends at Morgan Trail in Orcutt, with additional work locations at the Dutard Road and West Main Street road crossings.

Setting:
Inspected on April 1, 2025.

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 of Orcutt, as well as portions of the creek near the Laguna County Sanitation District Wastewater Reclamation Plant and the downstream confluence of Orcutt/Solomon Creek and the Santa Maria 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 following table is being included to more easily display and track the District's restoration efforts.

Orcutt/Solomon Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
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	2,000	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	1,760	0	0	-2,105
2017/2018	0	0	0	-2,105
2018/2019	0	0	0	-2,105
2019/2020	0	0	4,220	2,115
2020-2021	0	0	0	2,115

2021/2022	20	0	0	2,095
2022/2023	90	0	0	2,005
2023/2024	0	0	0	2,005
2024/2025	20	0	0	1,985
2025/2026	0	0	-	1,985

Wildlife Survey:
California red-legged frogs (RLFs) are known to inhabit the lower reaches of Orcutt/Solomon Creek near Westrail Estates, the Laguna Sanitation Facility, and at the West Main Street crossing. 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 to 12 feet wide.

The gradient through Orcutt is relatively low, and combined with sandy soils, culverts in this region are easily plugged by sediment. In dry years there is not substantial enough flow to clear culverts or actively scour sediment and vegetation sprouts. In intense rain years with high flow volume, the sediment bars become washed out and minimal vegetation is able to establish in the floor of the creek channel.

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

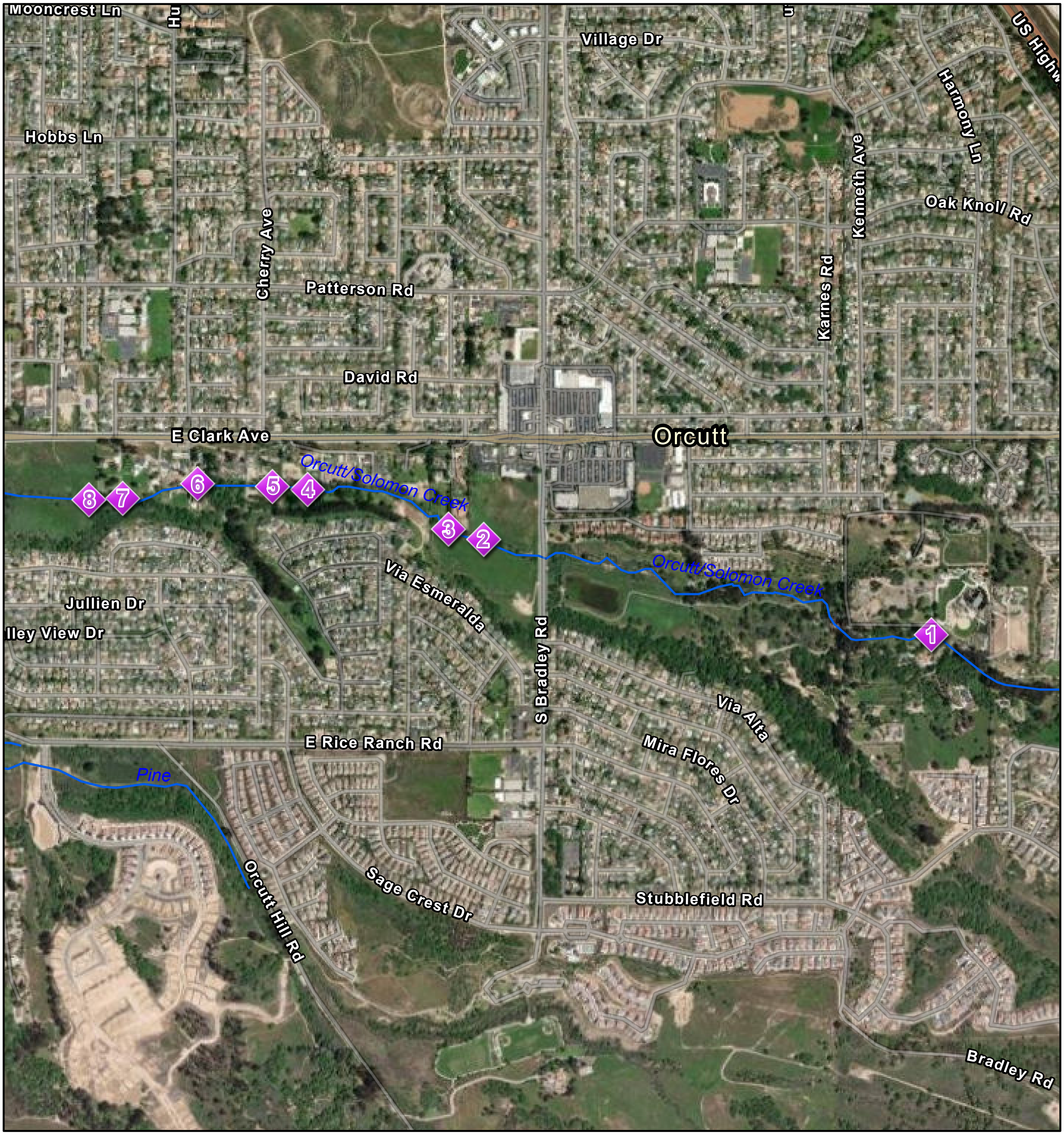
Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 1	x			willow				
Section 2	x			willow				
Section 3	x			willow				
Section 4	x			willow				
Section 5	x			pine				
Section 6			x	willow				

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 7	x			willow				
Section 8	x			willow				
Section 9	x			willow				multiple
Section 10	x			willow				
Section 11			x	willow				
Section 12	x		x	willow				multiple

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Orcutt Solomon Creek - A



5/9/2025

1:18,261

0 0.13 0.25 0.5 mi

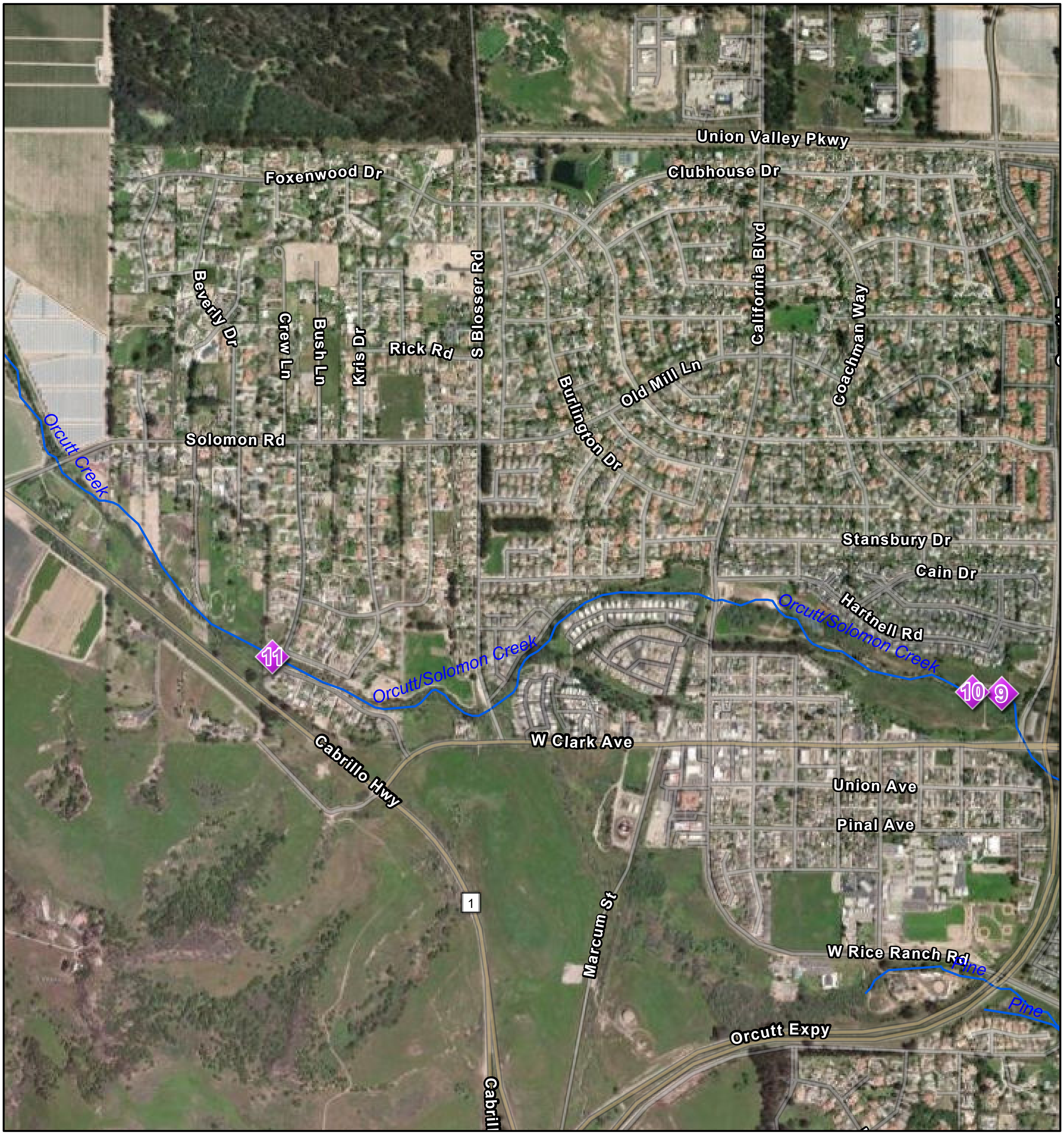
0 0.2 0.4 0.8 km

Sites25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Orcutt Solomon Creek - B



5/9/2025

Sites25

Lengths25

APCreeks

1:18,261

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Orcutt Solomon Creek - C

6/10/2025

Lengths25

APCreeks

1:36,648

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 5

Section 9

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

Location:
The project begins at Santa Ynez Boulevard and ends approximately four miles downstream of Bell Street.

Setting:
Inspected on April 9, 2025.

San Antonio Creek, located in northwestern Santa Barbara County is near the unincorporated area of Los Alamos. The area where maintenance will occur is an approximately 5-mile portion of San Antonio Creek. San Antonio Creek through the maintenance area is low gradient, with sand and gravel substrate, running through low density urban areas of Los Alamos and agricultural fields downstream. Riparian vegetation is generally quite dense along the entire maintenance area, dominated by medium and large willow 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.

Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)	Lg Tree Impacts	Tree mitigation installed
2002/2003	2,690	5,100	1,500	-1,190		
2003/2004	1,925	4,000	0	-3,115		
2004/2005	3,800	7,600	0	-6,915		
2005/2006	0	7,000	0	-6,915		
2006/2007	800	7,800	7,800	85		
2007/2008	760	2,400	0	-675		
2008/2009	350	4,670	0	-1,025		
2009/2010	0	4,670	4,670	3,645		
2010/2011	1,400	2,150	2,150	4,395		
2011/2012	0	500	1,000	5,395		
2013/2014	160	0	0	5,235		
2015/2016	200	0	0	5,035		
2016/2017	20	0	0	5,015		
2019/2020	25	0	0	4,990	1 willow 6" dbh	10 willows
2020/2021	75	0	0	4,915		
2022/2023	30	0	0	4,885		
2024/2025	70	0	0	4,815		
2025/2026	30	0	0	4,785		

Engineering Analysis:
Maintenance of San Antonio Creek requires removal of debris and downed or overhanging vegetation to preserve flood flow conveyance and to protect adjacent properties. Obstructive vegetation consisting primarily of downed limbs and trees as well as limbs projecting into the active channel will be removed from the main channel at various locations to provide conveyance of flood waters as well as reduce the debris load which can aggravate bridge and culvert plugging.

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (inches)	Length (feet)	Impacts to be Mitigated (ft2)	Additional Info
Section 1		5'x8'		sandbar willow			prior mitigation	
Section 2			x	sandbar willow				
Section 3		150x10		cottonwood			30	
Section 4	x			cottonwood	6	20		
Section 5	x			willow				multiple branches
Section 6	x			willow	4	15		
Section 7	x			willow				multiple branches
Section 8	x			willow	7	10		
Section 9	x			willow				multiple
Section 10								remove tires and trash
Section 11	x			pine				multiple branches
Section 12	x			willow	4	15		
Section 13	x			willow				branch
Section 14	x			willow				branch
Section 15	x			willow				multiple branches
Section 16	x			willow				multiple branches
Section 17	x			willow	4	15		
Section 18	x			willow				multiple branches
Section 19	x			eucalyptus	10	20		
Section 20	x		x	willow	12	15		
Section 21	x			willow				multiple
Section 22	x			willow	8	20		
Section 23			x	willow				
Section 24	x			willow				multiple branches

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (inches)	Length (feet)	Impacts to be Mitigated (ft2)	Additional Info
Section 25	x			willow	12	20		
Section 26	x			willow				branch
Section 27	x			willow	10	20		

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

San Antonio Creek - Los Alamos - A

5/9/2025

Sites25

Lengths25

APCreeks

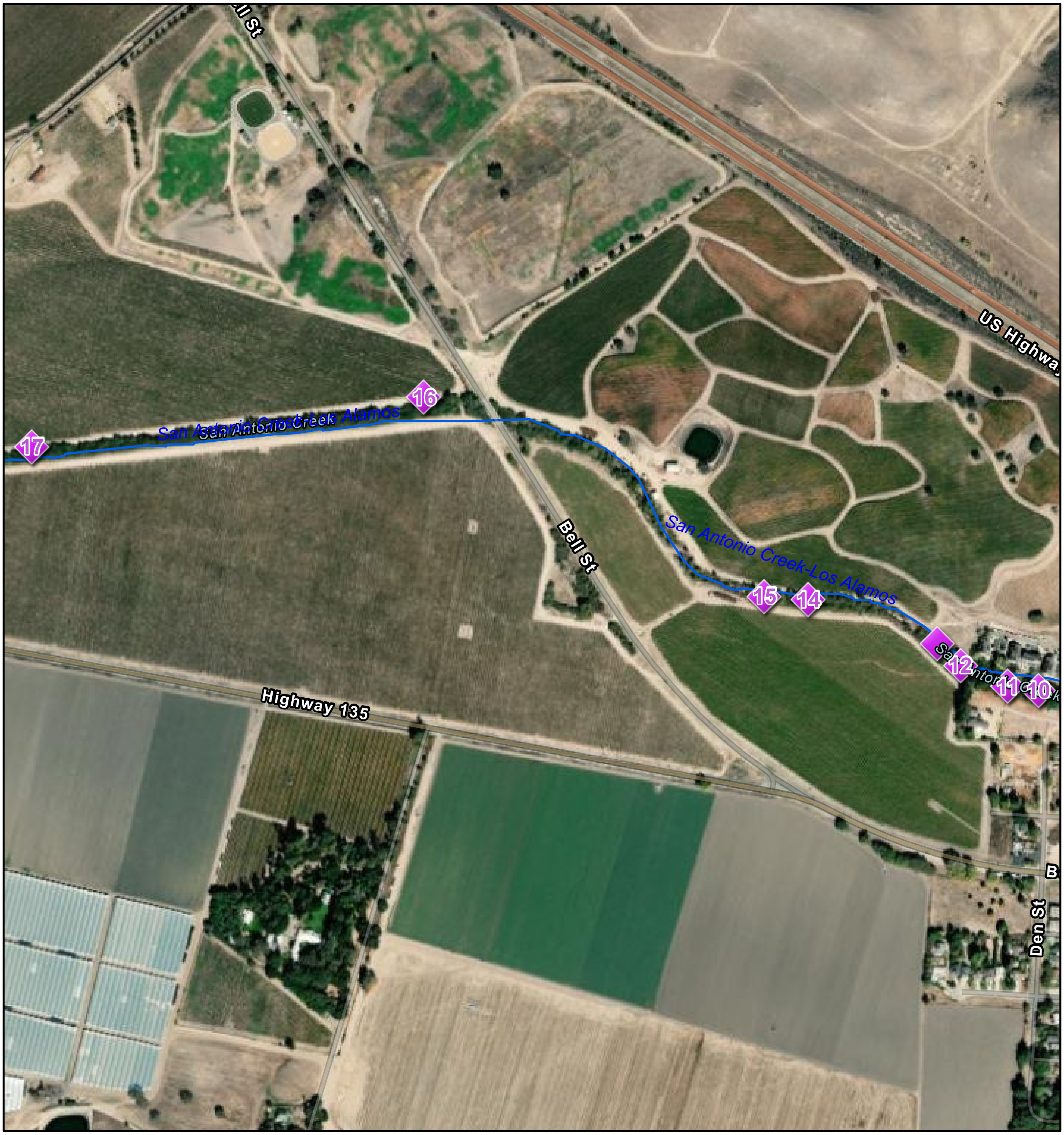
1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

San Antonio Creek - Los Alamos - B



5/9/2025

1:9,130

0 0.05 0.1 0.2 mi

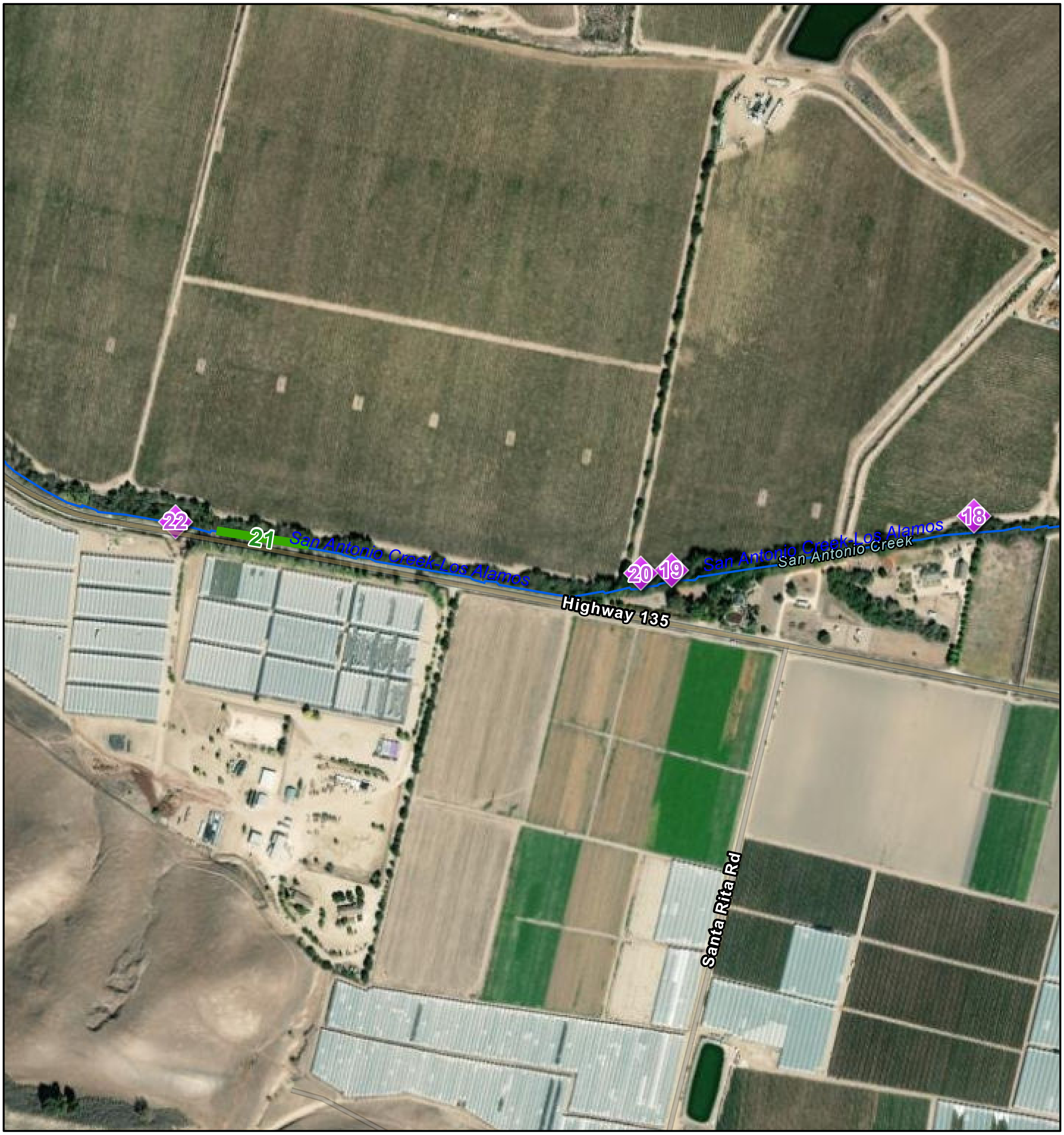
0 0.1 0.2 0.4 km

Sites25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

San Antonio Creek - Los Alamos - C



5/9/2025

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sites25

Lengths25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

San Antonio Creek - Los Alamos - D

5/9/2025

Sites25

Lengths25

APCreeks

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 6

Section 10

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

Location:

The Santa Maria Airport/Abex channels are located along the northeast side of the Santa Maria Municipal Airport. See attached map for specific locations.

Setting:

Inspected on March 25 and April 17, 2025.

Airport Ditch begins a short distance to the west of the intersection of Skyway Drive and Lakeview Road northeast of the Santa Maria Airport. The ditch is a trapezoidal channel 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 the former 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 Channel (upstream of the earthen portion) is concrete lined, conveys water amongst industrial and office buildings located northeast of the airport, and contains poor habitat for native plants and 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.

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/Abex Channels				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2004/2005	14,000	14,000	14,000	0
2005/2006	5,500	5,500	5,500	0
2008/2009	90	90	0	-90
2009/2010	0	1,600	1,600	1,510
2012/2013	1,250	3,000	2,650	2,910
2013/2014	3,000	1,000	3,400	3,310
2014/2015	200	0	0	3,110
2020/2021	200	0	0	2,910
2021/2022	150	0	0	2,760
2022/2023	150	0	0	2,610
2023/2024	50	0	0	2,560
2024/2025	35	0	0	2,525
2025/2026	0	0	0	2,525

Wildlife Survey:

The California red-legged frog (RLF) has been detected in both the Santa Maria Airport Ditch and Abex Channel. RLFs were observed in the wetted portions during surveys in 2003 and seen during maintenance monitoring intermittently since then. In dryer years, RLFs are generally not detected in the channel.

Similarly, RLFs were observed in the Abex Channel sporadically since 2003. It is expected that RLFs 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 RLFs 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 RLFs through a Biological Opinion issued by the U.S. Fish and Wildlife Service.

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

If standing water is present, the District Biologist will monitor sediment-moving operations. RLFs will be flushed from the work site and relocated out of the work area into adjacent habitat downstream of the weir. Impacts to RLFs 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:
Santa Maria Airport Ditch
Section 1:
The areas upstream and downstream of the weir structure in corner of the Santa Maria Airport channel adjacent to the former Sunset Ridge Golf Course has filled in with sediment. To reclaim the depth needed to maintain proper drainage, this area will be desilted. District crew will use a Gradall with bucket attachment or an excavator working from the adjacent access road to remove material and desilt the area upstream and downstream of the weir.

The culvert under the access road has accumulated sediment from urban runoff in the associated ditches upstream. Using an excavator or Gradall stationed along the adjacent access road, sediment will be scooped out of the ends of the culvert. A drag-sled or small walk behind skid steer will be used if needed to remove additional sediment from within the culvert box.

Approximately 15-20 cubic yards will be desilted in total. The material will be placed behind the machinery on the access road to dry, and then staged for Airport staff and contractors to use elsewhere on the property for grading or landscaping. The work area will likely be dry during maintenance. The District Biologist will perform a pre-project assessment. If standing water remains, the District Biologist will be onsite for bio-monitoring. Any RLF will be flushed from the work site or temporarily captured and relocated to wetted habitat elsewhere in the same drainage ditch, per the terms of the Biological Opinion.

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

The weedy upper slope of the ditch will be mowed for the entire approximately 4 foot by 450-foot length. A Gradall using a mower attachment will drive along the adjacent access road and reach into the ditch to mow the weedy vegetation on the floor of the channel and the north bank. The mower will leave approximately 6-12 inches of vegetation 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 aquatic herbicide may be done in the spring/summer 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 is mostly non-native ruderal species but includes a few patches of native cattails.

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Santa Maria Airport Ditch / Abex

5/9/2025

Sites25

Lengths25

APCreeks

1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

ABEX Section 1


Santa Maria Airport Ditch Section 1

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

Location:
The project begins near the confluence with Bradley Canyon Channel and extends to downstream of State Route 1.

Setting:
Inspected on March 25, 2025.

The Santa Maria River originates in the Los Padres National Forest and drains a 1,600 square 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 Santa Maria 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.

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.

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."

Santa Maria River				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2003/2004	0	435,600	65,000	65,000
2006/2007	52,000	0	0	13,000
2007/2008	551,000	485,700	588,000	50,000
2008/2009	26,100	0	26,000	49,900
2009/2010	0	0	0	49,900
2010/2011	72,150	100,000	0	-22,250
2011/2012	800	0	0	-23,050
2012/2013	325	0	0	-23,375
2013/2014	100	0	74,000	50,525
2014/2015	1,800	43,560	13,000	61,725
2015/2016	0	0	0	61,725
2016/2017	0	0	0	61,725
2017/2018	400	0	0	61,325
2018/2019	0	0	0	61,325
2019/2020	0	0	0	61,325
2020/2021	0	0	0	61,325
2021/2022	60	2000	0	61,265
2022/2023	625	0	0	60,640
2023/2024	0	40,000	60,000	120,640
2024/2025	3,000	0	0	117,640
2025/2026	15	0	0	117,625

Over the years the District has allowed and encouraged growth of willows and shrub/scrub vegetation in the river channel. From Fugler Point (where Foxen Canyon Road transitions from north-south to east-west), where the levee starts, to the terminus at State Route 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 non-native plant species including wild radish, pearly everlasting, malva, black mustard, bromes, and morning glory, to name just a few.

The U.S. 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.

Santa Maria River Engineering Analysis:
The Santa Maria River Levee was constructed by the U.S. 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.

Santa Maria River Emergency Project Revegetation:
This separate mitigation table is included for the Santa Maria River Emergency Project downstream of State Route 1 to display and track the District's restoration efforts.

Santa Maria River Emergency Project			
Annual Plan Year	New Temporal Impacts to Native Vegetation (acres)	Proposed Restoration (acres)	Restoration Implemented (acres)
2023/2024	7	14	14
2024/2025	0	0	0
2025/2026	0	7 acres seed	0

As part of the Santa Maria River Revegetation Plan Executive Final (February 2024), the District installed container plants and cuttings on approximately 14 acres downstream of State Route 1 within two different revegetation treatments; approximately 7-acres of Mixed Willow Riparian and approximately 7-acres of Mixed Shrub.

During February and March 2024, approximately equal amounts of arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), sandbar willow (*Salix exigua*), and mulefat (*Baccharis salicifolia*) cuttings, from onsite source material, were installed within the Mixed Willow Riparian revegetation treatment area. Cuttings were installed with an average of 10 to 15-foot centers no lower than 10-feet from the toe of berm, as intended to leave the lower slope of the berm and central channel from becoming a dense willow thicket. Cuttings were installed in an irregular pattern, some clusters of denser cuttings, and some more scattered to provide fringe and transitional habitat. The District has native seed mix that will be applied to appropriate areas within the Mixed Willow Riparian revegetation treatment area.

During January through March 2024, approximately equal amounts of arroyo willow, red willow, sandbar willow, and mulefat cuttings, from onsite source material, and 2,476 native container plants were installed within the Mixed Shrub revegetation treatment area. Cuttings were installed with an average of 20 to 30-foot centers no lower than 10-feet from the toe of berm. Cuttings were installed in an irregular pattern, some clusters, and some more scattered to provide fringe and transitional habitat. Native container plants were installed with an average of 5 to 15-foot centers no lower than 10-feet from the toe of berm.

The District has native seed mix that will be applied to appropriate areas within the Mixed Shrub revegetation treatment area in 2025.

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (inches)	Length (feet)	Impacts to be Mitigated (ft2)	Additional Info
Section 1		x		mulefat weeds			15	see below
Section 2								see below
Section 3		1200' x low flow		mulefat willow tamarisk			prior	single spot spray
Section 4								see below

Section 1:
The District crew will regrade the road and limb overhanging branches to reestablish access to the outlet to the river. This access is necessary to maintain the soil cement levee and prevent water backing up into the landfill property.

Section 2:
Sediment accumulated at the Levee West flood gate will be removed and sidecast to reestablish flow to the river. Work area is approximately 150'x8'x2' with radish, mustard, and hemlock on the deposited sediment.

Section 4:
Pursuant to the Santa Maria River Emergency Project Revegetation Plan (February 2024), the following will be performed as needed.

- Weed management
- Repair irrigation
- Manage irrigation regimes and locations
- Replace perished plants
- Install native container plants and cuttings
- Perform supplemental seeding
- Willow thicket clearing to maintain unobstructed flow
- Monitor

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Santa Maria River - A

5/12/2025

Sites25

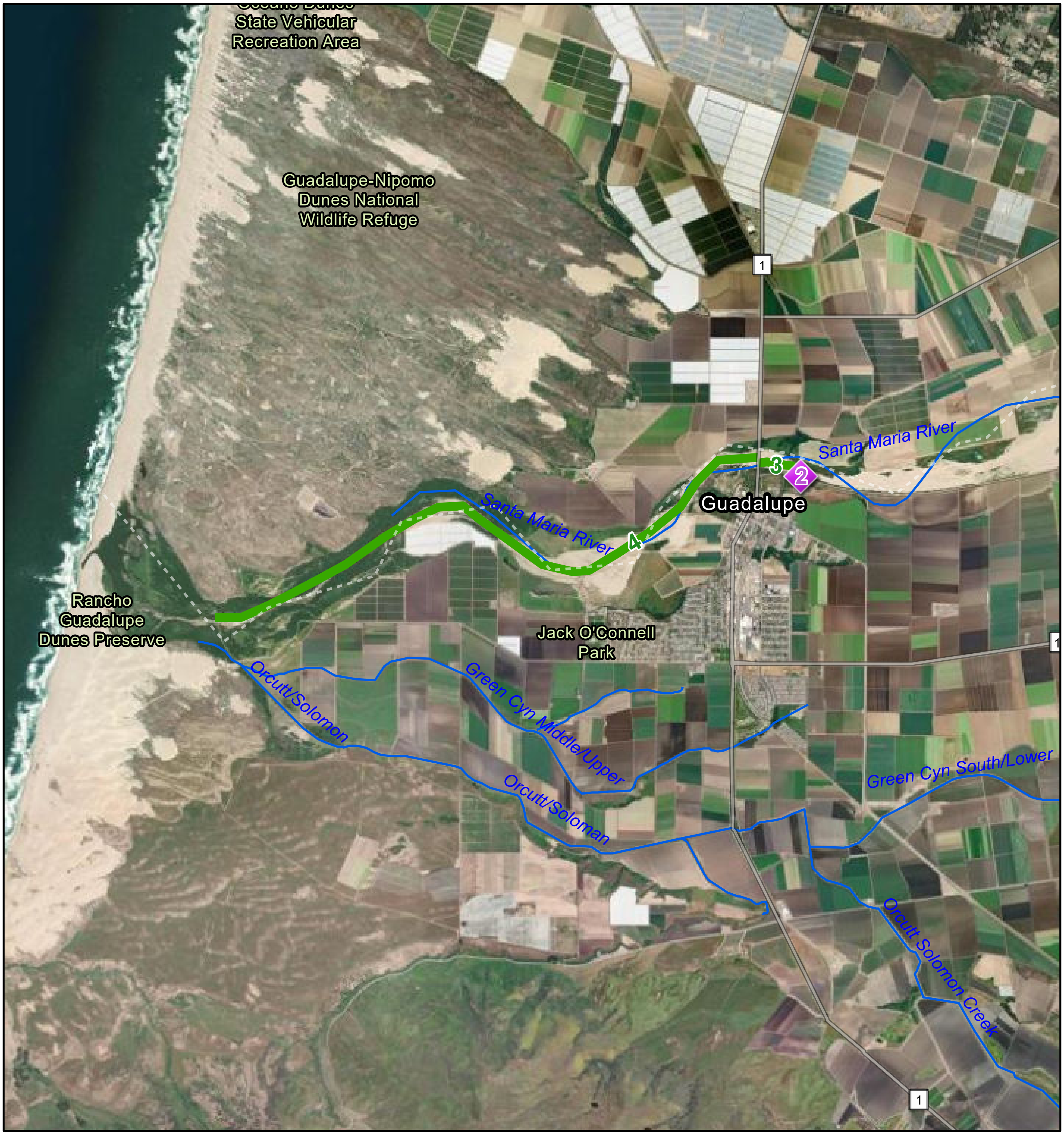
1:9,162

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Santa Maria River - B



5/12/2025

1:73,042

0 0.5 1 2 mi

0 0.75 1.5 3 km

Sites25

Lengths25

APCreeks

Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 2

Section 4

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

Location:
Tanglewood Channel is located within the Tanglewood Subdivision on Black Road west of the Santa Maria Airport. Maintenance will occur starting at the end of Myrtlewood Road and continue downstream approximately 330 feet.

Setting:
Inspected on April 1, 2025.

Tanglewood Channel begins at the end of Myrtlewood Avenue in the Tanglewood Subdivision. The channel begins as a storm drain outlet that receives run-off from the subdivision streets. Along with run-off from the subdivision, the ditch also collects street trash such as papers, soda cans, bottles, metal debris, and miscellaneous litter. This ditch runs approximately 330 feet to the south and then takes a 90-degree turn to the west for a distance of 460 feet where it flows under Black Road and eventually down to some ponded wetlands. The drainage meets with Orcutt Creek, although surface water is typically only present during the rainy season in the lower 460 feet of the drainage while the upper 330 feet of the drainage retains stagnant water year-round.

Approximately 80 feet of the ditch immediately upstream of Black Road is a concrete lined spillway that takes the ditch down to the elevation of Black Road. The earthen portion of the ditch is approximately 50-feet wide with a wetted flow area approximately 10 feet wide. During most years, most of the ditch dries out but the upper 1/3 or so remains wet from irrigation and urban drool from the subdivision. Vegetation consists of sedges, rushes, non-native grasses and weedy species within the wet areas and immediately adjacent, however beyond the 10-foot wetted corridor the banks are annual grasses, occasional coyotebrush, goldenbush, and other sage shrubs. There are no trees growing along this ditch. Land use beyond the ditch is open pasture to south, east and west with the Tanglewood subdivision to the north.

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. A table is being included in the 2010/2011 Annual Routine Maintenance Plan.

Tanglewood Channel				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2007/2008	200	1,800	0	-200
2010/2011	0	1,800	0	-200
2012/2013	1,400	3,600	0	-1,600
2017/2018	0	0	0	-1,600
2019/2020	0	2,250	0	-1600

Tanglewood Channel				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2020/2021	0	2,250	1,100	-500
2021/2022	0	0	0	-500
2022/2023	300	0	0	-800
2023/2024	0	0	*800	0
2024/2025	0	0	0	0
2025/2026	0	0	0	0

*restoration square footage implemented in Santa Maria River

Engineering Analysis:

The Tanglewood Channel is designed to convey storm flows from the subdivision. Reduction in channel capacity, as a result of excessive vegetation and/or sedimentation, subjects the surrounding areas to frequent flooding because the storm drains and Tanglewood Basin will not be able to drain if the channel is not clear of obstructions. The Santa Maria River valley, including most of the Orcutt and Tanglewood area, is very flat and all of the drainage courses are prone to sedimentation. Vegetation in the channel bed aggravates this situation by lowering velocities and encouraging sedimentation which in turn reduces the channel capacity. Controlling vegetation to minimize the potential for sedimentation as well as removing recently accumulated sediment will maintain the design capacity of the channel.

Project Description:

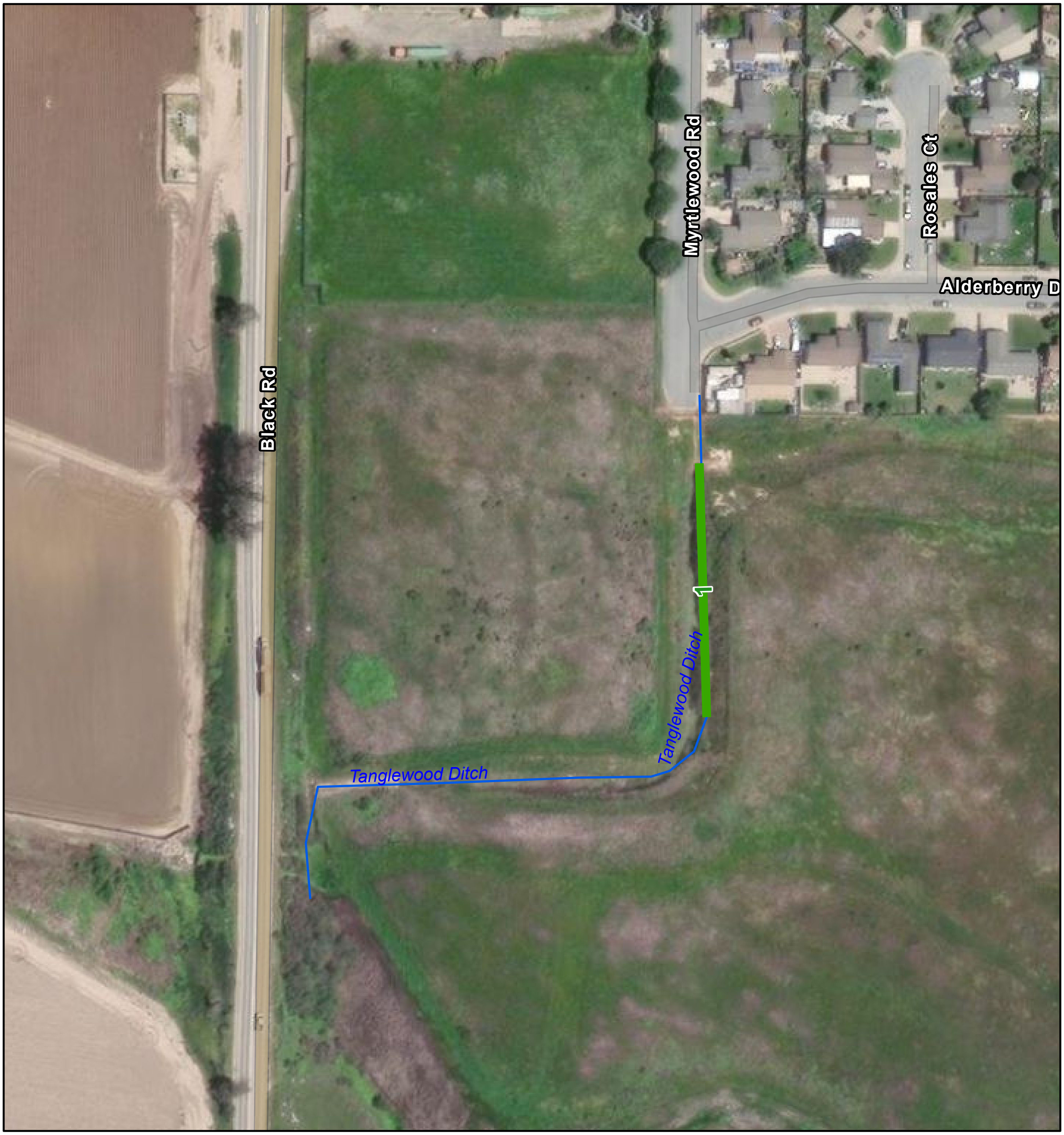
Section 1:

Beginning 30 feet downstream of the end of Myrtlewood Avenue, the District will spot-spray vegetation sprouts along the right edge of the center of the channel. Cattail, bulrush, and weedy growth threaten to obstruct this channel. Spot-treatment of ½ of the channel will allow drainage to continue while preserving wildlife habitat along the left edge. Spot-spray will be suspended during Feb/March/April during amphibian breeding season. The District's herbicide management program has determined that periodic small treatments are more effective and use less herbicide product that a single larger treatment per season. This area has previously been mitigated for impacts to native vegetation.

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Tanglewood



5/9/2025

Lengths25

APCreeks

1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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:
The project is within the network of drainages located immediately west of the City of Santa Maria: Unit II, Unit II Tailwater, East, and West Main Channels. See attached map for specific locations.

Setting:
Inspected on March 25, 2025.

West Main Channel:
West Main Channel is a degraded unlined trapezoidal roadside ditch that runs from 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 Unit II Tailwater Channel. Dirt access roads run parallel to the channel on either side. Row crops surround the channel beyond the access roads. This channel transports 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 transports 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 Santa Maria River just west 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 an approximately 0.5-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 Tailwater Channel, then through the Levee into the River 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 Channel 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.

Unit 2, Unit 2 Tailwater, East, and West Main Channels				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
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
2019/2020	0	2,500	1,250	800
2020/2021	0	200	0	800
2021/2022	0	0	0	800
2022/2023	500	0	0	300
2023/2024	0	0	0	300
2024/2025	0	0	0	300
2025/2026	0	0	0	300

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 California red-legged frog has been detected in Unit II Channel and Unit II Tailwater, as well as the West Main Channel, regularly since 2003. California 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 U.S. 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 drainages in past years.

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 California red-legged frog will also serve to protect the southwestern pond turtle.

The District assumes California 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 California 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 agricultural 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 Channel. By agreement, the U.S. Army Corps of Engineers 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 are 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. A strip of vegetation will be left along the toe 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 minimized during the months of February/March/April for California red-legged frog 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:

Sediment and weedy growth have built up on the concrete floor of the channel. A Gradall or excavator stationed on the adjacent access road will be used to remove the 30'x5'x2' accumulation. The work area consists of sediment and weedy vegetation, there will be no impact to native plants.

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 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 minimized during the months of February/March/April for California red-legged 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. There will be no impact to native vegetation.

Section 2:
A washout has formed near the culvert outlet due to drainage from adjacent fields. Rock will be used to stabilize the toe. Equipment will be operated from the access road to rebuild the slope. The farm/access road will be regraded to minimize future over-road flow from eroding soil behind the outlet.

The District biologist will monitor the work and any California red-legged frogs will be flushed and relocated from the work area per the District's Biological Opinion. The work will not result in impacts to native vegetation.

Section 3:
Islands of sediment have accumulated sporadically throughout the channel from the s-turn towards the river. Equipment operating from the adjacent road will be used to remove the sediment which will be returned to a neighboring field for the farmer to till back into the field.

The District biologist will monitor the work and any California red-legged frogs will be flushed and relocated from the work area per the District's Biological Opinion. The work will not result in impacts to native vegetation.

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

Periodic spot spraying may be necessary to maintain the design capacity of the channel and prevent weedy 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 minimized during the months of February/March/April for California red-legged frog 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, and non-native grasses. There will be no impact to native vegetation.

East 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.

Periodic spot spraying may be necessary to maintain the design capacity of the channel and prevent weedy 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 minimized during the months of February/March/April for California red-legged frog 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, and non-native grasses. There will be no impact to native vegetation.

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

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

5/12/2025

1:36,521

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Sites25

Lengths25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Unit 2 West Main Channel Section 2

Unit 2 Channel Section 2

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

Location:
The project begins at 2nd Street and continues to 300 feet downstream of Zaca Street in Buellton.

Setting:
Inspected on April 9, 2025.

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

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

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

Zaca Creek					
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Restoration Bank Credits Utilized*	Surplus Restoration (ft2)
2003/2004	500	700	700		200
2008/2009	600	4,000	0		-400
2010/2011	0	2,000	0		-400
2012/2013	50	2,100	0		-450
2014/2015	0	0	0	450	0
2015/2016	495	0	0	495	0
2016/2017	400	0	0	400	0
2017/2018	30	0	0	30	0
2024/2025	90	0	0	90	0
2025/2026	15	0	0	15	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)

Wildlife Survey:
No sensitive species are known or likely to occur at the project area.

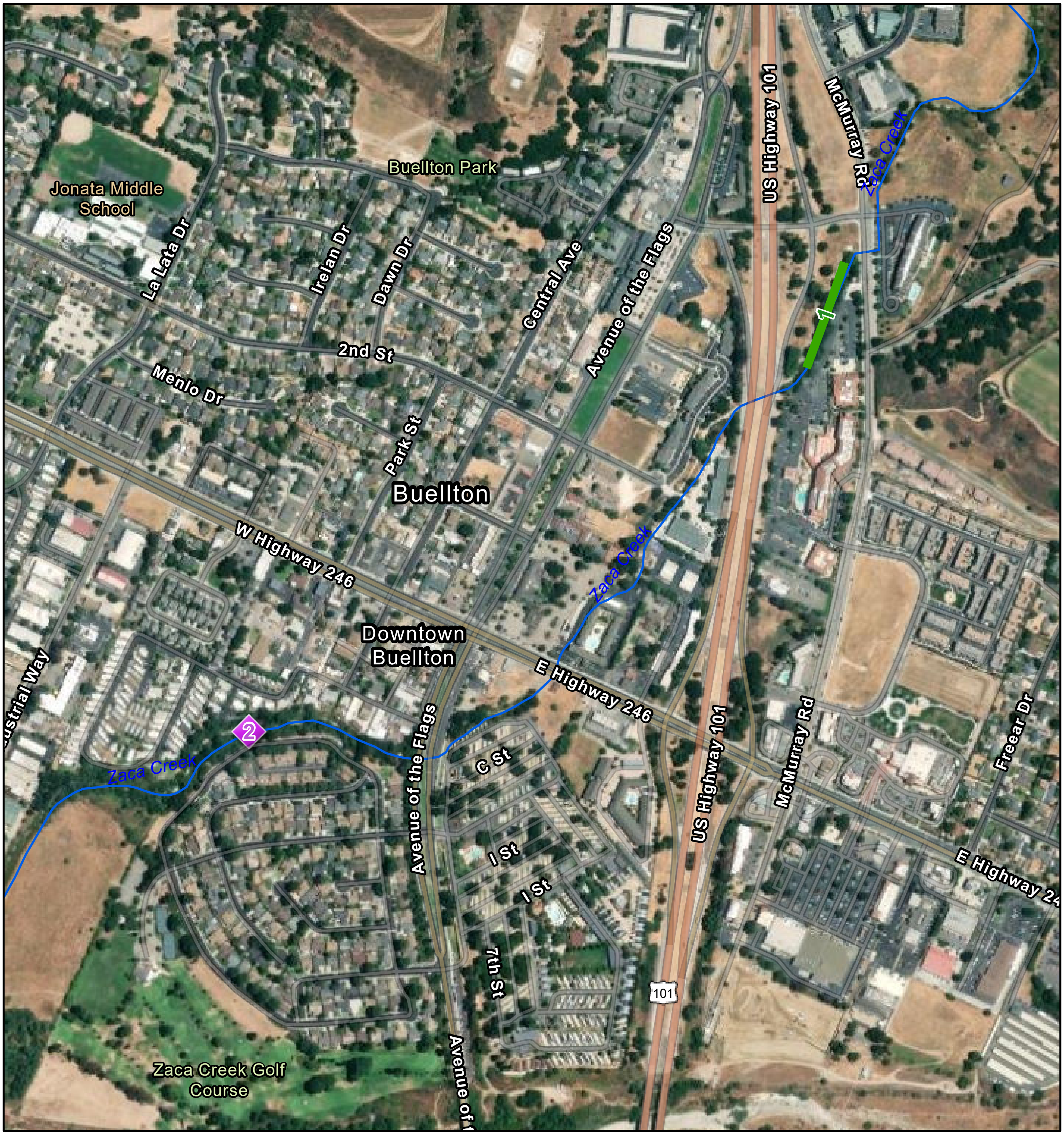
Engineering Analysis:
Zaca Creek flows directly through the City of Buellton. Several culverts exist on the creek that can be prone to plugging. These culverts must remain clear and able to drain into Zaca Creek so the surrounding properties and roadways are not subject to severe inundation. Additionally,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

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (length by width, feet)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 1			x	mulefat				
Section 2		25x5		willow sycamore			15	

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Zaca Creek



5/9/2025

Sites25

Lengths25

APCreeks

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 1

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 just upstream of Faraday Street in the community of Santa Ynez and ends at Edison Street.

Setting:
Inspected on April 9, 2025.

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

Revegetation:
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.

Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Restoration Bank Credits Utilized*	Surplus Restoration (ft2)
2012/2013	100	0	0	0	-100
2015/2016	150	0	0	250	0
2017/2018	50	0	0	50	0
2021/2022	0	0	0	0	0
2022/2023	50	0	0	50	0
2024/2025	0	0	0	0	0
2025/2026	0	0	0	0	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-feet 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:

The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section 1:

A down willow branch will be removed from the channel.

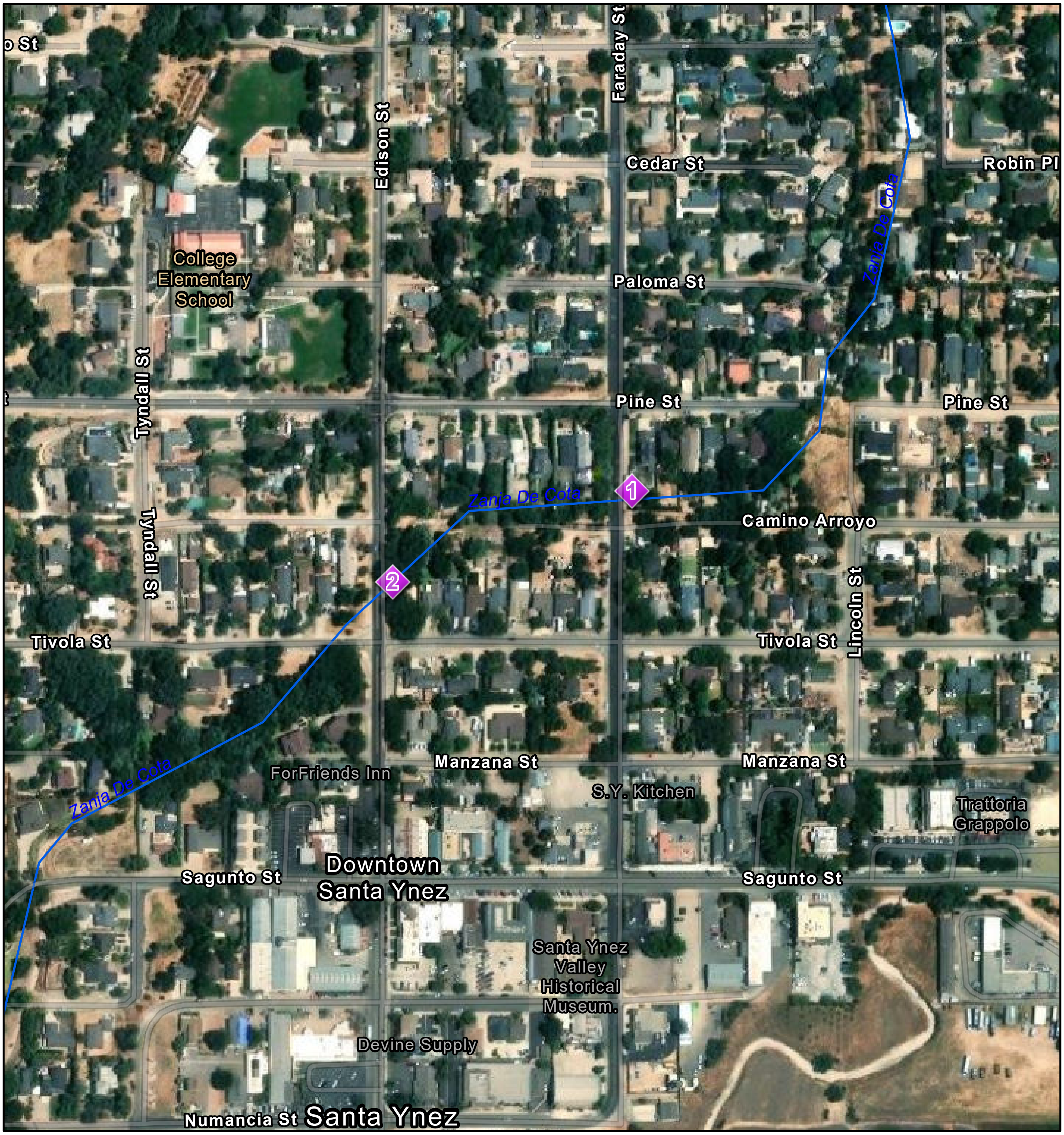
Section 2:

Several young valley oak seedlings have sprouted in the footprint of the wingwall leading to the culvert under the intersection at Edison and Tivola Streets. These seedlings will be salvaged and transplanted.

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Zanja De Cota Creek



5/9/2025

1:4,565

0	0.03	0.06	0.12 mi
0	0.05	0.1	0.2 km

Sites25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 1

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

Location:
The project begins adjacent to Nomad Village private road and ends near Arroyo Road.

Setting:
Inspected on April 7, 2025.

Atascadero Creek originates in the foothills of the Santa Ynez Mountains. Upper Atascadero Creek drains an 1,118-acre watershed above the confluence with Cieneguitas Creek which is capable of producing 1,300 cfs during a 100-year return period precipitation event.

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

Downstream of U.S. 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 U.S. 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.

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.

Upper Atascadero Creek					
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	LCMB Bank Utilized (ft2)	Surplus Restoration (ft2)
2002/2003	5,400	6,500	0		-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	0	0	8,120		-1,480
2009/2010	90	1,600	1,400		-170
2012/2013	50	0	50		-170

Upper Atascadero Creek					
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	LCMB Bank Utilized (ft2)	Surplus Restoration (ft2)
2013/2014	0	0	0		-170
2014/2015	0	0	0	170	0
2015/2016	710	100	100	610	0
2018/2019	0	0	0		0
2019/2020	0	0	0		0
2020/2021	150	0	0	150	0
2023/2024	20	0	0	20	0
2025/2026	20	0	0	20	0

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 feet, the width of clearing should be 10 feet to maintain channel equilibrium.

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

Project Description:

The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

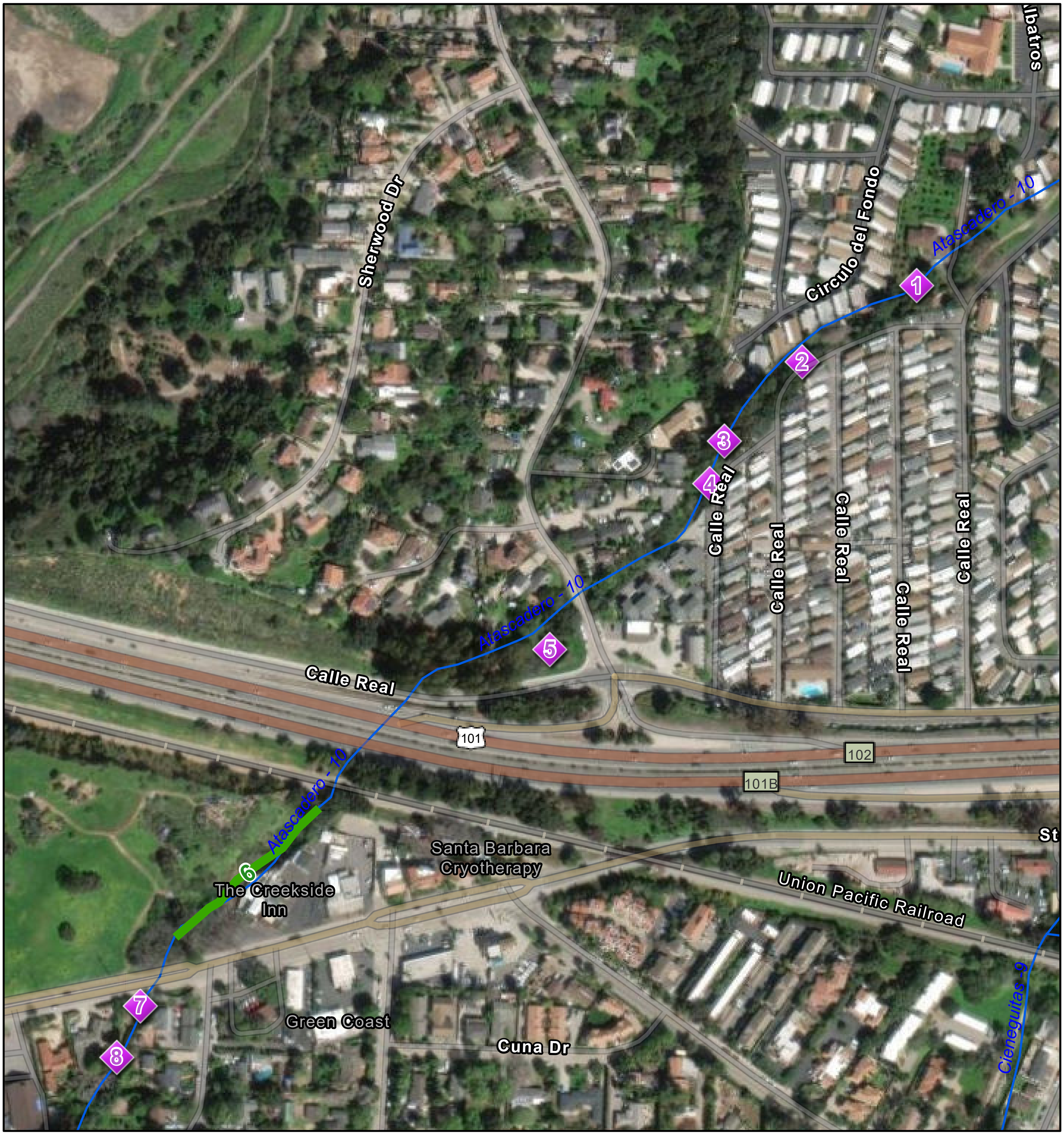
Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 1		25x5		cattail			20	
Section 2	x			willow	3	15		
Section 3	x			eucalyptus	12	20		
Section 4	x			willow	2	15		
Section 5	x			willow	4	20		
Section 6			x	willow oak acacia				
Section 7			x	willow				
Section 8	x			yucca				branch
Section 9	x			willow	5	20		
Section 10								debris plug with metal
Section 11		x		ash				

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 12		x		ash				
Section 13	x			willow				branch
Section 14		x		castorbean				
Section 15		x		palm				
Section 16	x		x	willow				also remove down branch
Section 17		x		palm				multiple
Section 18	x			willow				multiple
Section 19	x			willow	6	20		
Section 20	x			willow	5	18		
Section 21	x			willow	4	15		

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Atascadero Creek - A



5/9/2025

Sites25

Lengths25

APCreeks

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

1.2m Resolution Metadata

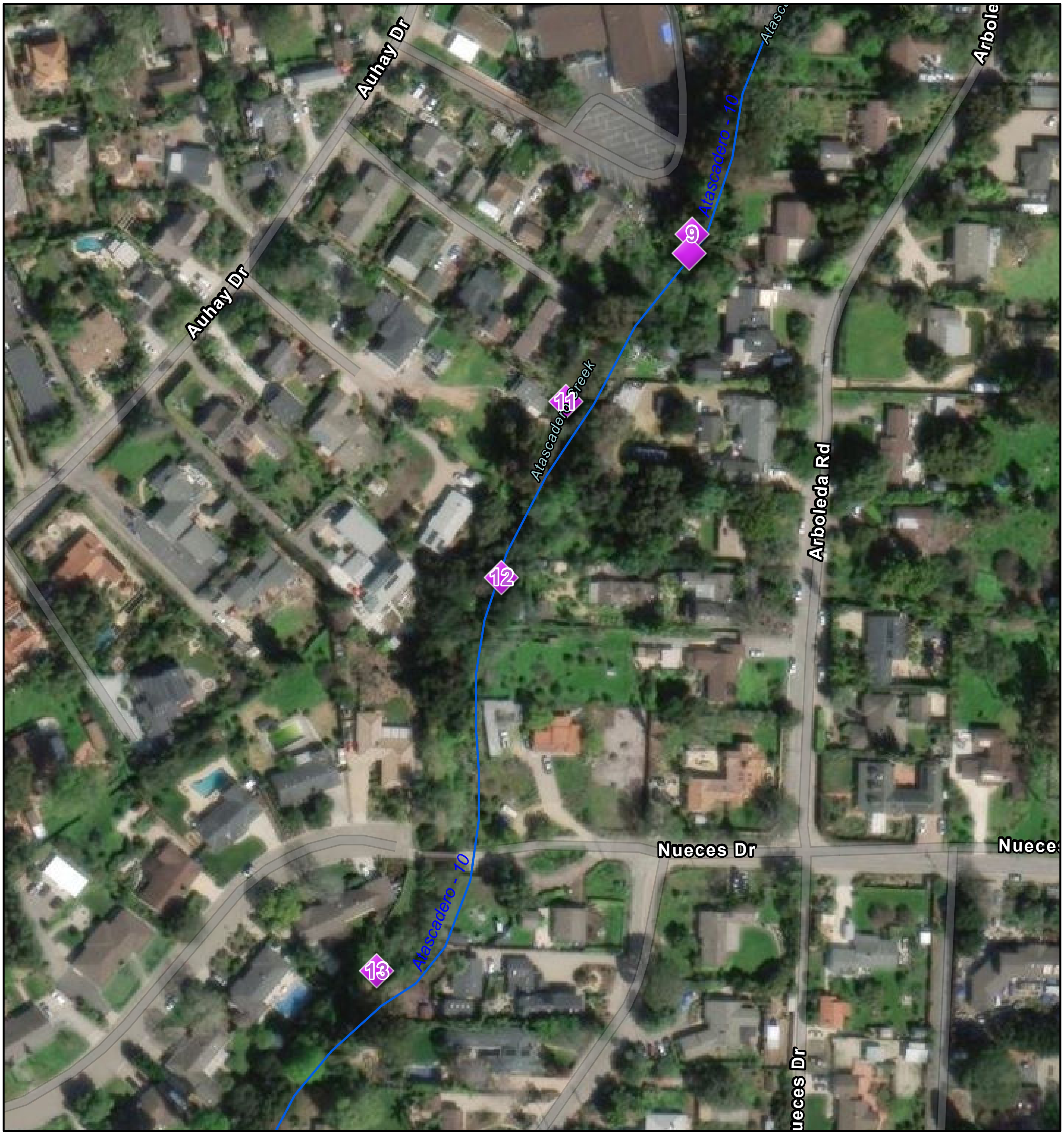
1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Atascadero Creek - B



5/9/2025

Sites25

APCreeks

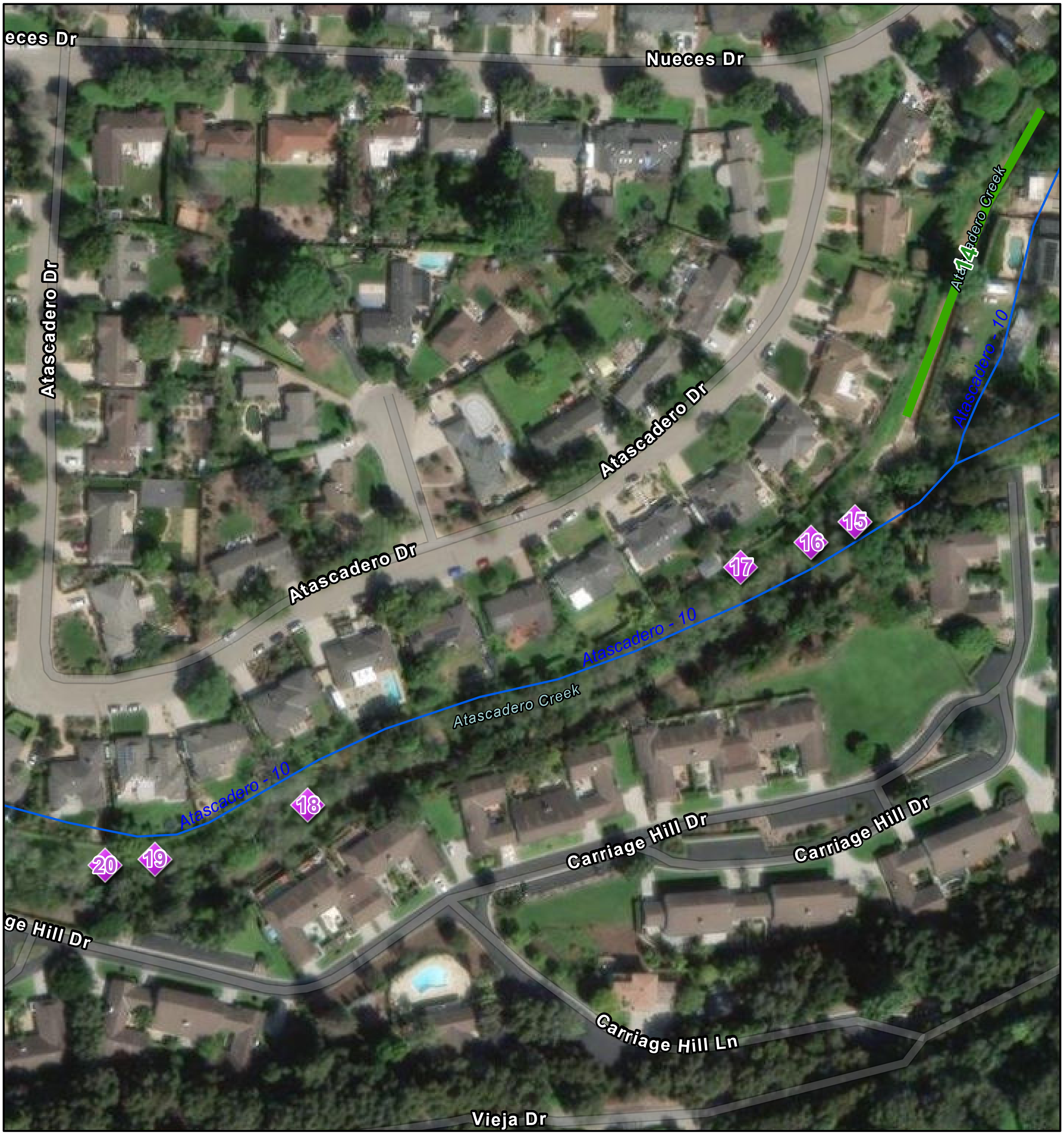
1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Atascadero Creek - C



5/9/2025

1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

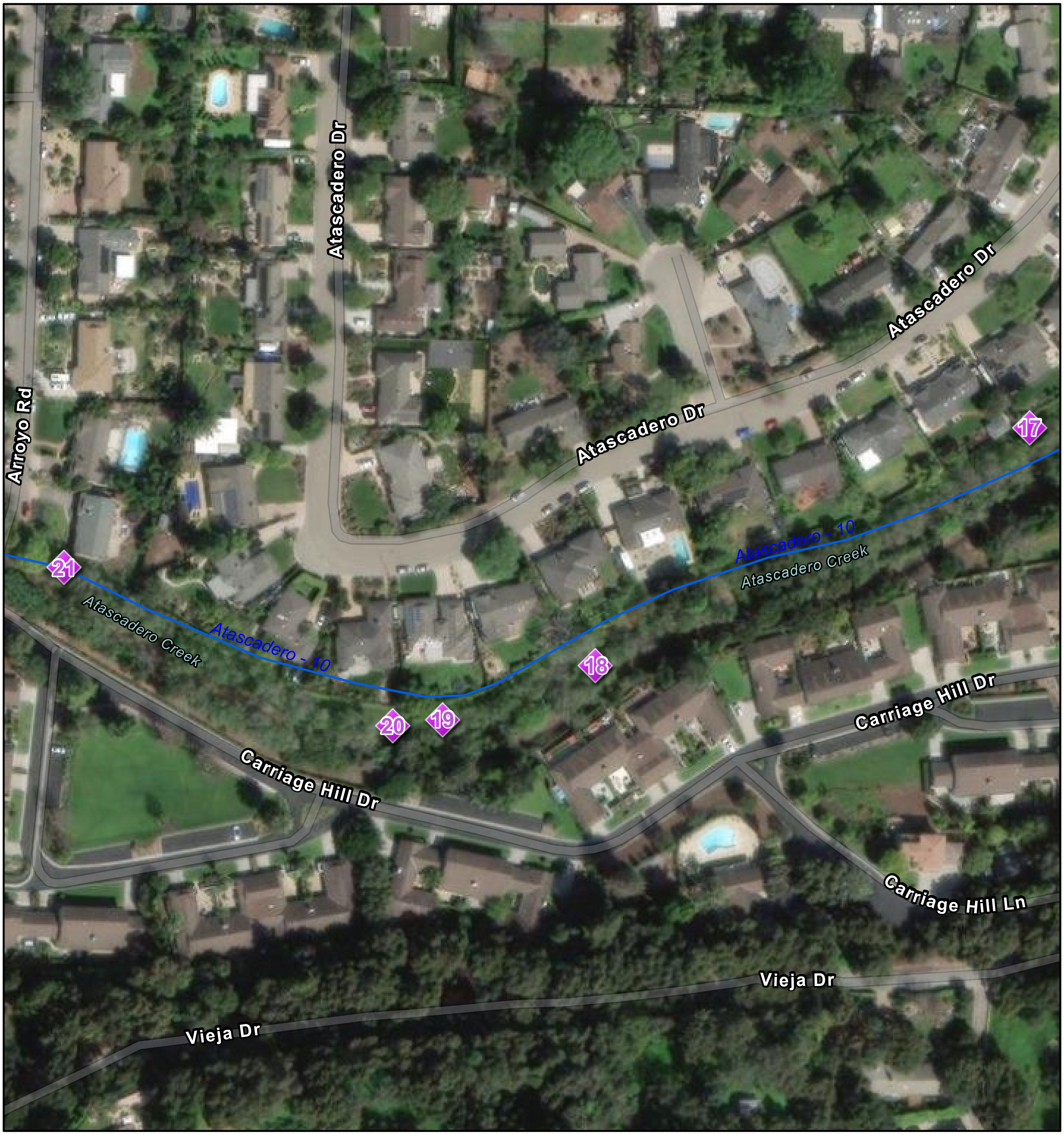
Sites25

Lengths25

APCreeks

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Atascadero Creek - D



5/9/2025

1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Sites25

APCreeks

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 3

Section 10

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 State Route 192 and terminates downstream of the 8th Street Bridge in the City of Carpinteria.

Setting:
Inspected March 12 and 19, 2025.

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

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

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

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

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

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

Revegetation:
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.

Carpinteria Creek					
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Carp Valley DFW Bank Utilized (ft2)	Surplus Restoration (ft2)
2002/2003	2,710	4,750	3,610		900
2003/2004	900	0	0		0
2008/2009	1,250	16,750	0		-1,250
2009/2010	1,500	6,750	6,750		4,000
2010/2011	650	1,400	0		3,350
2012/2013	5,200	1,800	1,800		-50
2013/2014	565	600	0	615	0
2014/2015	520	0	0	520	0
2016/2017	350	0	0	350	0
2018/2019	0	0	0		0
2020/2021	1,845	0	0	1,845	0
2021/2022	1,895	0	0	1,895	0
2024/2025	0	0	0	0	0
2025/2026	0	4,500	-	0	0

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-feet, the width of clearing should be 35-feet to maintain channel equilibrium.

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

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 1								see below
Section 2								see below
Section 3	x			cottonwood	20	25		
Section 4	x			cottonwood	12	30		
Section 5			x	willow				
Section 6			x	sycamore				
Section 7	x			sycamore	8	20		
Section 8	x			coast live oak	18	30		
Section 9	X			coast live oak				
Section 10			x	willow				
Section 11			x	willow				
Section 12	x			cottonwood	14	30		
Section 13			x	sycamore				
Section 14			x	willow				
Section 15	x			willow	14	20		
Section 16	x			cottonwood	8	20		
Section 17	x			willow	3	20		
Section 18	x			cottonwood	5	15		
Section 19	x				3	20		

Heavy storm flows have repeatedly damaged the river left bank of Carpinteria Creek downstream of the Gobernador Debris Basin. Two sections of the bank will be repaired this year with placement of boulders and streambed material along the toe of the eroded bank sections. Willow and mulefat cuttings will be incorporated as bio-technical bank protection. Additional native cuttings and container plants will be installed for habitat restoration.

<u>Section 1:</u>
Downstream of the basin outlet, approximately 150 linear feet of bank repair with 3,000 square feet of revegetation.

<u>Section 2:</u>
~90 linear feet of erosion repair immediately upstream of the Widdoes bridge to repair the bank and protect the bridge footings, with 1,500 square feet of revegetation.

<u>Impact Analysis and Mitigation Measures:</u>
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program

EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Carpinteria Creek - A

5/9/2025

1:2,283

0 0.01 0.03 0.06 mi

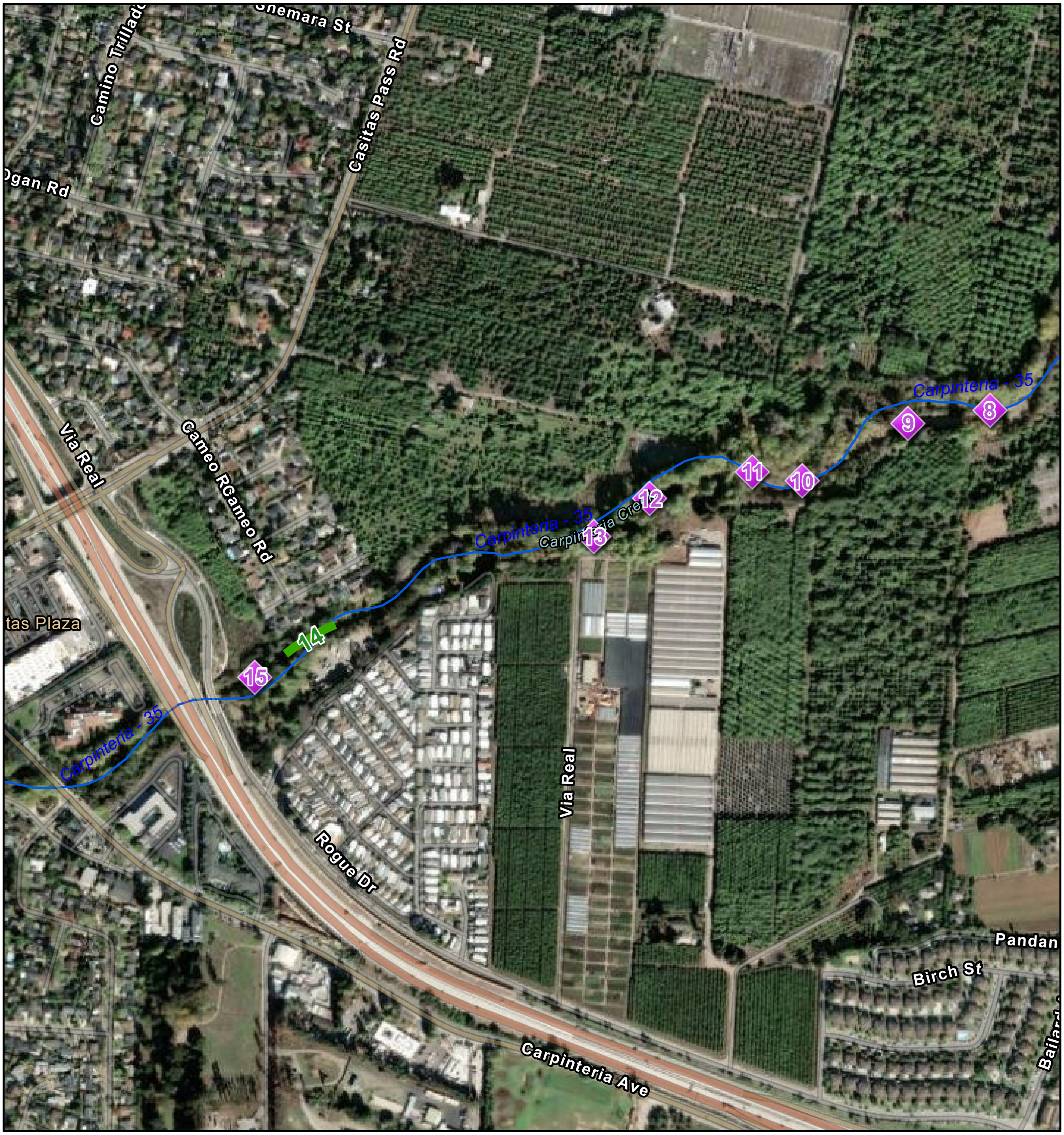
0 0.03 0.05 0.1 km

Sites25

APCreeks

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Carpinteria Creek - B



5/9/2025

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

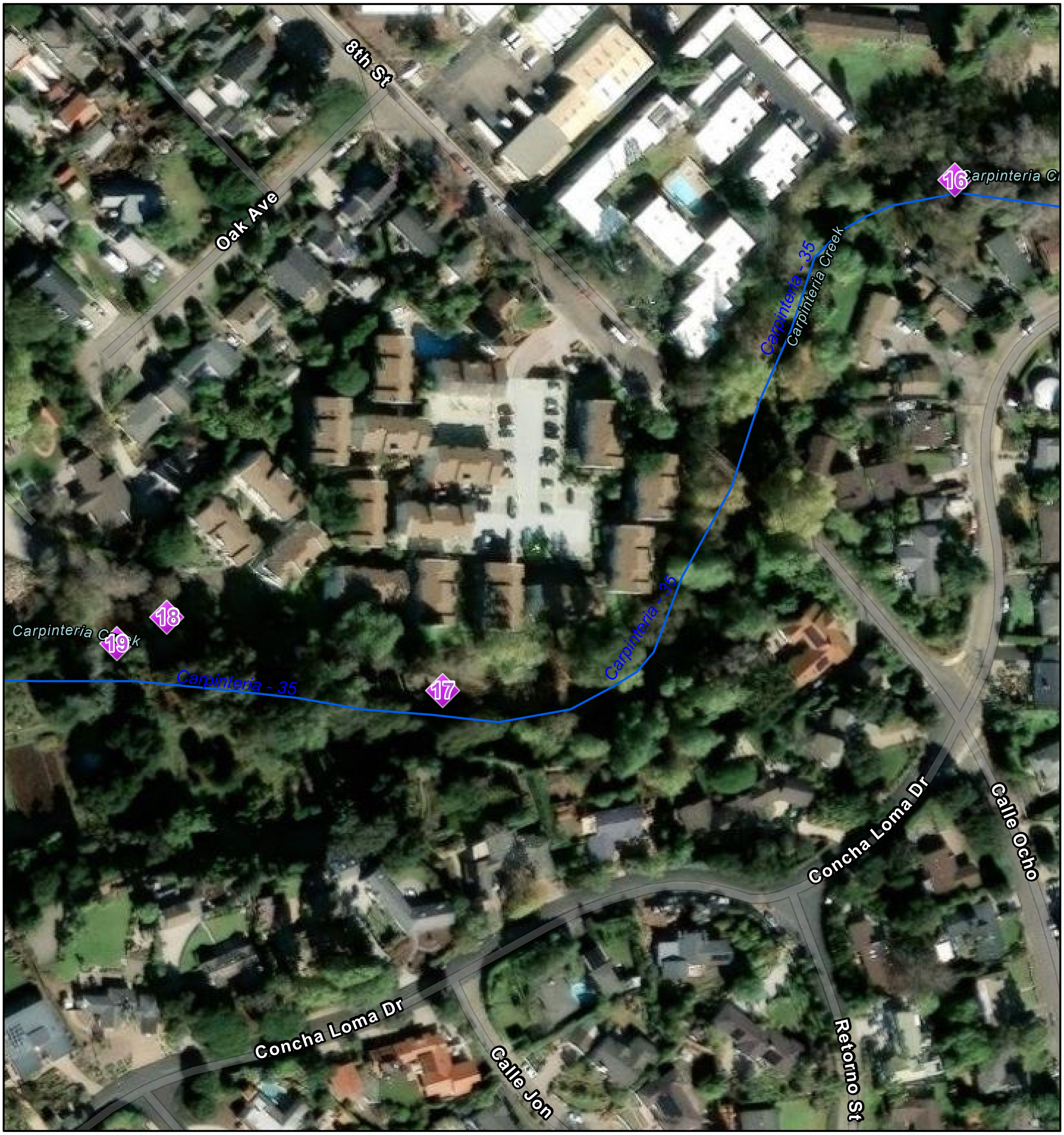
Sites25

Lengths25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Carpinteria Creek - C



5/9/2025

Sites25

APCreeks

1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 1

Section 12

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

Location:
The project begins just downstream of State Street and continues to Arboleda Road.

Setting:
Inspected on March 18, 2025.

Cieneguitas Creek originates in the foothills of the Santa Ynez Mountains and drains a 1,340-acre watershed capable of producing 2,100 cfs during a 100-year return period precipitation event.

Land uses adjacent to Cieneguitas Creek are suburban housing and light commercial. Residential streets and bike paths run alongside and cross the creek at several locations along the maintenance area. The upstream reach of the maintenance area is a drainage “spur” off of Cieneguitas main fork. The spur runs through commercial and residential properties but is confined by State Street and the Union Pacific Railroad. This portion of the creek is densely vegetated but subject to illegal dumping and homeless encampments as well as water quality impairments from adjacent parking lots.

The Cieneguitas spur joins the main stem at a Railroad culvert and from there, the channel is concrete lined for 600 feet until another culvert at Modoc Road. From Modoc downstream to Arboleda Road, the creek banks along Cieneguitas Creek are well vegetated and several large restoration projects have been implemented on this drainage between Modoc Road and Nogal, greatly improving the diversity and cover along the stream corridor. The vegetation between Modoc Road and Nogal Drive has now grown large enough for a majority of the distance to provide shading to the stream channel. Downstream of Nogal Drive the creek banks are well vegetated with mostly non-native species along private residences. There is a constant flow of water in this reach of the creek which precludes much vegetation from growing in the invert along this lower stretch. The channel generally dries up during the summer months upstream of Modoc 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.

Cieneguitas Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2002/2003	3,200	6,100	6,100	2,900
2005/2006	240	0	0	2,660
2009/2010	270	0	0	2,390
2014/2015	75	0	0	2,315
2015/2016	10	0	0	2,305
2019/2020	20	0	2,000	4,285
2020/2021	10	0	0	4,275
2023/2024	0	0	0	4,275
2025/2026	0	0	0	4,275

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 the spur is approximately 28 cfs. With a velocity of approximately 3 fps and a typical depth of 1.5 feet, the width of clearing should be 6 feet to maintain channel equilibrium. The bankfull discharge* for the main stem is approximately 90 cfs. With a velocity of approximately 4 fps and a typical depth of 2.5 feet, the width of clearing should be 9 feet to maintain channel equilibrium.

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

Project Description:

The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

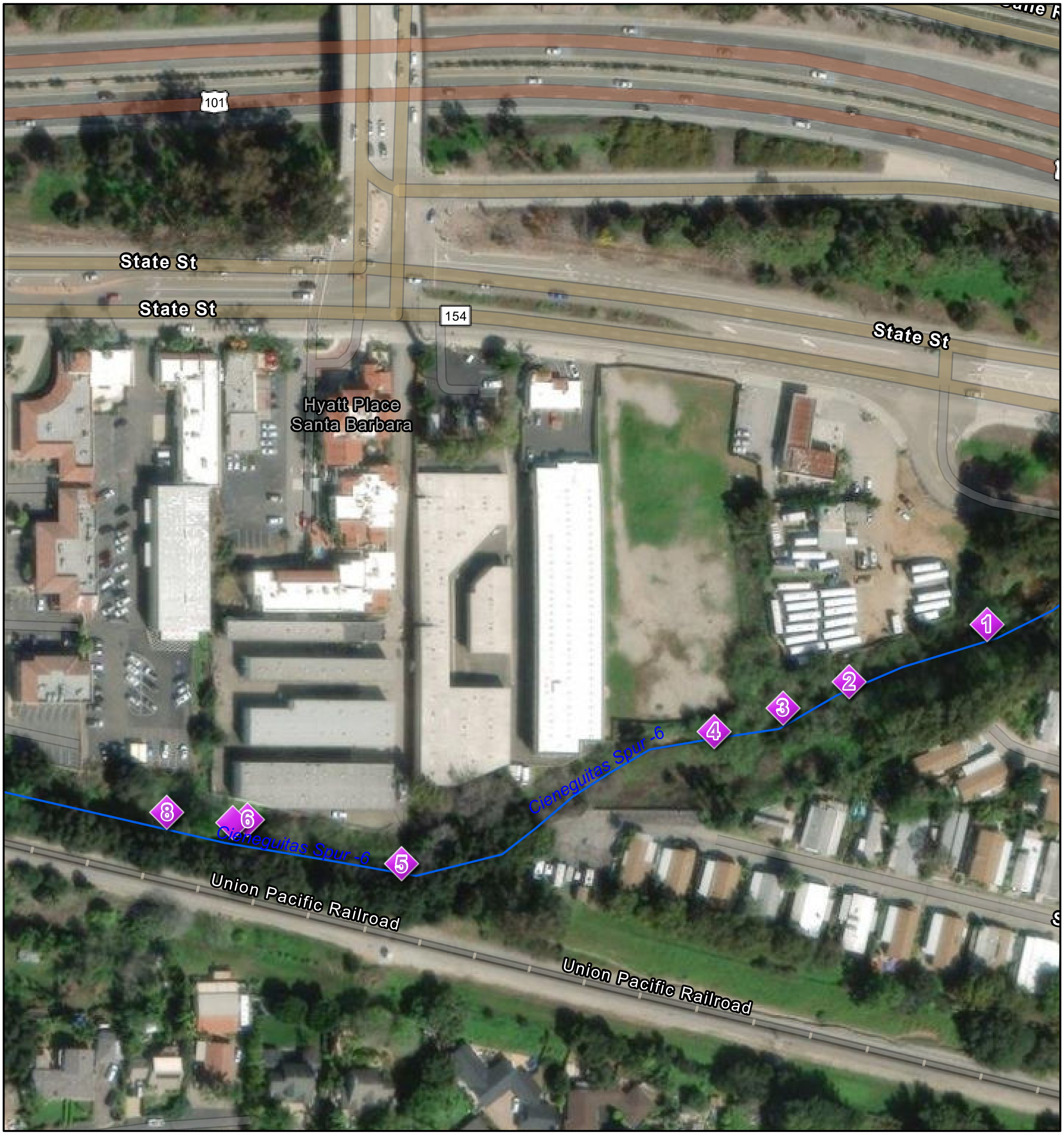
Section	Down tree/limb	Brushing (length by width, feet)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 1	x			willow	6	15		
Section 2			x	willow				
Section 3	x			willow	6	12		
Section 4			x	willow				
Section 5			x	willow				
Section 6	x			willow	5	15		
Section 7	x			willow	3	12		
Section 8	x			willow	7	20		
Section 9	x			willow eucalyptus				multiple
Section 10			x	willow				

Section	Down tree/limb	Brushing (length by width, feet)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 11	x			willow	3	12		
Section 12			x	willow				
Section 13			x	willow				
Section 14	x			willow	8	25		remove broken and lower trunks leave upper
Section 15				palm				remove palm next to bridge
Section 16	x			willow				branch
Section 17			x	willow				
Section 18	x			willow	3	15		debris plug
Section 19		x		palm				
Section 20			x	willow				

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Cieneguitas Creek - A



5/9/2025

Sites25

APCreeks

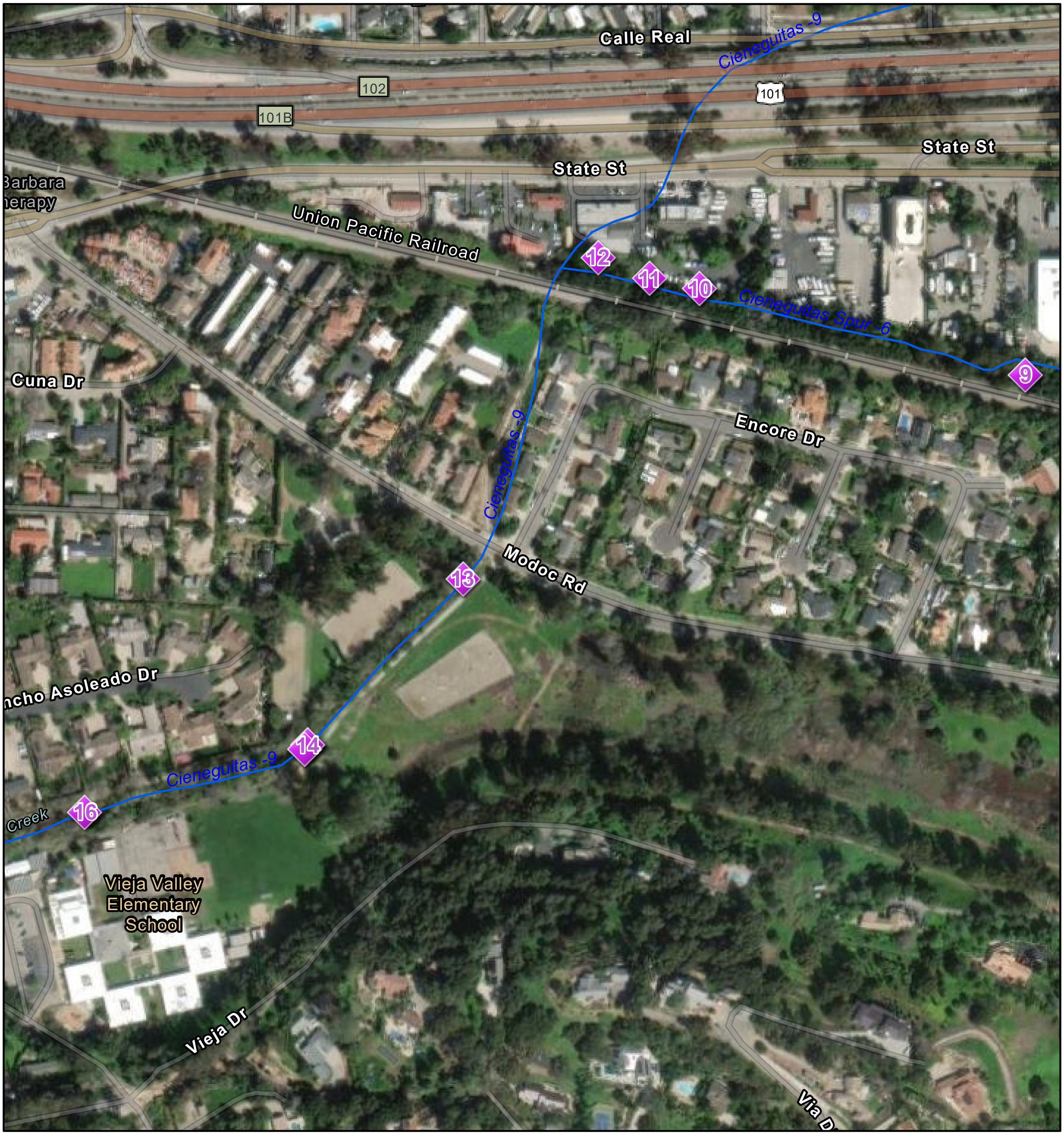
1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Cieneguitas Creek - B



5/9/2025

Sites25

APCreeks

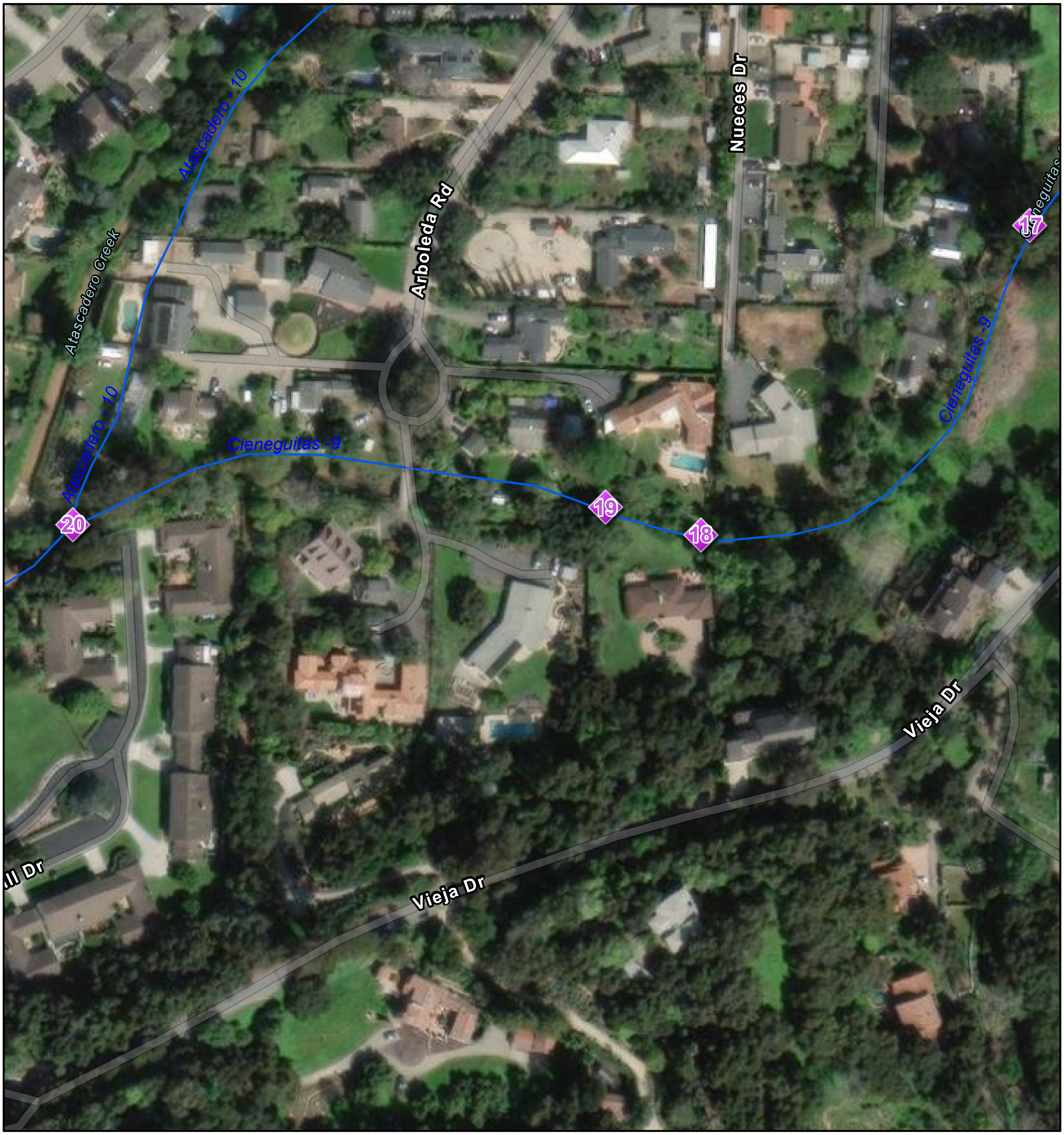
1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Cieneguitas Creek - C



5/9/2025

Sites25

APCreeks

1:2,283

0	0.01	0.03	0.06 mi	
0	0.03	0.05	0.1 km	

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 6

Section 9

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

Location:
The project begins at the northern end of Camino Rio Verde and ends upstream of Queen Ann Lane.

Setting:
The creek was inspected on April 14, 2025.

Fremont Creek originates in the foothills of the Santa Ynez Mountains and drains a 625-acre watershed capable of producing 1,400 cfs during a 100-year return period precipitation event. Fremont Creek flows into San Jose Creek upstream of Cathedral Oaks Road.

Fremont Creek begins in a steep-sided canyon amidst avocado orchards and suburban housing. The slopes become gentler as the Creek approaches Cathedral Oaks Road. In general, Fremont Creek is heavily vegetated with willow, coast live oak, sycamore and an abundance of poison oak. Other understory plants include mugwort, periwinkle and introduced Cape ivy. The District has implemented approximately 3,000 square feet of restoration along the banks; the restoration sites have filled in and are performing well to stabilize the slopes.

The substrate in Fremont Creek is silty, deep and soft which is probably due to the erosion from the orchards along this corridor. Surrounding land use is residential along the east bank with orchards on the west bank. The agriculture and back yards extend up to the top of the banks. Fremont Creek contains year-round water in the upper reaches, but may dry out in the summer near the Patterson Avenue crossing.

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.

Fremont Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2003/2004	0	3,000	0	0
2005/2006	200	3,200	3,200	3,000
2010/2011	50	0	0	2,950
2013/2014	25	0	0	2,925
2020/2021	100	0	0	2,825
2025/2026	0	0	0	2,825

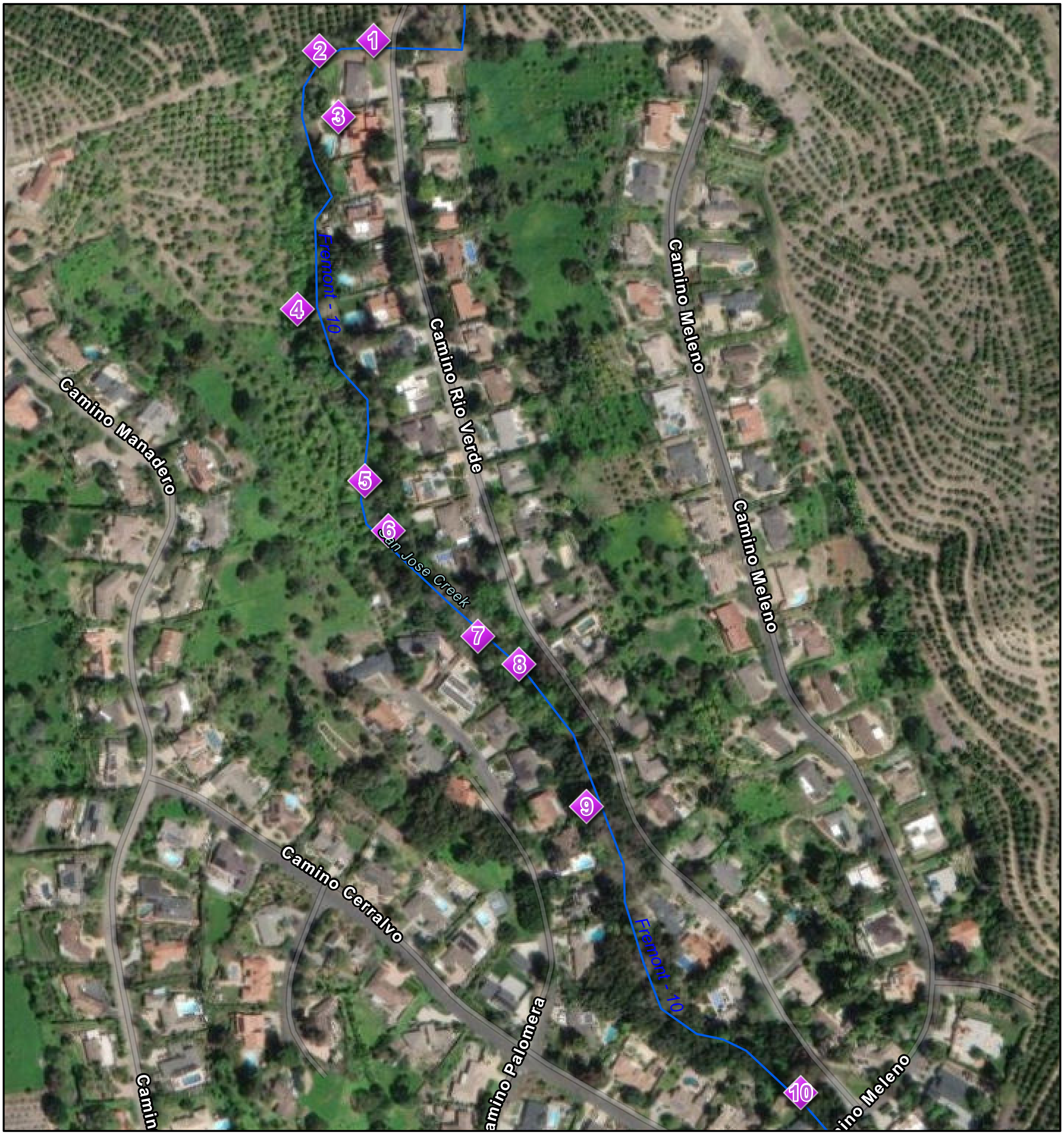
Engineering Analysis:
Portions of Fremont Creek have either downed trees, or have vegetation that is obstructive to flows and need to be removed. These obstructions can dislodge and be carried downstream where plugging of bridges can be a problem. Also, keeping the middle of the channel open helps reduce erosion and protects against loss of more trees.

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (length by width, feet)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 1	x			willow				multiple
Section 2	x			willow				branch, also trim back ivy
Section 3	x			willow	4	15		
Section 4	x			willow	3	13		
Section 5	x			willow				debris on river left
Section 6	x			willow ash	5	16		multiple
Section 7	x			sycamore	14	24		
Section 8			x	willow				
Section 9				palm				debris plug
Section 10	x			willow	4	13		
Section 11	x			willow	5	21		
Section 12	x			willow				branch
Section 13	x			willow				branch
Section 14	x			willow	15	17		3 down trees in front of culvert box

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Fremont Creek - A



5/9/2025

1:4,565

0 0.03 0.06 0.12 mi

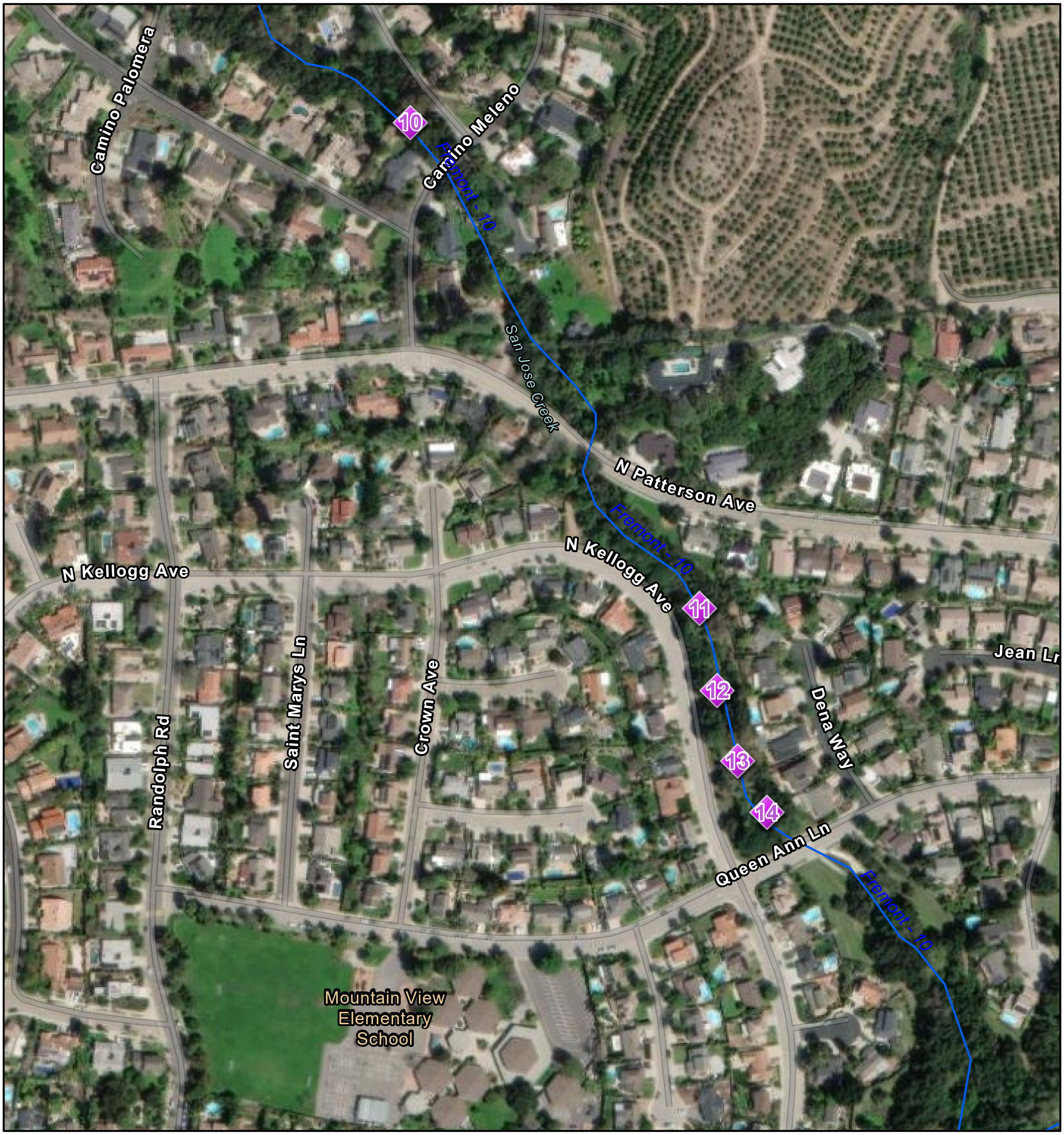
0 0.05 0.1 0.2 km

Sites25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Fremont Creek - B



5/9/2025

Sites25

APCreeks

1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 9

Section 14

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

Location:
The project begins downstream of the Alpha Resource Center, which is just below Cathedral Oaks Road, and terminates at Calle Real.

Setting:
Inspected on March 18, 2025.

Hospital Creek originates in the foothills of the Santa Ynez Mountains and drains a 900-acre watershed capable of producing 1,400 cfs during a 100-year return period precipitation event.

Hospital Creek flows through an area with very long, step, well vegetated banks. Canopy trees include oak, sycamore, elderberry and willow. Understory species include blackberry, nettle, and poison oak along with numerous non-native species. The substrate consists of silt and is saturated and deep in places. The steep banks and vegetation provide shade to the channel invert. Hospital Creek generally dries up a short distance downstream of the starting point during the summer months. From the Social Services Buildings downstream, the creek is shallow and mainly vegetated with non-native species with the exception of the sycamore trees that were planted many years ago. In 2005, the District removed a large area of iceplant along the east bank just upstream of Calle Real and realigned the lower 300 feet of the channel so it would flow unobstructed through the Calle Real and Highway 101 culverts. Approximately 12,000 square feet of riparian restoration was implemented along 300 feet of the east and west banks and is doing very well. Land use upstream on Calle Real is business, 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.

Hospital Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2003/2004	500	6,000	0	-500
2005/2006	0	12,000	12,000	11,500
2007/2008	1,800	14,850	14,850	24,550
2012/2013	0	500	500	25,050
2014/2015	5	0	0	25,045
2017/2018	0	80	0	25,045
2020/2021	20	0	0	25,025
2025/2026	0	0	0	25,025

Engineering Analysis:
Removal of obstructive vegetation to maintain an approximately 8' wide channel will be performed to maintain the flow area of the creek for protection of adjacent property. Obstructive vegetation removal will reduce the potential for plugging the relatively small bridge located at the upstream

end of the Social Services building parking lot and the culvert under Calle Real and Highway 101. This bridge has plugged in the past resulting in localized flooding.

Project Description:

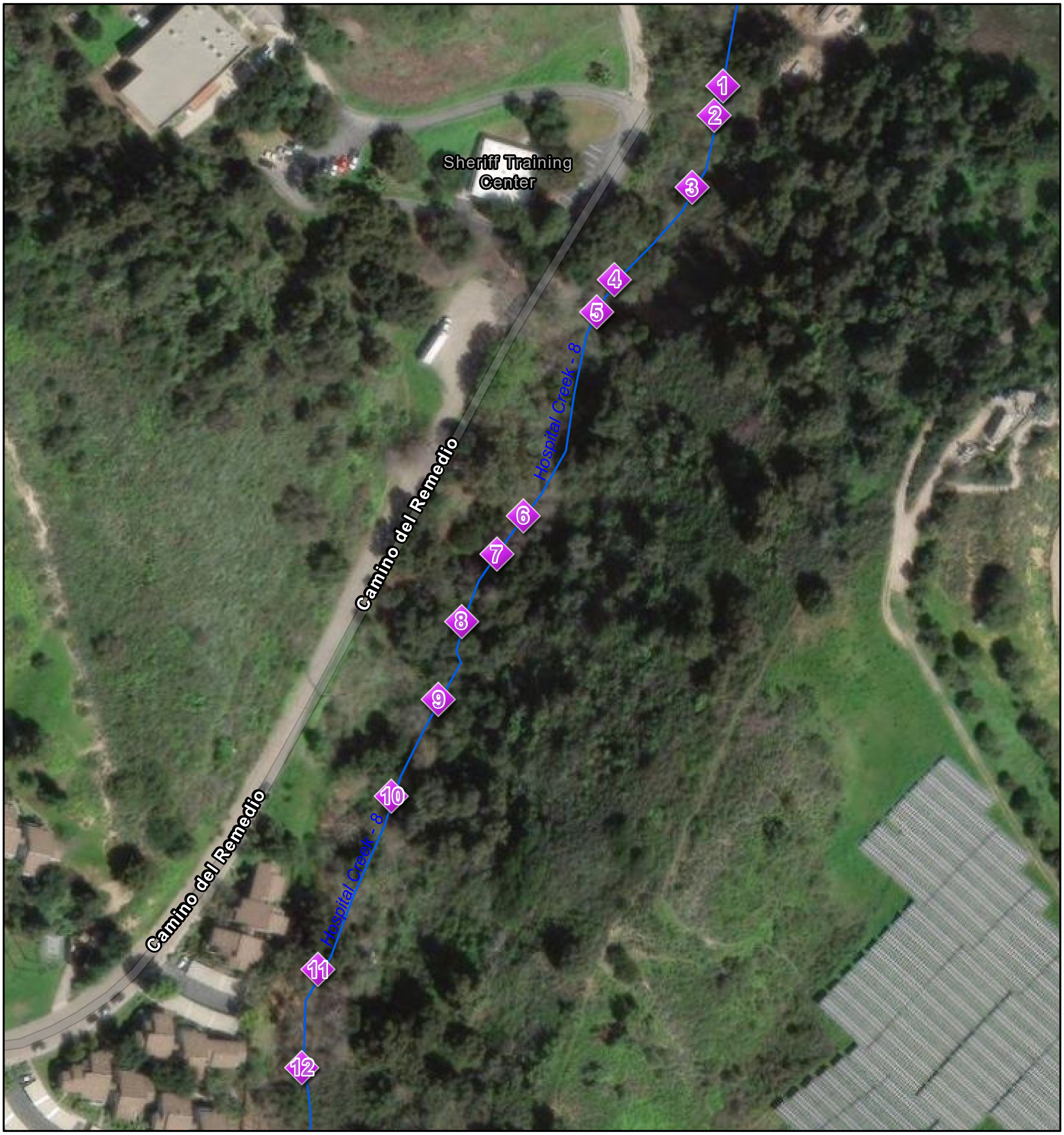
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (Area)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 1	x			willow	4	20		
Section 2		x		palm				
Section 3	x			willow	4	8		
Section 4	x			willow	5	10		debris plug
Section 5	x			sycamore	6	25		
Section 6	x			oak				branch
Section 7			x	palm				
Section 8	x			oak	8	12		
Section 9	x			willow	7	15		
Section 10		x		pampas grass				
Section 11	x			willow				multiple
Section 12	x			willow	7	25		
Section 13			x	lemonade berry				
Section 14			x	lemonade berry				

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Hospital Creek - A



5/9/2025

1:2,283

0 0.01 0.03 0.06 mi

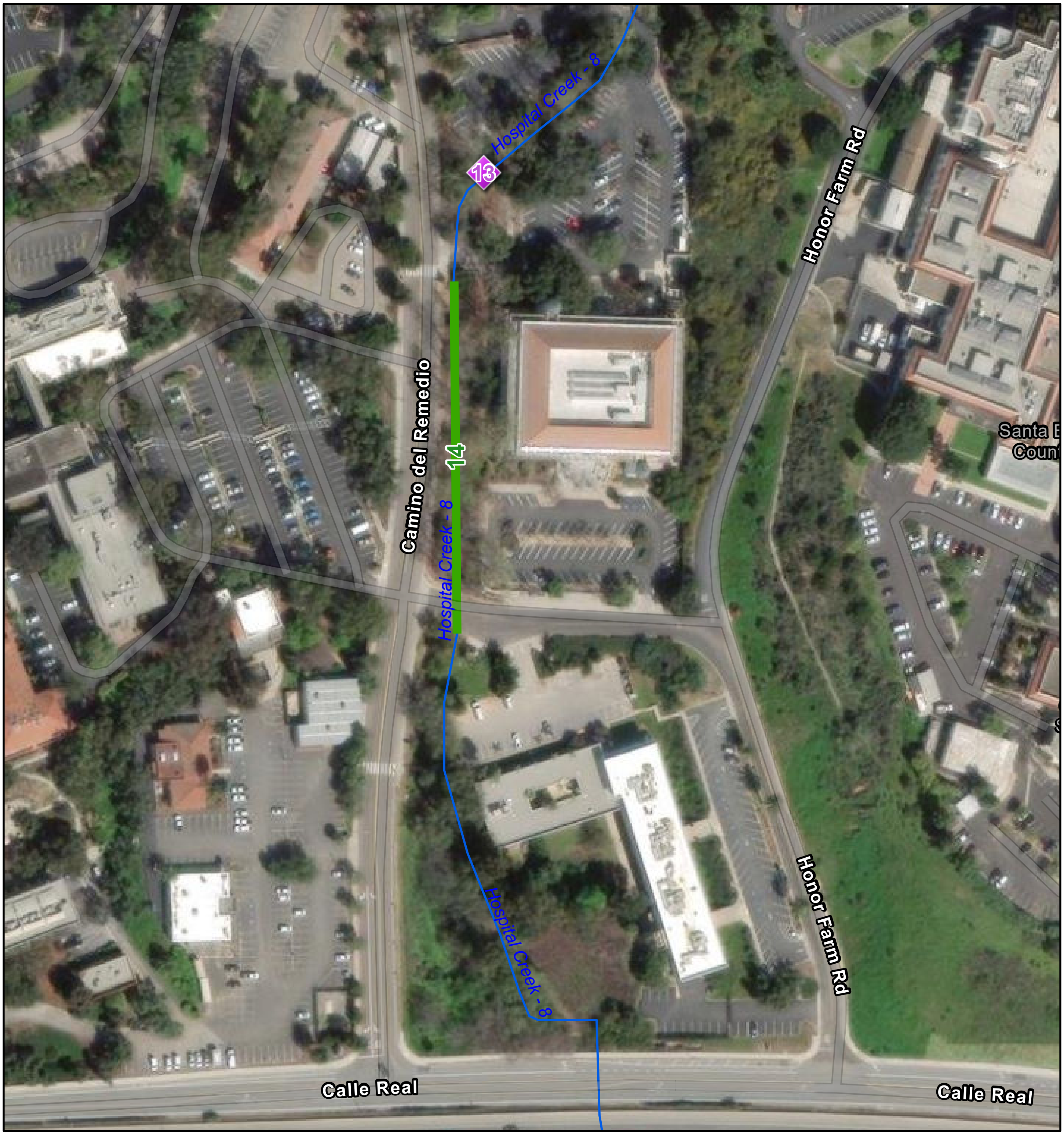
0 0.03 0.05 0.1 km

Sites25

APCreeks

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Hospital Creek - B



5/9/2025

1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Sites25

Lengths25

APCreeks

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 12

Section 14

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

Location:
The project begins at Modoc Road and continues downstream to Los Positas Place, where the concrete lined section begins.

Setting:
Inspected on March 26, 2025.

Las Positas Creek originates in the foothills of the Santa Ynez Mountains and drains a 506-acre watershed capable of producing 900 cfs during a 100-year return period precipitation event. The east bank contains many places that are reinforced with pieces of concrete stacked upon each other. To the east is Las Positas Road and to the west are homes. At the time of the field inspection the creek was still flowing and had small pools of water along the project reach. Both banks are densely vegetated mainly with willows, however the riparian corridor is narrow, as is a common occurrence along the urban drainages surrounded by development.

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.

Las Positas Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft)
2006/2007	0	0	0	0
2008/2008	0	0	0	0
2011/2012	0	0	0	0
2017/2018	0	0	0	0
2019/2020	0	0	0	0
2022/2023	0	0	0	0
2023/2024	0	0	0	0
2024/2025	0	0	0	0
2025/2026	0	0	0	0

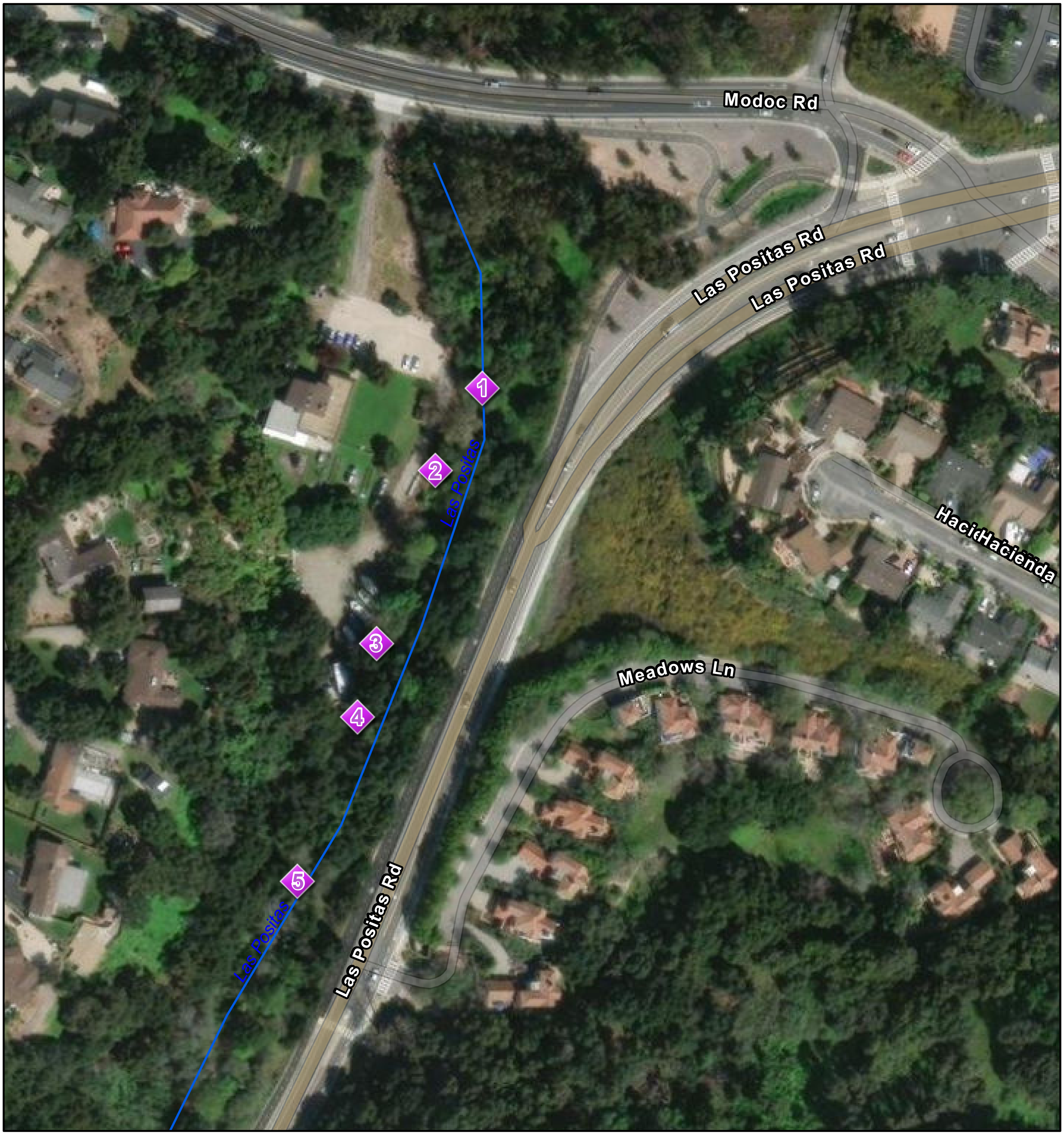
Engineering Analysis:
Vegetation within these sections can become uprooted in high flows and be carried downstream. Veronica Springs Road has two 60-inch culverts that are especially vulnerable to plugging from this vegetation. The potential for this type of flooding is minimized by trimming the low branches from the trees on the banks and by clearing the invert of debris, rubble, trash and vegetation.

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (Area)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 1								debris plug
Section 2		x		palm				
Section 3	x			willow	4	20		
Section 4	x			willow	9	10		
Section 5	x			willow				multiple branches

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Las Positas Creek



5/9/2025

Sites25

APCreeks

1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 1

Section 4

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

Location:
The project begins at Stow Canyon Road and continues to approximately 75 feet downstream of Calle Real.

Setting:
Inspected on April 10, 2025.

Las Vegas Creek originates in the foothills of the Santa Ynez Mountains and drains an 863-acre watershed capable of producing 2,300 cfs during a 100-year return period precipitation event.

The portion of Las Vegas Creek proposed for maintenance runs through residential and commercial properties with more than half of the distance lined on both sides with pipe and wire revetment which was installed when the residential areas were developed many years ago. The banks are vegetated with canopy trees such as oak, willow, sycamore and elderberry along with some non-native ornamental acacia. Understory vegetation consists of blackberry, mugwort, gooseberry, California rose, and clematis. Over the past 15 years, the District, surrounding homeowners associations and businesses have implemented a great deal of restoration and the corridor is much healthier than is was in the past both with the amount of native cover on the banks as well as the diversity of plant species. Upstream of the proposed maintenance, the channel is concrete lined between Cathedral Oaks Road and Stow Canyon Road.

The creek will likely be dry through the summer and maintenance season. The channel bottom consists of silt and sand. The District has an access road downstream of Shirrell Way that runs between the creek and nearby homes.

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.

Las Vegas Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2002/2003	5,350	5,500	5,550	200
2005/2006	200	5,850	5,850	5,850
2007/2008	320	0	0	5,530
2010/2011	150	0	0	5,380
2012/2013	530	500	500	5,350
2013/2014	0	0	0	5,350
2020/2021	150	0	0	5,200
2022/2023	30	0	0	5,170
2025/2026	115	0	-	5,055

Engineering Analysis:

Las Vegas Creek from Stow Canyon Road to Calle Real is fairly flat (slope =.0068ft/ft) and can be subject to sedimentation, particularly where obstructive vegetation is present which increases channel roughness and reduces channel capacity. Additionally, because this channel is confined between pipe and wire revetment in a relatively straight line, the channel cannot substantially meander but instead down-cuts to dissipate energy. The combination of the pipe and wire and obstructive vegetation has created a down-cut meandering low flow channel that is threatening the pipe and wire revetment which must stay in place because the creek was improved from Stow Canyon to Shirrel Way as a condition of approval for the adjacent residential development (The Meadows Tract 13,446).

In order to protect the pipe and wire revetment and maintain channel capacity, obstructive vegetation must be removed within the bankfull discharge width and the low flow channel must be reestablished down the middle of the channel.

The bankfull discharge* for Las Vegas Creek within these maintenance sections is approximately 75 cfs. With a velocity of approximately 3.5 fps and a typical depth of 2-feet, the width of clearing should be 11-feet to maintain channel equilibrium.

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

Project Description:

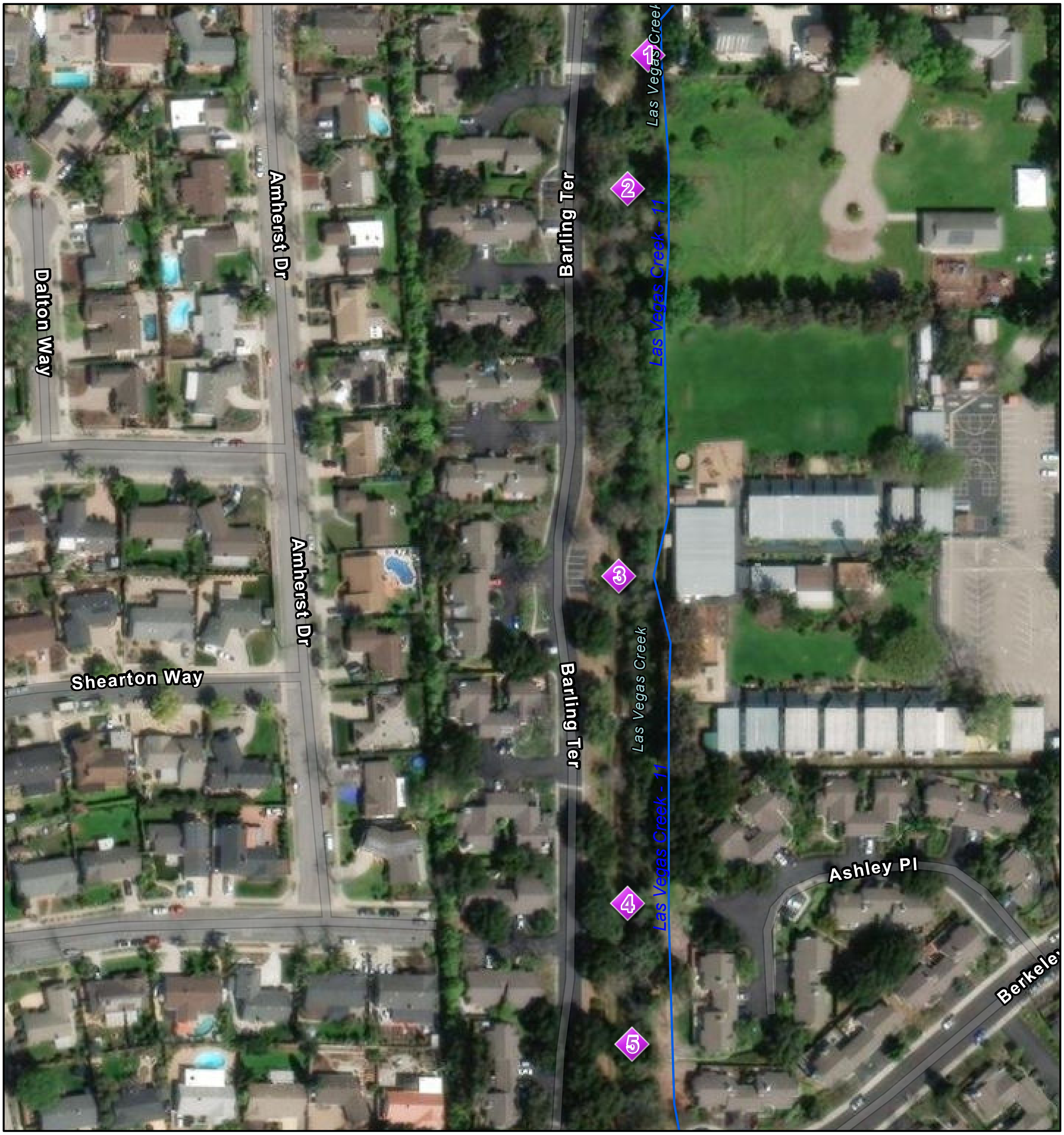
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 1		20'x5'		cottonwood			25	
Section 2		50'x4'		cottonwood			35	
Section 3	x			willow	4	15		
Section 4		2'x2'		acacia			0; non-native	
Section 5			x	acacia				
Section 6								debris plug
Section 7			x	lemonade berry, walnut				
Section 8	x			willow	8	30		multiple trunks
Section 9			x	pepper tree				
Section 10		30'x5'		cottonwood			25	
Section 11			x	ash				
Section 12	x			willow	14	30		
Section 13	x			willow	3	20		
Section 14	x			willow	4	15		
Section 15			x	ash				
Section 16		30'x10'		willow, cattail, palm			30	

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Las Vegas Creek - A



5/9/2025

Sites25

APCreeks

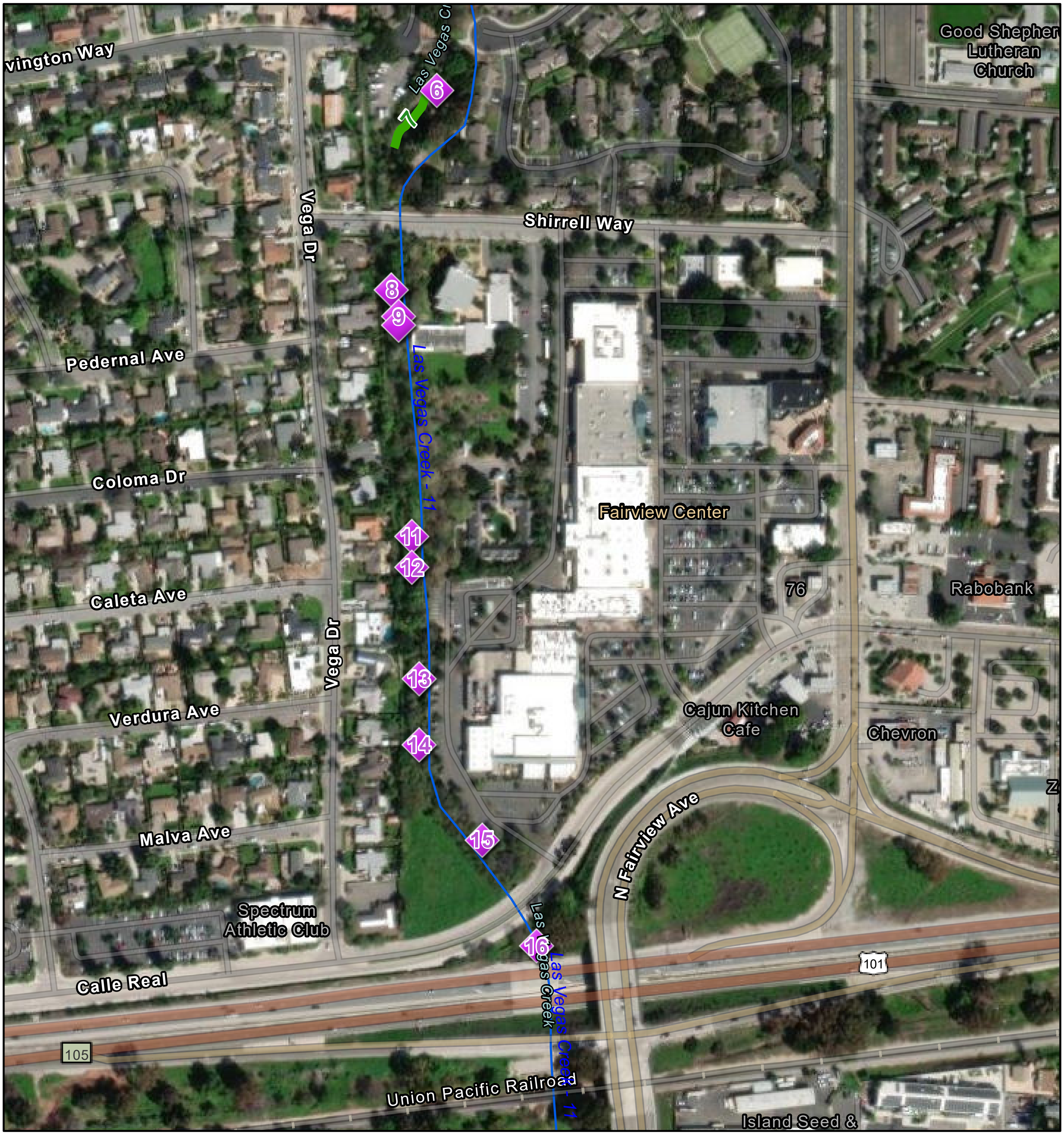
1:2,283

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Las Vegas Creek - B



5/9/2025

1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sites25

Lengths25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 3

Section 8

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 at West Yanonali Street.

Setting:
Inspected on April 7, 2025.

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 Santa Barbara Museum of Natural History 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.

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 Santa Barbara Museum of Natural History, 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	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	LCMB Bank Utilized (ft2)	Surplus Restoration (ft2)	Lg Tree Impacts	Tree mitigation installed
2002/2003	3,425	7,500	0		-3,425		
2005/2006	4,917	1,000	0		-8,342		
2006/2007	0	0	0		-8,342		
2008/2009	1,060	17,625	12,000		2,598		
2009/2010	1,080	0	0		1,518		
2012/2013	1,710	0	0		-192		
2013/2014	1,520	0	0	652	-1,060		
2014/2015	480	0	0	480	-1,060		
2015/2016	1,400	0	0	2,460	0		
2016/2017	105	0	0	105	0	1 willow 8" DBH	
2017/2018	0	0	0		0		
2018/2019	175	0	0		0		
2019/2020	60	0	0	235	0	0	10:1 willows
2020/2021	215	80	0	215	0		
2021/2022	180	0	0	180	0		
2022/2023	0	0	0	0	0		
2023/2024	185	0	0	185	0		
2024/2025	10	500	0	10	0		
2025/2026	0	0	-	0	0		

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 U.S. Highway 101 is approximately 351 cfs. With a velocity of approximately 6 fps and a typical depth of 2.5 feet, the width of clearing should be 24 feet to maintain channel equilibrium.

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

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 1		x		fig				no mitigation; non-native
Section 2	x			sycamore				branch
Section 3	x			acacia	6	25		
Section 4	x			willow	7	10		
Section 5	x			willow	6	10		
Section 6	x			eucalyptus				branch
Section 7			x	coast live oak				
Section 8								see section 8
Section 9								repair access ramp
Section 10			x	willow				
Section 11		30’x5’		willow, white alder			0; previously mitigated	
Section 12			x	arundo				
Section 13		30’x20’		willow, alder			0; previously mitigated	
Section 14		20’x10’		willow			0; previously mitigated	
Section 15	x			tree of heaven	10	30		
Section 16			x	arundo				
Section 17		20’x5’		willow			0; previously mitigated	
Section 18								see section 18
Section 19		25’x10’		cattail			0; previously mitigated	
Section 20		200’x15’		cattail				see section 20

Section 8:
A loose plastic pipe within the creek bottom has the potential to catch debris or cause a debris plug. District maintenance will assess the pipe and remove.

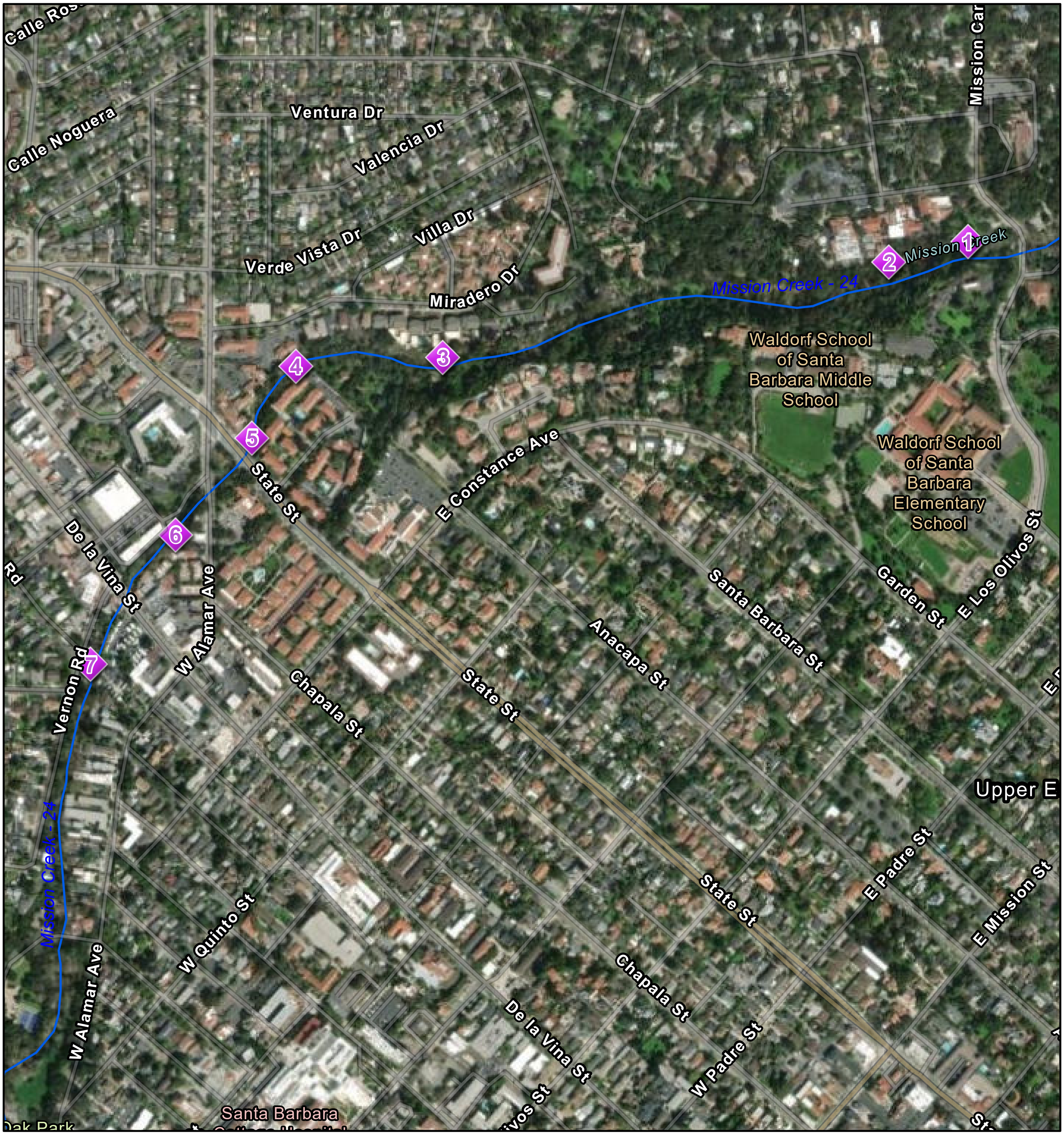
Section 18:
Flood Control District crew or a contractor will trim vegetation along the top of the bank of Mission Creek at West Gutierrez Street to allow for removal and relocation of a part of a fence, block wall, fire hydrant and air/vacuum valve currently located at the top of the bank. The infrastructure will be relocated further away from the top of the creek bank. An access gate will be installed in place.

The site is within an urban part of the City of Santa Barbara adjacent to West Gutierrez Street and a condo complex. All work will be performed outside of the creek bed at the top of bank and in the existing sidewalk and parkway. Vegetation immediately adjacent includes non-native Mexican blood flower (*Amphilophium buccinatorium*), American century plant (*Agave americana*), and swan-neck agave (*Agave attenuata*). Minor limbing of arroyo willow (*Salix lasiolepis*) and sycamore (*Platanus racemosa*) branches may be needed to access the work area. District biologists will perform nesting bird surveys of the access improvement site and adjacent areas. District biologists will monitor work to ensure the Mission Creek riparian habitat is not encroached. Work is planned for 2025 with a duration of approximately 1 to 1.5 months.

Section 20:
This section of the channel is concrete lined and has accumulated sediment and obstructive weedy vegetation has sprouted. The vegetation will be brushed.

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Mission Creek - A



5/9/2025

Sites25

APCreeks

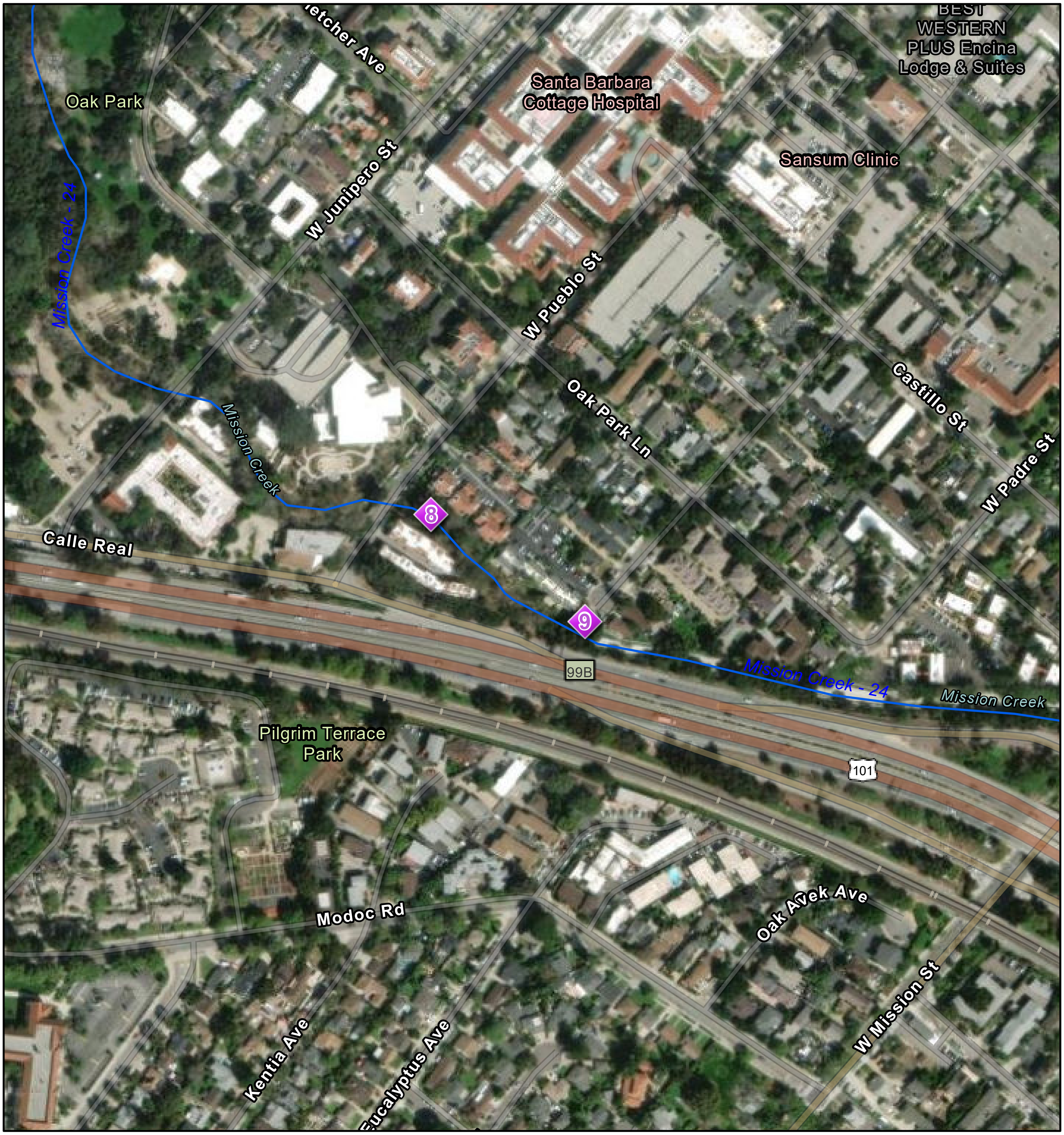
1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Mission Creek - B



5/9/2025

1:4,565

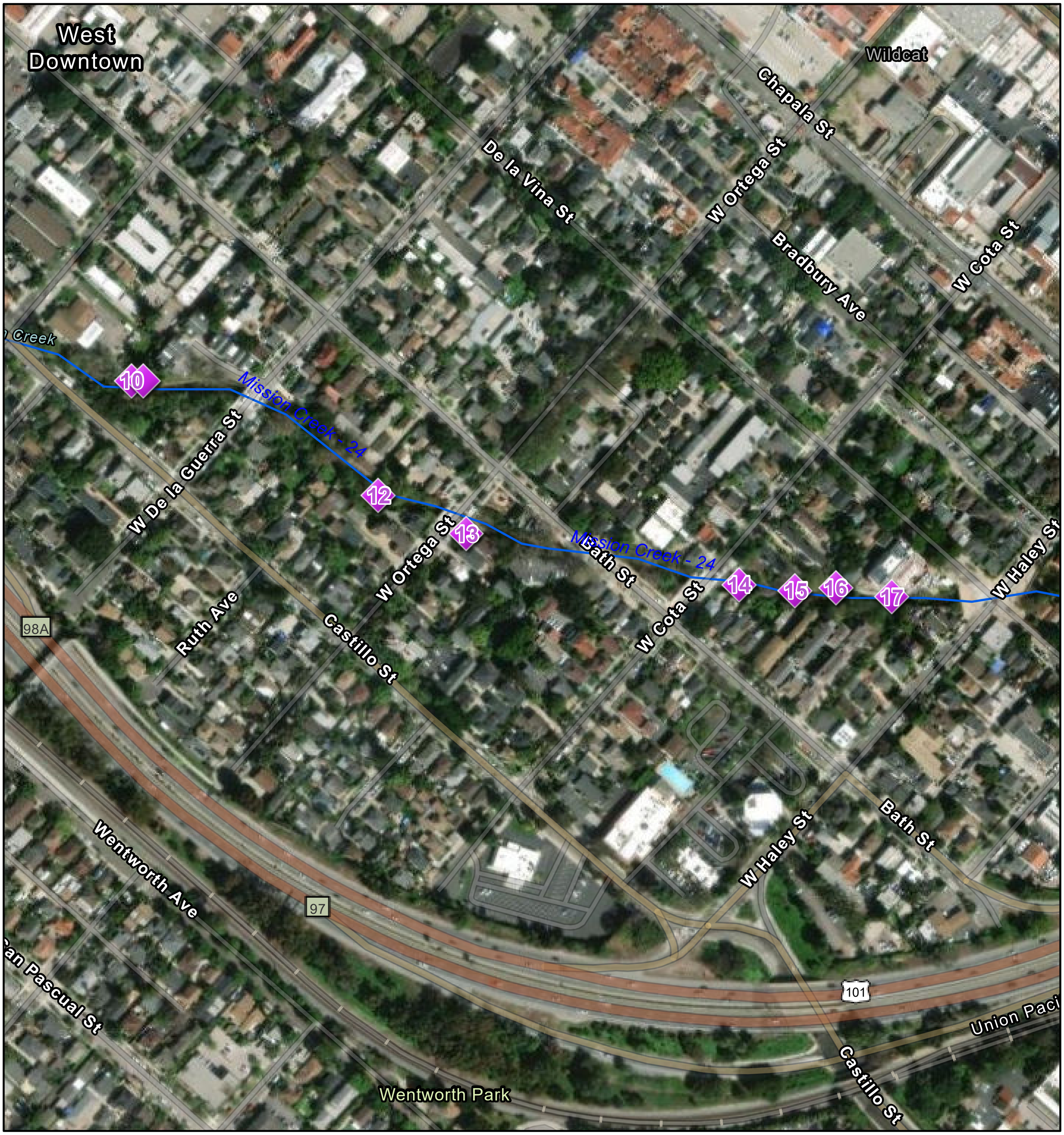
0	0.03	0.06	0.12 mi
0	0.05	0.1	0.2 km

Sites25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Mission Creek - C



5/9/2025

Sites25

APCreeks

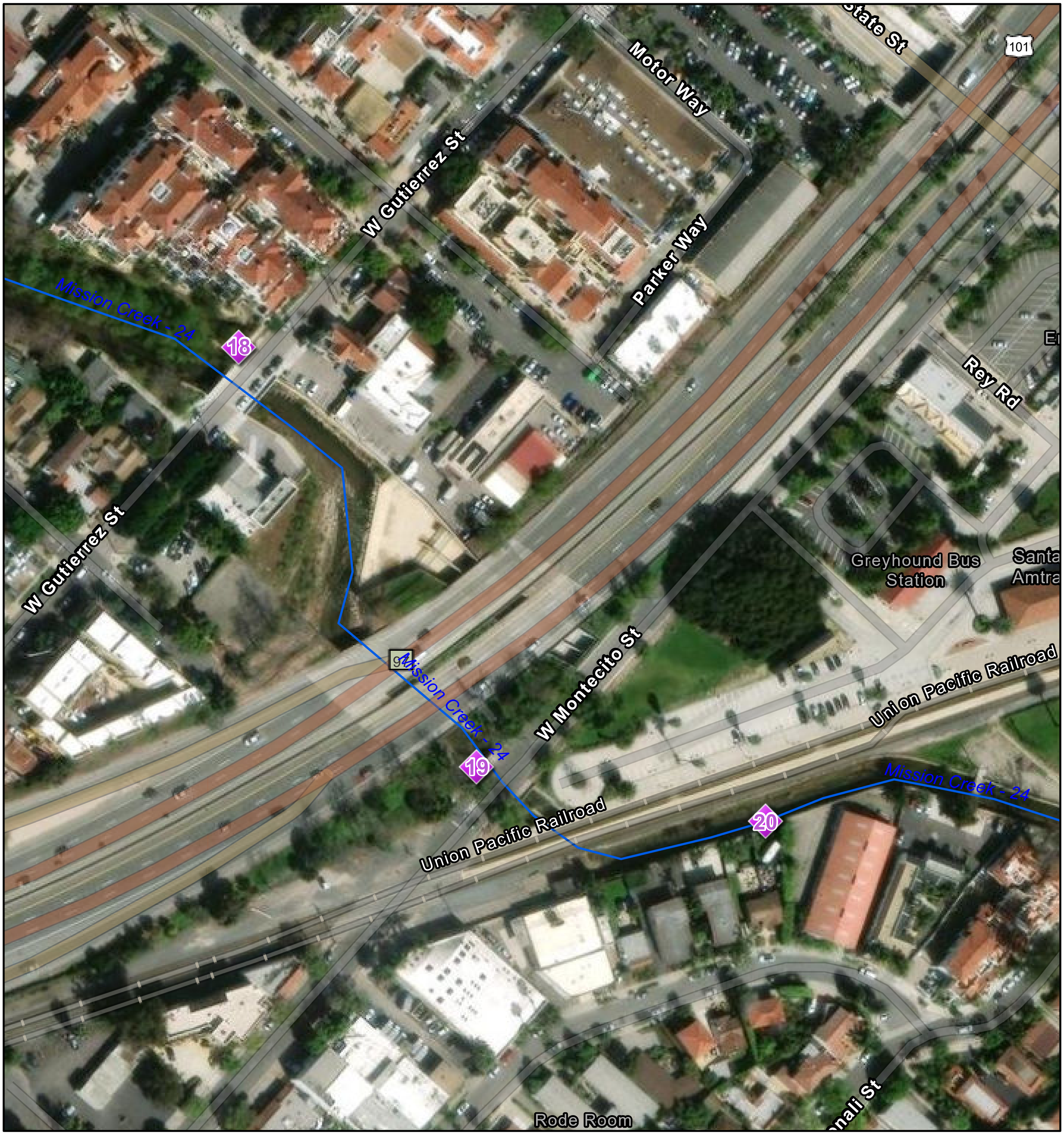
1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Mission Creek - D



5/9/2025

1:2,283

0	0.01	0.03		0.06 mi
0	0.03	0.05		0.1 km

Sites25

APCreeks

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Section 5

Section 18

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

Location:
The project beings at East Valley Road and terminates at the confluence with Romero Creek.

Setting:
Inspected on March 24, 2025.

Picay Creek originates in the Santa Ynez Mountains and drains a 626-acre watershed capable of producing 1,400 cfs during a 100-year storm event. Picay Creek is a small tributary to Romero Creek that runs along a bridle trail and under several small road crossings. Overhanging willows are common along the narrow riparian corridor. The substrate is rocky with small pools throughout most of the project reach. Vegetation growing in the invert and the banks includes willow, sycamore, poison oak, clematis, and large amounts of vinca and nasturtium. The creek contained water at the time of the inspection but generally dries up during the summer months. Land use surrounding Picay Creek includes large acreage residential, medium-density residential, and open space with mixed native and exotic/landscape vegetation.

Picay Creek is part of the District's annual creek inspections, but very seldomly requires maintenance. The last time this creek corridor was maintained under the Annual Maintenance Plan was in 2022, and in 2020 and 2015 before that. The creek is well vegetated with dense vegetation along the creek banks.

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.

Picay Creek					
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	LCMB Bank Utilized (ft2)	Surplus Restoration (ft2)
2010/2011	0	0	0		0
2015/2016	0	0	0		0
2020/2021	135	0	0	135	0
2022/2023	35	0	0	35	0
2025/2025	0	0	-	0	0

Engineering Analysis:
Obstructive vegetation in the flow way of the creek can be detrimental for many reasons, including: the tendency for it to hinder the conveyance capacity of the creek which will tend to raise the water surface elevations; the tendency for it to direct flows into adjacent banks, which can lead to bank erosion; the tendency for it to trap additional debris flowing down the creek,

which can lead to a bigger debris plug; and a tendency for the accumulated debris to break loose and potentially clog downstream culverts and bridges, which would increase water surface elevations and lead to a break out of storm water flows out of the creek channel.

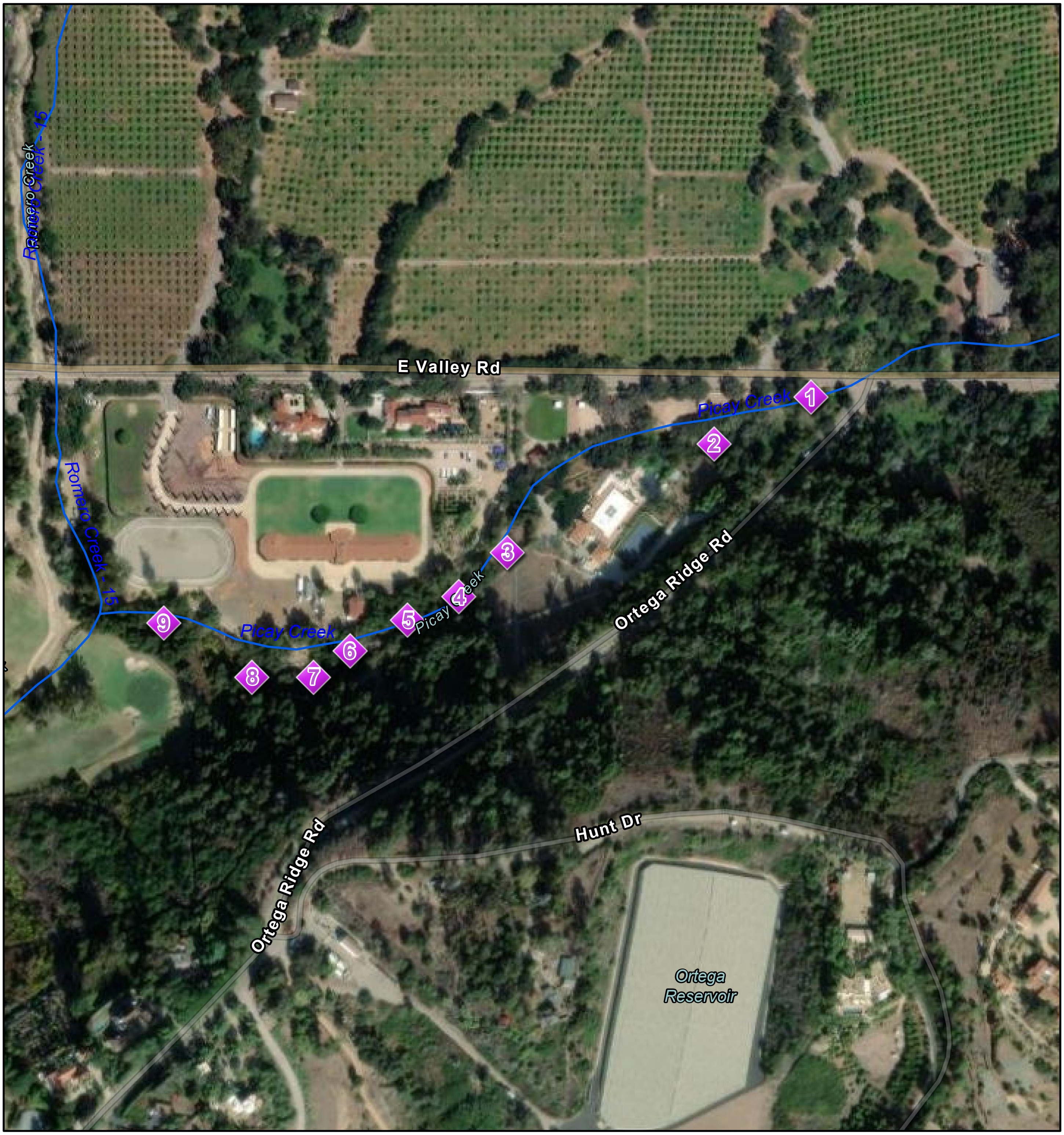
The obstructive vegetation should be removed so that it does not have a chance to accumulate and potentially lead to damaging flow conditions.

Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 1	x			willow	8	12		
Section 2	x			willow	3	15		
Section 3			x	willow				
Section 4			x	willow				
Section 5			x	willow				
Section 6								debris plug
Section 7		x		palm			0; non-native	multiple
Section 8			x	willow				
Section 9	x			willow				

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

Picay Creek



5/9/2025

Sites25

APCreeks

1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 1

Section 9

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

Location:
The project begins at Vineyard Road and terminates just downstream of Hollister Avenue.

Setting:
Inspected on March 31, 2025.

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.

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 U.S. 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:
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 Jose Creek				
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
2002/2003	1,380	12,600	12,600	11,220
2003/2004	2,650	6,200	6,200	14,770
2006/2007	0	0	0	14,770
2008/2009	1,525	0	0	13,245
2010/2011	1,000	1,000	1,000	13,245
2011/2012	0	0	0	13,245
2013/2014	1,145	0	0	12,100
2014/2015	200	0	0	11,900
2015/2016	135	0	4,600	16,365
2016/2017	85	0	2,300	18,580
2017/2018	0	0	0	18,580
2018/2019	0	6,500	6,500	25,080
2019/2020	70	0	3,000	28,010
2020/2021	260	0	0	27,750
2021/2022	0	0	0	27,750
2022/2023	50	0	0	27,700
2023/2024	20	0	0	27,680
2024/2025	10	0	0	27,670
2025/2026	550	0	0	27,120

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 feet, the width of clearing should be 21 feet to maintain channel equilibrium.

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

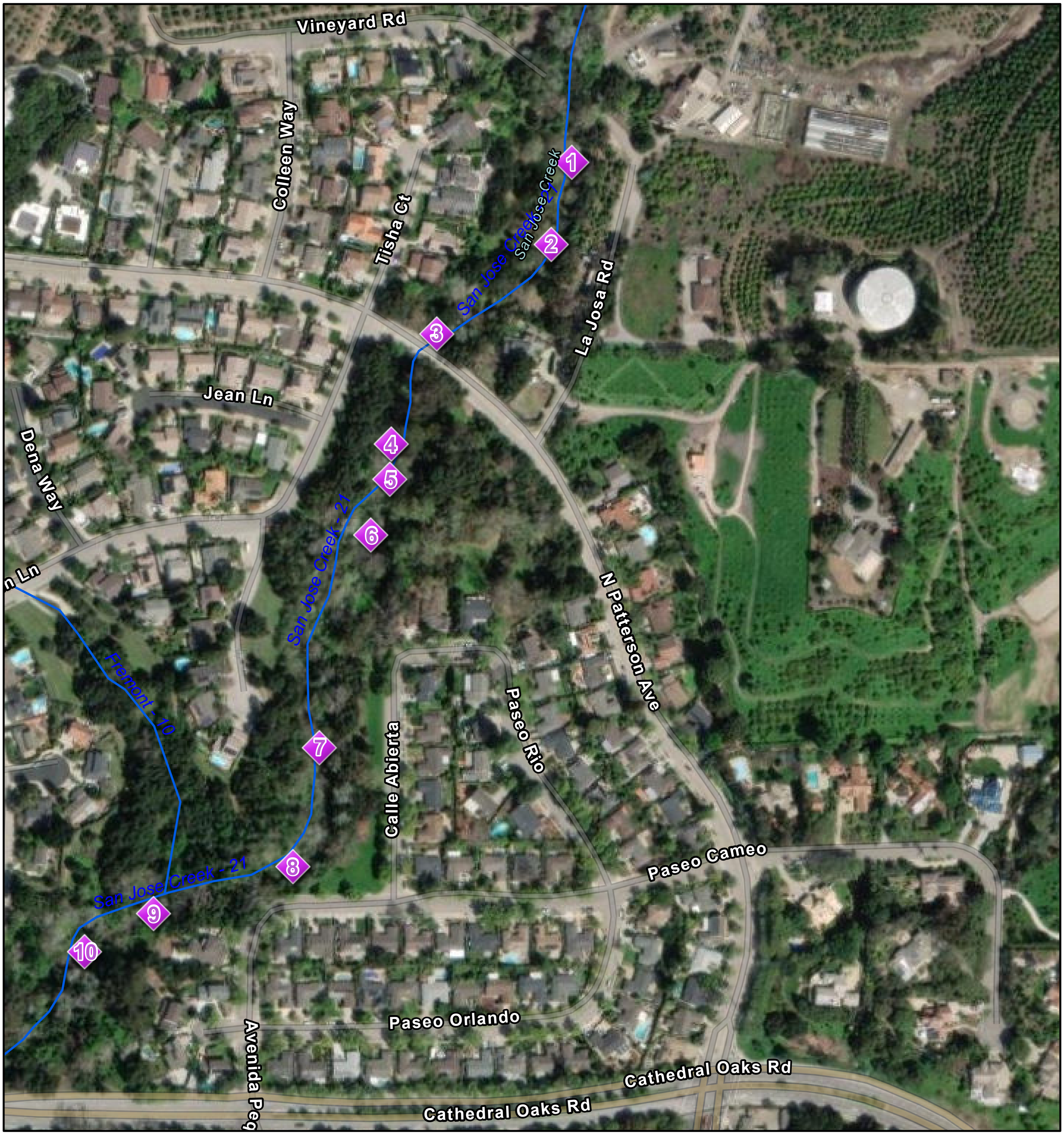
Project Description:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (Area)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 1	x			willow	6	20		cut and push up to retain for LWD
Section 2	x		x	oak arundo				remove down oak branch, limb arundo
Section 3								remove damaged section of remnant pipe and wire
Section 4	x			willow	3	18		
Section 5	x		x	willow arundo				remove down willow branch, limb arundo
Section 6			x	willow				
Section 7			x	arundo				
Section 8			x	arundo				
Section 9	x			willow	3	10		
Section 10			x	arundo				
Section 11		15x5		sycamore willow			25	
Section 12			x	arundo				
Section 13	x	12x3		willow			25	branch
Section 14		x		tree of heaven				
Section 15	x			willow				branch
Section 16	x			willow	3	17		
Section 17	x			willow	5	20		
Section 18	x			willow	3	20		
Section 19			x	willow				
Section 20	x		x	cottonwood	3	15		also limb willow
Section 21	x			willow	3	10		
Section 22							500	see below
Section 23	x			sycamore	3	10		
Section 24	x			willow	3	12		
Section 25	x			willow				multiple branches
Section 26			x	willow				

Section 22:
Willows have grown in on an accumulation of streambed material on river left, directing flows towards the right bank and the road. Willows and accumulated streambed material will be removed and placed behind the pipe and wire on river right.

Impact Analysis and Mitigation Measures:
Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

San Jose Creek - A



5/9/2025

Sites25

APCreeks

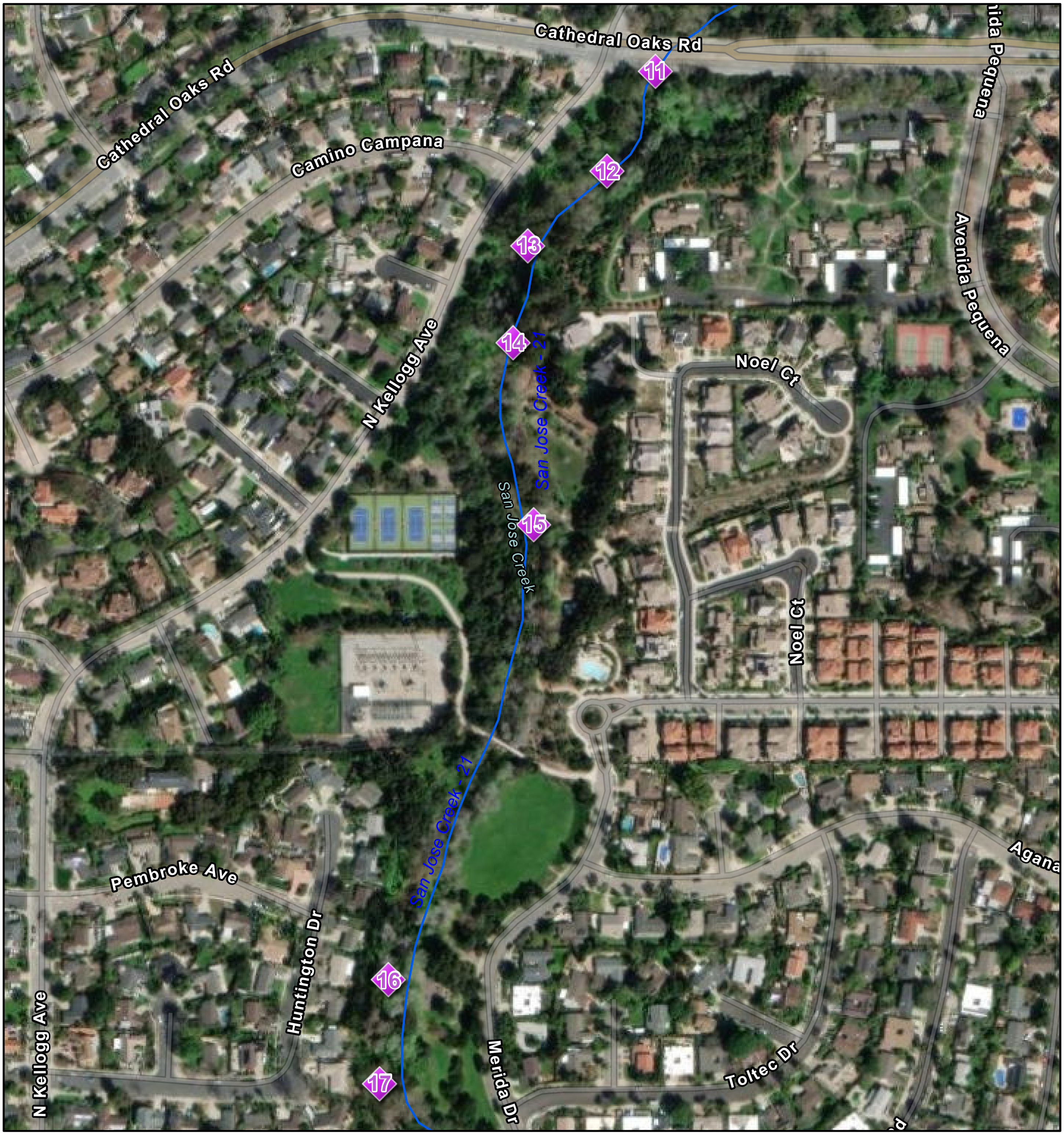
1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

San Jose Creek - B



5/9/2025

Sites25

APCreeks

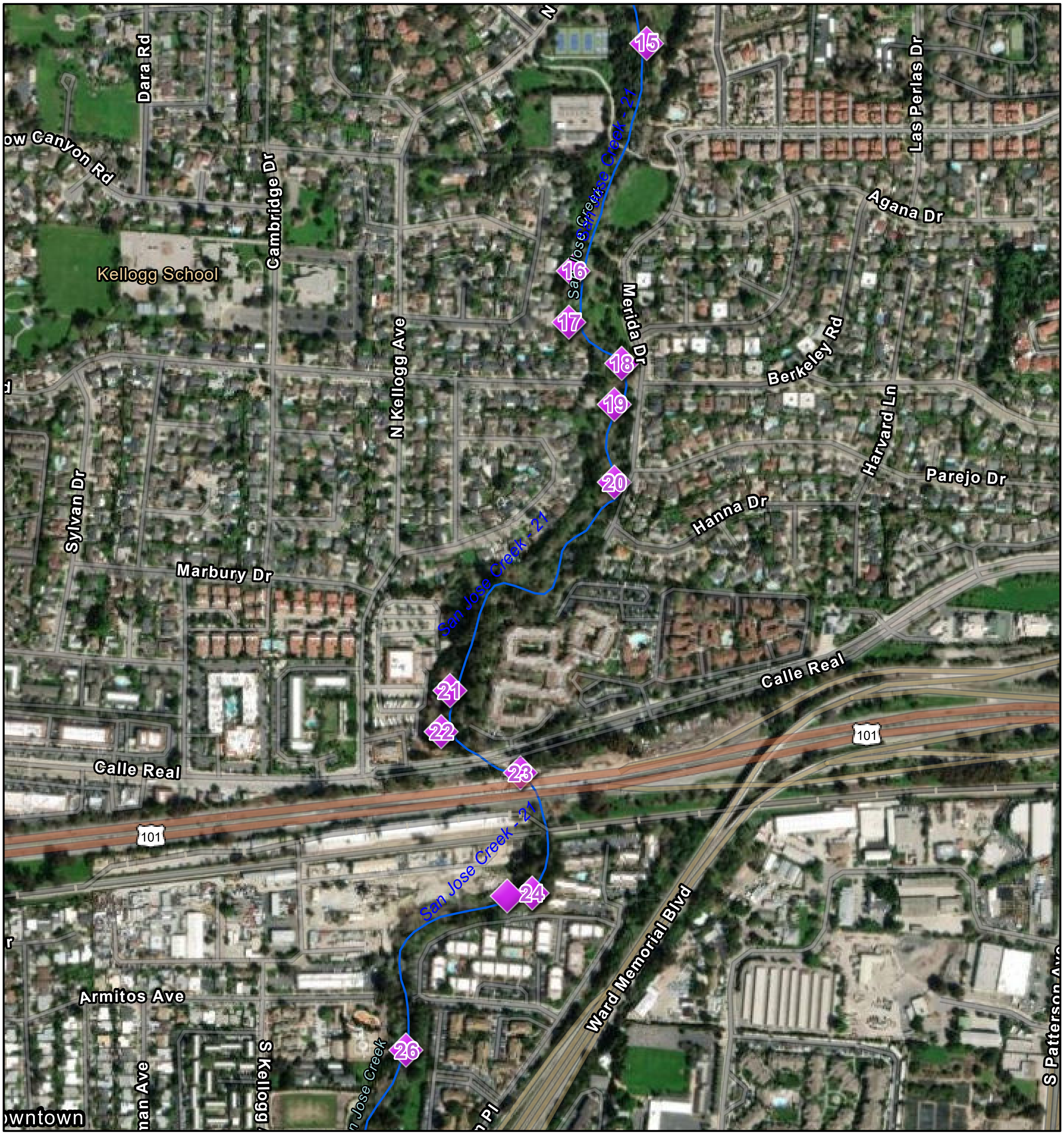
1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

San Jose Creek - C



5/9/2025

Sites25

APCreeks

1:9,130

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 22

Section 25

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

Location:
The project starts at Cathedral Oaks Road and terminates near the intersection of Fairview Road and Matthews Street.

Setting:
Inspected on March 31, 2025.

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, under U.S. 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 U.S. 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 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	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	Surplus Restoration (ft2)
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
2007/2008	120	0	0	5,050
2008/2009	225	0	0	4,825
2009/2010	200	1,000	1,000	5,625
2010/2011	0	320	320	5,945
2012/2013	600	0	0	5,345
2013/2014	100	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	700	5,475
2019/2020	100	0	500	5,875
2020/2021	350	0	0	5,525
2021/2022	100	0	0	5,425
2023/2024	110	0	0	5,315
2024/2025	0	0	0	5,315
2025/2026	0	0	0	5,315

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 feet, the width of clearing should be 16 feet 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 feet upstream of Hollister. The bankfull channel width is approximately 34 feet 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:
The maintenance tasks proposed in this drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (area)	Limbing	Species	DBH (in)	Length (ft)	Mitigation (ft2)	Additional Info
Section 1	x			oak				multiple branches
Section 2		50x10		cottonwood			prior	
Section 3	x			sycamore				branch
Section 4			x	ash				
Section 5	x			sycamore	3	15		
Section 6		30x10		cottonwood			prior	
Section 7	x			willow				branch
Section 8	x			willow	5	15		
Section 9	x			sycamore				debris plug
Section 10	x			willow	7	20		
Section 11			x	arundo				
Section 12		x		pampas grass				multiple
Section 13								see below

Section 13:
This Section is a recurring project that is performed nearly every year as part of routine maintenance. Beginning near the Santa Barbara Airport Long Term Parking 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. Upstream of the confluence with Las Vegas creek, the channel bed will be disced a width of approximately 20 feet. Just downstream of the confluence, the disced width will be 40 feet and then gradually tapers back down to 20 feet towards 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.

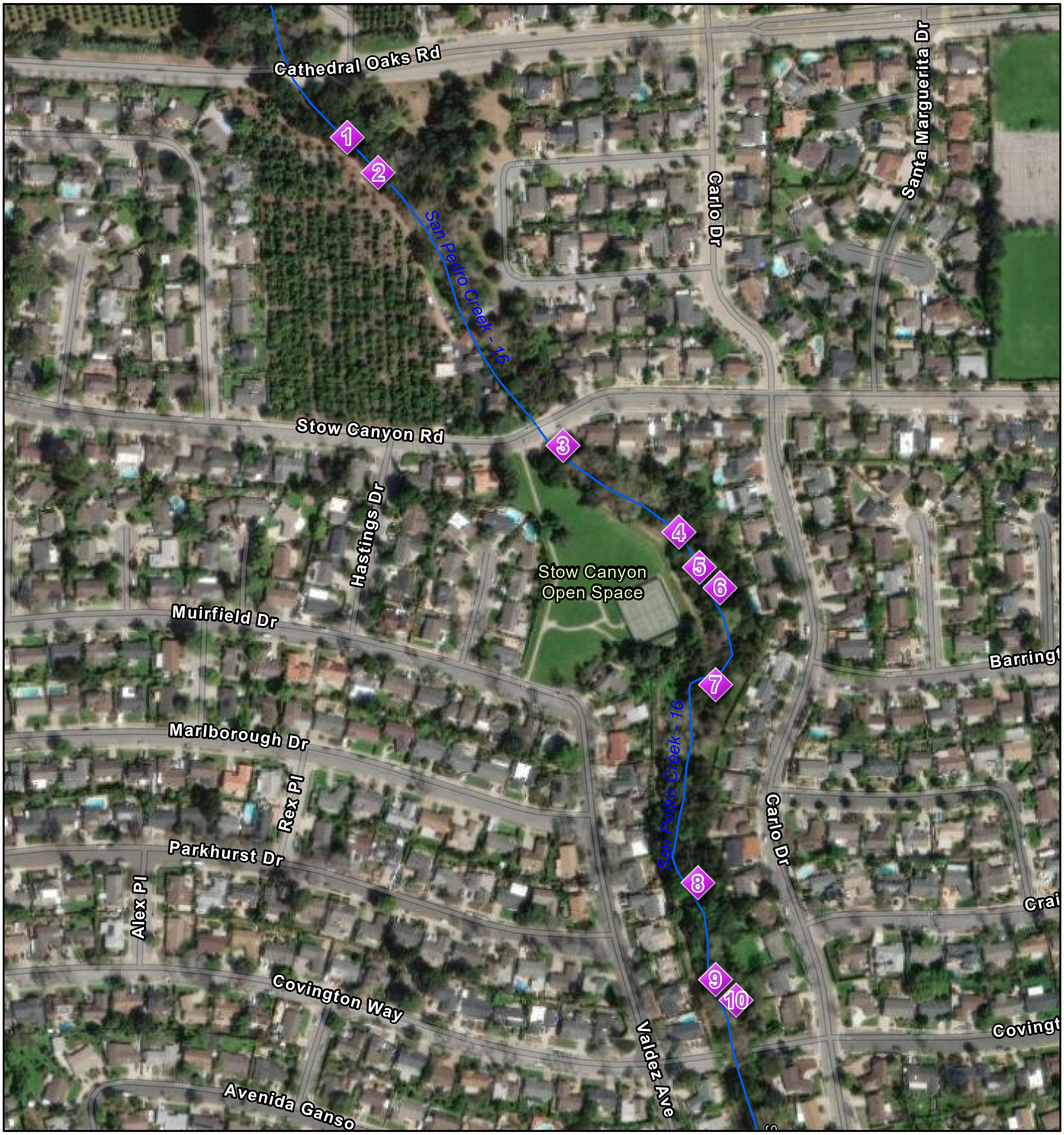
An herbicide registered for aquatic use may be applied to silt trapping vegetation in the streambed to inhibit regeneration. Herbicide may be applied in the spring and summer. The creek bed consists of recently deposited sandy sediment with almost no vegetation. A few patches of non-native rabbitsfoot grass are present, and some willows and cocklebur have sprouted around a culvert outlet connection to the channel. Less than 1 percent of the work area has native vegetation present and impacts were previously mitigated in Annual Plan 2023/2024.

This area is typically maintained every year as standard practice to facilitate drainage under Highway 101, Hollister Avenue, and the Union Pacific Railroad tracks.

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the "Impacts and Mitigation Measures" tab. Some of the impacts identified in the Program EIR are considered Class I (unavoidable significant) under the worst-case scenario assumptions of the Program EIR. However, due to the limited scope of the proposed maintenance actions and the current state of the creek, the projects covered in this addendum would not be considered a worst-case scenario. Therefore, the impacts associated with this addendum are considered Class II (significant but mitigable). 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).

San Pedro Creek - A



5/9/2025

Sites25

APCreeks

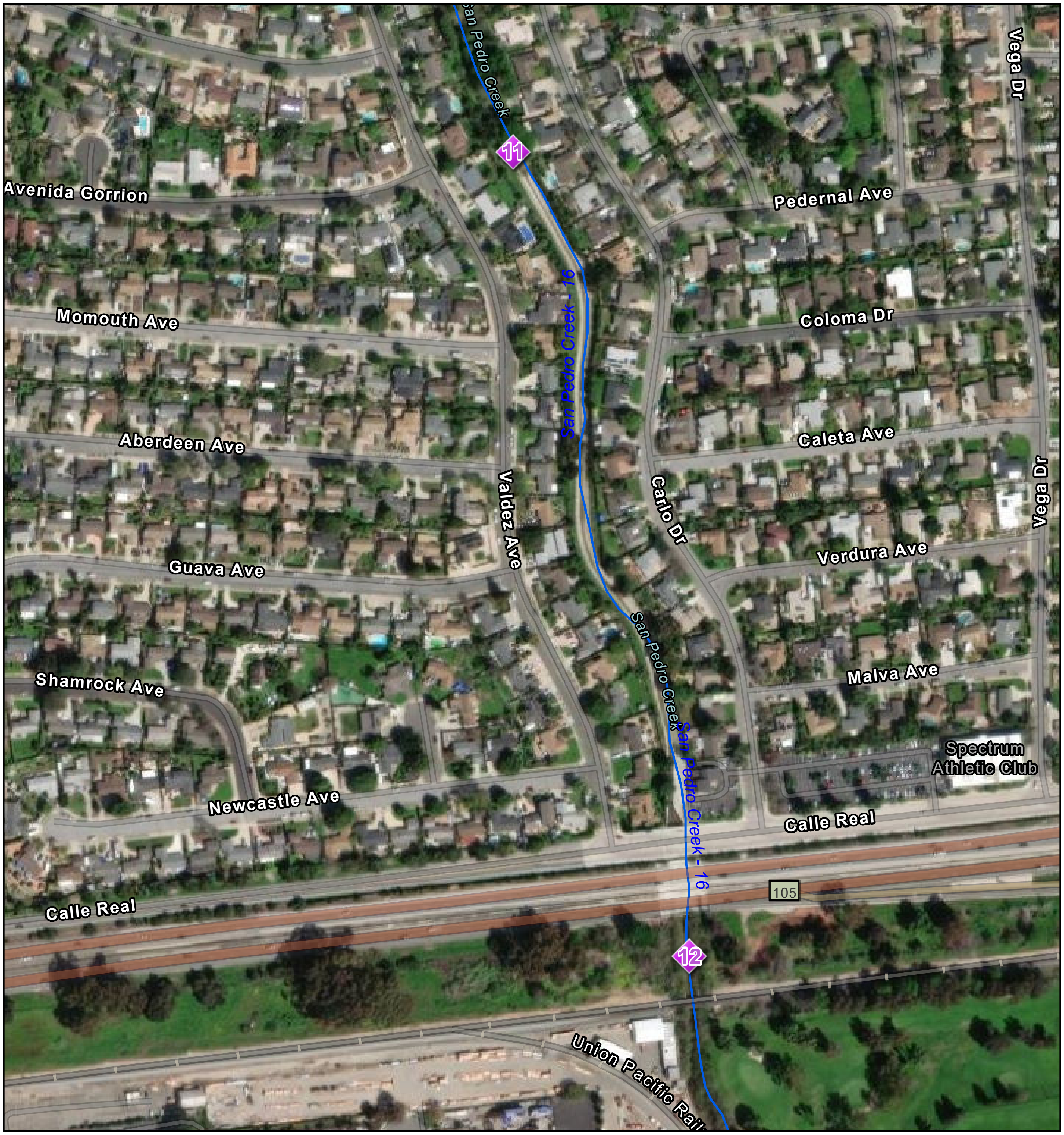
1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

San Pedro Creek - B



5/9/2025

1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sites25

APCreeks

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

San Pedro Creek - C

5/9/2025

Lengths25

APCreeks

1:4,565

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 2

Section 8

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

Location:
The project begins upstream of Cathedral Oaks Road near where Tecolotito Creek passes under Glen Annie Road and terminates at Cortona Drive.

Setting:
The creek was inspected on March 17, 2025.

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 Road 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 of Cathedral Oaks Road. From Del Norte Drive downstream to U.S. 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 U.S. Highway 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 U.S. 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 several years. The land use adjacent to the creek downstream of the U.S. Highway 101 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	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	LCMB Bank Utilized (ft2)	Surplus Restoration (ft2)
2002/2003	14,620	15,000	15,000		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	0	150	0
2018/2019	50	0	0	50	0
2019/2020	445	0	0	445	0
2022/2023	100	0	0	100	0

Tecolotito Creek					
Annual Plan Year	New Temporal Impacts to Native Vegetation (ft2)	Proposed Restoration (ft2)	Restoration Implemented (ft2)	LCMB Bank Utilized (ft2)	Surplus Restoration (ft2)
2023/2024	0	0	0	0	0
2025/2026	0	0	-	0	0

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 consists primarily of cattails and bulrush 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 feet, the width of clearing should be 17 feet to maintain channel equilibrium.

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

Project Description:

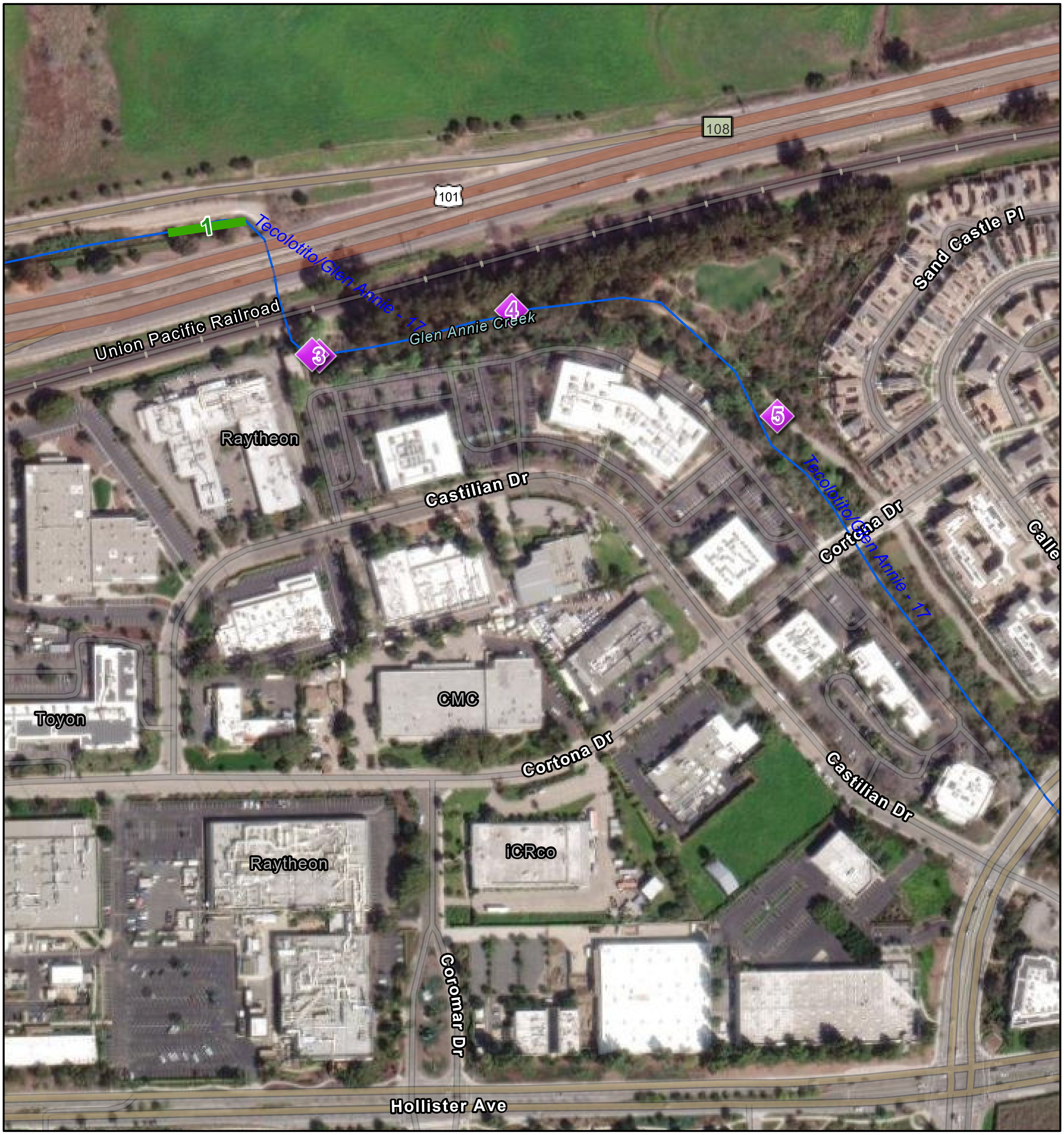
The maintenance tasks proposed in the drainage are provided below. Descriptions of each type of maintenance task are provided in the Maintenance Practices Summary section.

Section	Down tree/limb	Brushing (Area)	Limbing	Species	DBH (in)	Length (ft)	Impacts to be Mitigated (ft2)	Additional Info
Section 1		50’x5’		cattail			0; previously mitigated	
Section 2	x				5	12		
Section 3	x			willow	7	15		
Section 4	x			willow	3	15		
Section 5	x			willow	2	12		

Impact Analysis and Mitigation Measures:

Impacts and mitigation measures associated with this project have been identified in the Updated Program EIR for Santa Barbara County Flood Control Routine Maintenance Activities (01-EIR-01). Impacts and Mitigation measures can be found in the appendix to the Annual Plan under the “Impacts and Mitigation Measures” tab. Some of the impacts 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 associated with this project are considered Class II (significant but mitigable). 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).

Tecolotito Creek



5/9/2025

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Section 2

Section 5

CEQA 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 2025/2026 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 2025/2026 Annual Routine Maintenance Plan Addenda will not create any new significant effects or a substantial increase in the severity of previously identified significant effects on the environment. Therefore, since there are no substantial changes proposed in the project which will require major revisions to the Updated Routine Maintenance PEIR, no substantial changes have occurred with respect to the circumstances under which the project is undertaken, and there is no new information of substantial importance, no subsequent environmental review shall be prepared according to CEQA Guidelines Sections 15162 and 15168 (c)(2).

1.2 LOCATION OF DOCUMENTS

The documents and other materials which constitute the record of proceedings upon which this decision is based are in the custody of the Santa Barbara County Flood Control District located at 130 E. Victoria Street, Suite 200, Santa Barbara, CA 93101.

1.3 ENVIRONMENTAL REPORTING AND MONITORING PROGRAM

Public Resources Code Section 21081.6 and CEQA Guidelines Section 15091(d) require the District to adopt a reporting and monitoring program for the project and conditions of the project adopted to mitigate or avoid significant effects on the environment. The approved project descriptions, mitigation measures, with their corresponding permit monitoring requirements, are hereby adopted as the reporting and monitoring program for these projects. The District will provide the monitoring and reporting to ensure compliance during project implementation.

REVEGETATION PLAN FOR SANTA BARBARA COUNTY FLOOD CONTOL DISTRICT MAINTENANCE PROGRAM

The purpose of this plan it to outline the Santa Barbara County Flood Control and Water Conservation District's (District) plan for designing, implementing, and monitoring the restoration associated with the Annual Routine Maintenance Plan. The District's maintenance practices often require mitigation in the form of restoration. As a result, the District has gained a great deal of revegetation experience over the past 10 years and has planted more than one hundred restoration sites along creek corridors throughout Santa Barbara County.

This Plan addresses seven phases of the revegetation process: 1) Identification of native plants and potential revegetation sites, 2) Use of bio-technical approaches to bank stabilization, 3) Determination of appropriate plant quantities, 4) Plant collection and propagation, 5) Revegetation of the riparian corridor, 6) Maintenance of restoration sites, and 7) Post-project monitoring.

Identification of Native Plants and Revegetation Sites

During annual creek inspections, District personnel determine maintenance needs and associated restoration opportunities on individual creeks. In general, the District implements restoration in four different situations:

1. Denuded banks
2. Areas containing large amounts of non-native invasive species such as *Arundo donax*, castor bean, mustard or poison hemlock
3. Areas with an established healthy canopy but lacking a well-developed understory, or vice versa, due to the invasion of non-natives
4. Eroded banks that have been stabilized or rebuilt

Each creek addendum included in the Annual Routine Maintenance Plan will identify appropriate restoration that mitigates the impacts of the proposed maintenance project. The identified areas will be at densities recommended in this revegetation guide.

Bio-technical Bank Protection

Bio-technical approaches to bank stabilization use woody, readily sprouting plant species which are inserted into the banks or anchored in various other ways to create structure and stabilization by providing direct protection from erosive flows and quickly developing root systems and above ground growth to further stabilize the bank.

Bio-technical bank stabilization is not appropriate in all circumstances and is most suitable for creek restoration projects where the purpose is to reduce bank erosion, establish native vegetation on the bank, and not protect expensive structures or roads. The District will evaluate the erosion problems and flow conditions at potential revegetation sites to determine whether bio-technical techniques are appropriate and if so, the combination of techniques that would be best suited for the specific site characteristics. Common types of bio-technical bank protection are briefly described below. The District has consulted directly with Ms. Ann Riley for bio-technical design as well as referring to her book, Restoring Streams in Cities. Some examples of bio-technical techniques are shown in Figures1 through 4.

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

2. Live Stakes. This is the simplest form of bio-technical slope protection in which live cuttings of willows, mulefat, or cottonwood trees are tamped into the banks to root, grow and form a thicket of new trees.

3. Live Fascines. Fascines are dormant branch cuttings of willows bound together into long cylindrical bundles that are placed in shallow trenches parallel to the bank and buried. The branches will sprout and create a mass of new woody plants.

4. Brush Mattress. A combination of live willow stakes, fascines and individual branch cuttings are interwoven and pinned to the bank with jute cord or wire held in place with stakes. The "mattress" is then covered with soil to facilitate sprouting of the willows.

5. Tree revetment. A row of downed trees are laid parallel to the base of the bank and anchored together, and to the bank with steel cable. The trees reduce flow velocities along the base of the slope, trap sediment, and provide substrate for plant establishment.

6. Coconut Fiber Roll. Cylindrical structures composed of coconut husk fibers bound together with twine woven from coconut material are placed parallel to the slope to reduce erosion and trap sediment.

7. Reed Rolls. Soil and rootballs of herbaceous plants are placed into burlap rolls and partially buried and staked along the bank.

8. Brush Layers. Cuttings of willow are placed into trenches cut into the bank so that the branches stick outward from the bank. Alternating layers of cuttings and soils are placed up the bank.

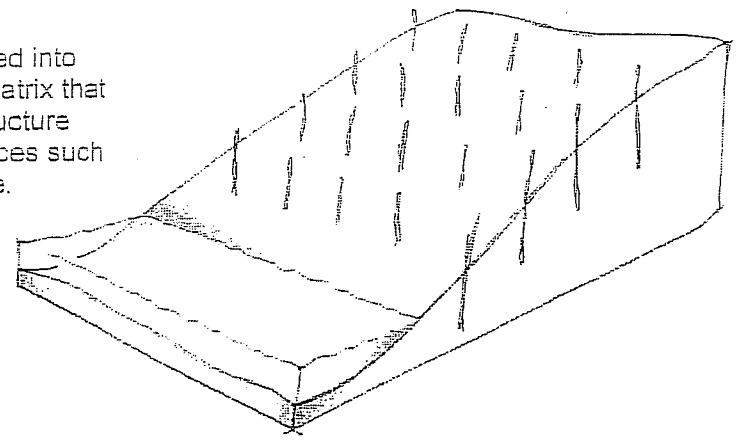
9. Geotextiles consist of plastic or biodegradable materials that hold soils in place to allow plants to become established through the mesh. There are many types of geotextiles available, designed for various flow conditions. For banks in low flow conditions geotextiles are placed across the face of a slope and cuttings or container plants are installed through the mesh. In more erosive conditions, geotextiles are placed between brush layers that are buried in trenches on the bank.

10. Joint Planting. Easily sprouting species such as willow or cottonwood are planted amongst ungrouted rip-rap or "A-jacks" at the base of eroded slopes.

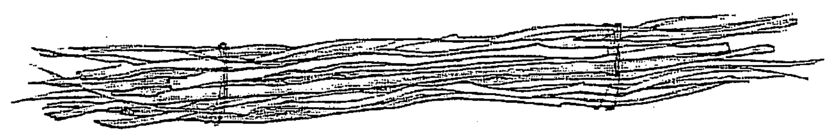
11. Live Cribwalls. Hollow box-like interlocking arrangements of timber are placed at the base of a slope and are filled with alternating layers of soil and live branch

Live Stakes

Live woody cuttings are pushed or tamped into the soil to root, grow and create a root matrix that stabilizes the soil. The above-ground structure that results reduces overland erosive forces such as raindrops or sheet flow across the site.



Willow Wattle (Fascine)



Live Fascines

Branch cuttings bound together in sausage-like bundles and placed in shallow trenches on slopes to reduce erosion and shallow sliding.

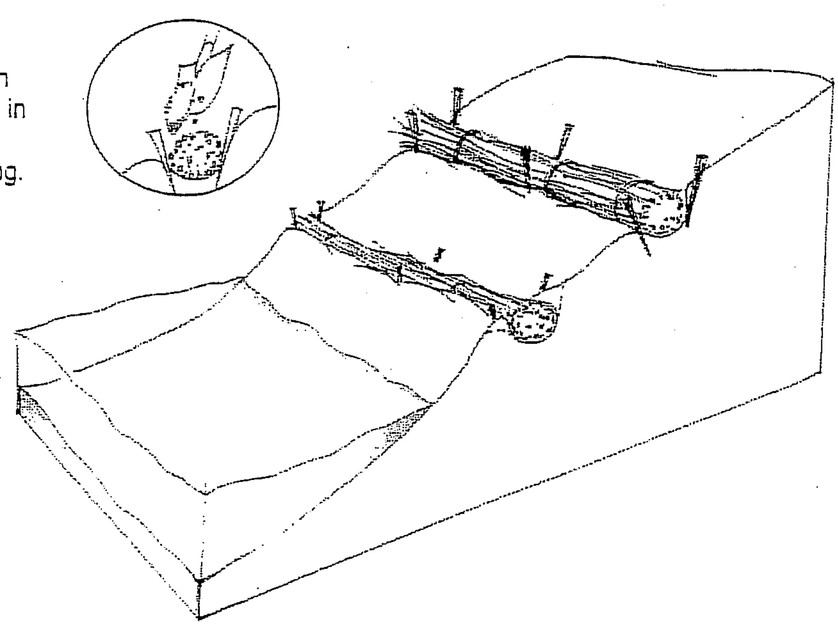
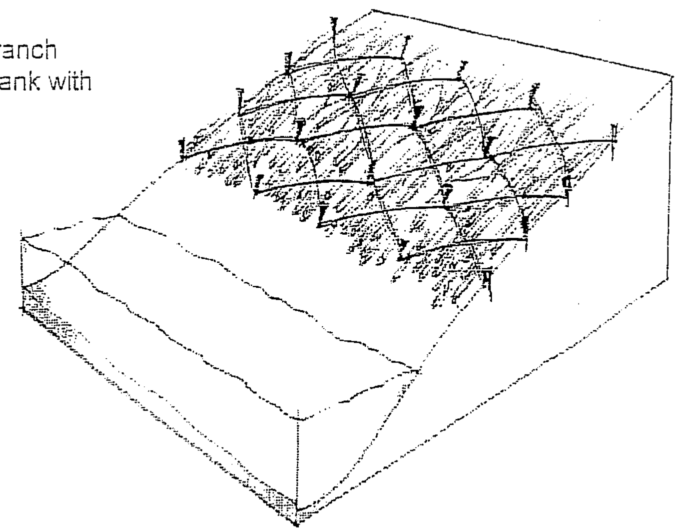


Figure 1. Examples of Bio-technical Techniques

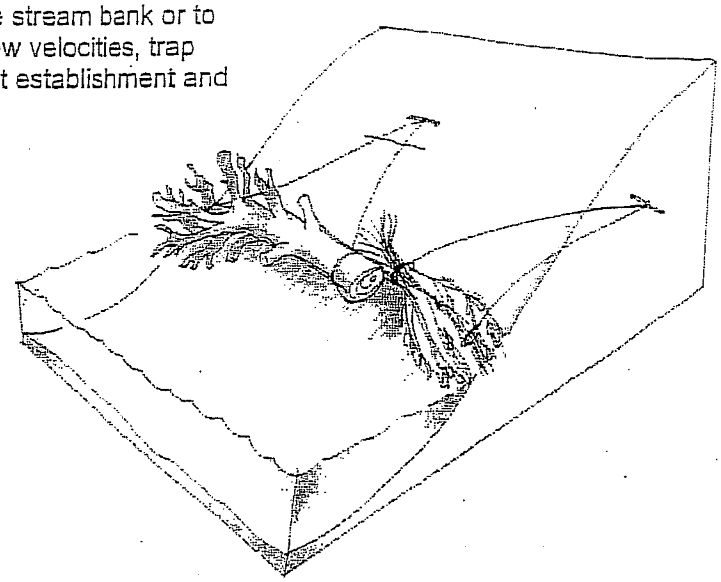
Brush Mattress

Live willow stakes, facines and individual branch cuttings are interwoven and pinned to the bank with jute cord or wire held in place with stakes.



Tree Revetment

A row of live or dead trees attached to the stream bank or to deadmen in the stream bank to reduce flow velocities, trap sediment and provide a substrate for plant establishment and erosion control.



Tree Revetment

A large root wad and stump is anchored within the stream bank to reduce flow velocities and provide structure and hiding places for aquatic species.

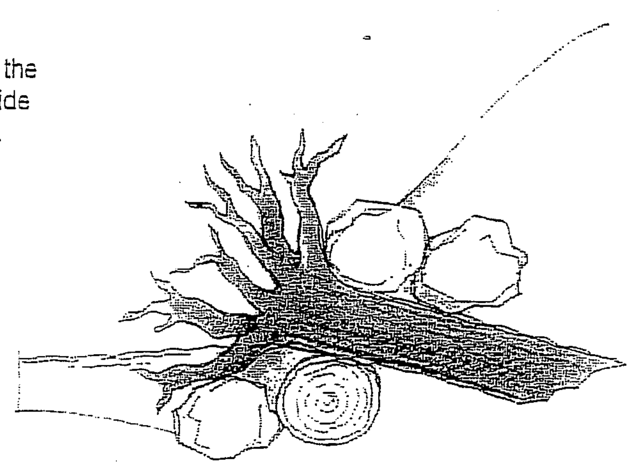
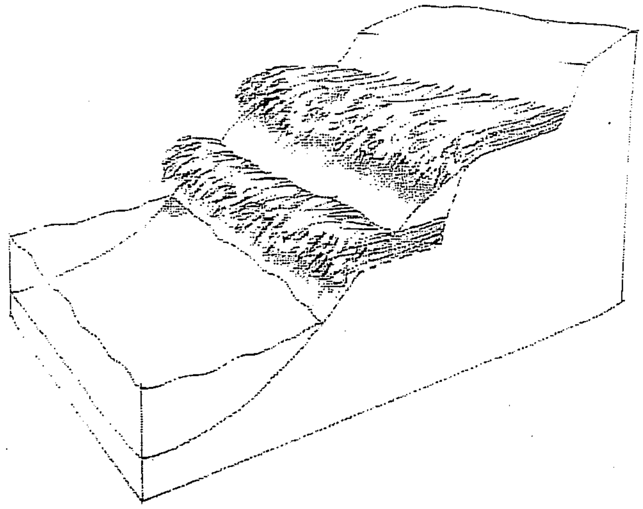


Figure 2. Examples of Bio-technical Techniques

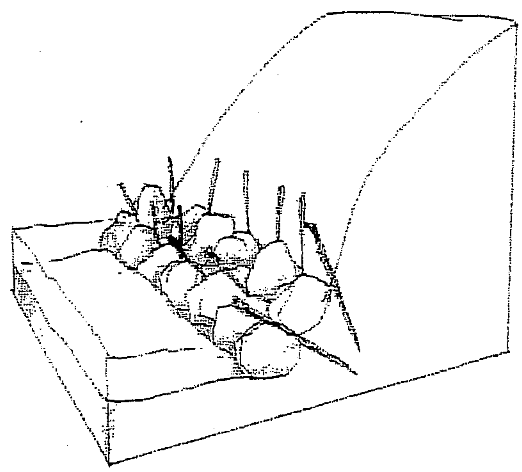
Brush Layering

Live cuttings of willow or cottonwood are placed into trenches cut into the bank so that branches stick outward from the bank. Brush layering provides live material that will root and go along with a structural component to reduce flow velocities along the bank.



Joint Planting Newly Installed

Live cuttings such as willow or cottonwood are planted among ungrouted rip-rap. Cuttings can also be placed horizontally in a trench below the rocks.



Joint Planting Three Years Later

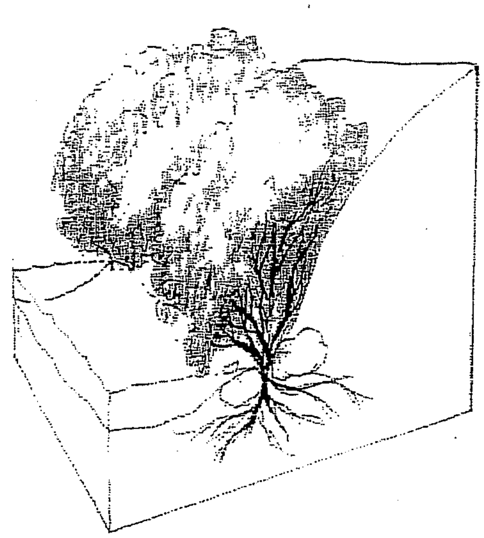
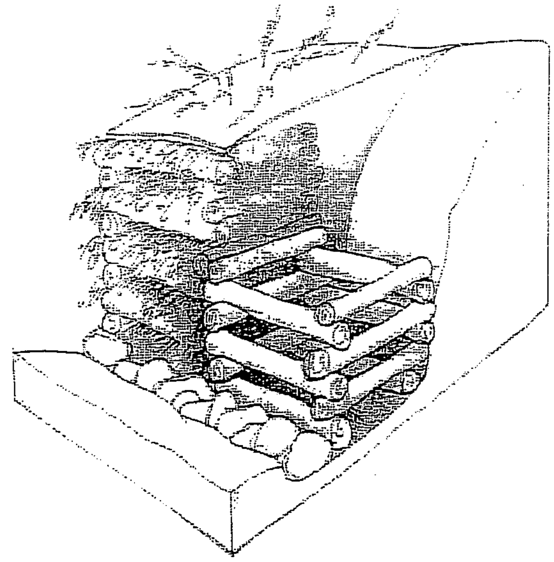


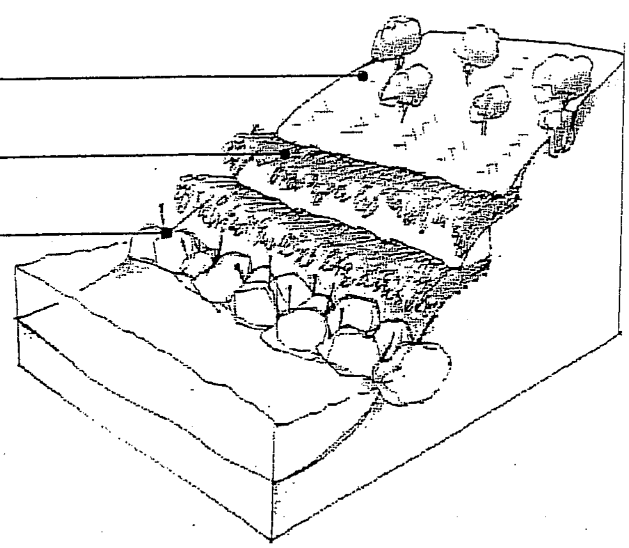
Figure 3. Examples of Bio-technical Techniques

Live Crib Wall

Hollow, box-like interlocking arrangements of logs or timber filled with alternative layers of soil material and live branch cuttings.



Combined Bio-Technical Bank Protection Techniques



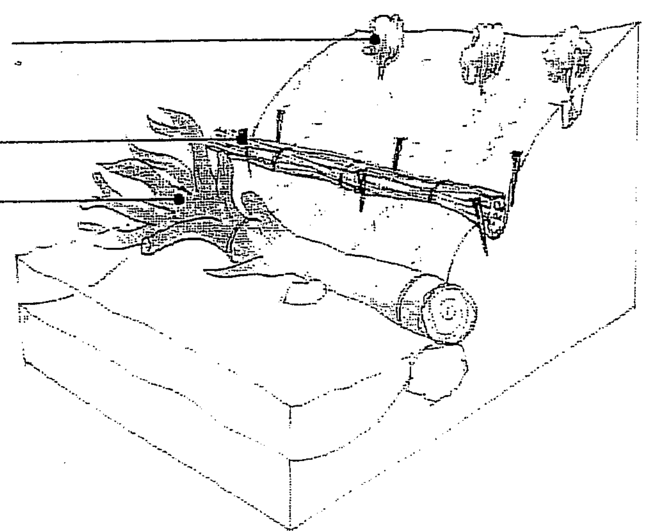


Figure 4. Examples of Bio-technical Techniques

cuttings. Live Cribwalls should be reserved for the particularly difficult projects in urban settings that require a substantial structural solution.

Determination of Appropriate Plant Quantities

After revegetation sites are identified the actual revegetation areas will be calculated. The District does not generally place understory species within three feet of the toe of the bank because even minor flows could remove these plants. Revegetation along the toe of the bank generally consists of willow or cottonwood cuttings or natural colonization.

Planting locations and densities will be determined by the District Biologist using guidance from Martha Blane, a consulting botanist, who provided planting density recommendations that the District has referred to since 1992. Most often, the District Biologist uses Ms. Blane's recommendations as a starting point for figuring plant numbers and then adjusts the numbers as appropriate for each site. It is the District's goal to increase species diversity at each of the revegetation sites as feasible depending upon site characteristics, species occurring in the watershed, and plant availability. Once a plant mix is determined, plant quantities are calculated. The District always includes the possibility of at least 30% plant mortality when calculating final plant numbers for each site. Generally, the District chooses from the following species for restoration projects, although other species are sometimes used depending upon site location:

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

PLANTING DENSITY RECOMMENDATIONS

SPECIES	# PER ACRE	SPACING
Salix sp.	1,000	6' – 7'
Platanus racemosa	50	30'
Quercus agrifolia	50	30'
Populus sp.	70	25'
Alnus rhombifolia	70	25'
Umbellularia californica	70	25'
Sambucus mexicana	200	15'
Baccharis pilularis	200	15'
Rhus sp.	450	10'
Rosa californica	450	10'
Ribes sp.	450	10'
Heteromeles arbutifolia	450	10'
Rhamnus californica	450	10'
Lonicera subspicata	450	10'
Rubus ursinus	1740	5'
Clematis ligusticifolia	1740	5'
Artemesia douglasiana	1740	5'

Plant Collection and Propagation

When feasible, to maintain genetic integrity of the species in each creek, all material (saplings, cuttings and seeds) will be collected as close to the revegetation site as possible. Once the District identifies the creeks needing maintenance for any given year and the associated revegetation requirements, the District biologist will coordinate the plant material collecting and propagation of the species and quantities needed to fulfill the mitigation requirements for that year. Seeds will be collected year round depending upon the species. Many species of trees, shrubs and vines can also be grown from cuttings. In many cases cuttings can be collected year round and grown in a nursery setting to produce a 1-gallon size plant that is ready to be planted by the winter or early spring. The District will work with a nursery to propagate the needed plants for each given maintenance year. For the past several years, the District has used the Tree of Life Nursery, in San Juan Capistrano, to grow plants for several District projects. The District also uses local plant growers as feasible. The District most often uses 1-gallon size plants but occasionally will use 5-gallon size plants. Occasionally, the District will use willow cuttings planted directly at the revegetation site depending upon water availability and site conditions. The District has had the greatest success with container plants as opposed to cuttings planted directly at the site.

Revegetation of the Riparian Corridor

Beginning in the winter and continuing into spring, the District Biologist will coordinate the installation of the plants at the revegetation sites identified in the Annual Routine Maintenance Plan. The District hires a landscaping company with experience in native plant restoration to plant, water and maintain most ofl the revegetation sites.

The District Biologist identifies the species and plant numbers for each revegetation site (allowing for a 30% mortality) and places the color-coded flags to identify where each plant will be installed. The plants are planted at irregular intervals or appropriate groupings to simulate the appearance of a natural creek. Only as many plants that can be planted and watered in one day are delivered to the site.

Actual plantings will follow the digging of holes as rapidly as possible so that the excavated hole does not dry out. The excavated soil will be used as the backfill and will be tamped firmly to eliminate all voids and obtain contact between the root systems and native soils. Excess soil will be used to form a basin around the plant to hold either rainwater or watered delivered to the plant by a drip or hand watering system. The District will often include a slow release fertilizer tablet and some soil amendment in the planting hole at the time of plant installation, depending upon site conditions.

The District will sometimes use unrooted cuttings of easy to root natives such as Salix sp. or Populus sp. In particular, bio-technical techniques utilize cuttings in several planting methods. Standard live stakes are generally from ¾" to 1 ½ " in diameter, approximately 2 to 3 feet long and generally straight. Cuttings are prepared the day they are to be planted although a one to two day delay can be tolerated if the cuttings are kept wet. When the cuttings are prepared, the top of each cutting is cut square with a leaf bud and the base of each cutting is cut below a leaf bud at an approximate 45-degree angle. All the leaves and branches are trimmed off flush with the stem. The cuttings are either pushed into ground that is soft or into holes that have been excavated and backfilled with loose soil that is tamped firmly against the stem to eliminate any air pockets.

Maintenance of Restoration Sites

All newly planted plants are watered immediately. In most cases, the District hand-waters the revegetation sites using a water truck fitted with a hose. Occasionally, a site will be near a water source and a drip system can be installed. In yet other instances, a large site will have a drip system installed and will be watered from the water truck. In all cases, newly installed plants are watered with 5 gallons of water once a week for approximately the first year after installation, which usually takes the site into the next rainy season. If the rainy season is particularly dry or the storms are far apart, watering continues uninterrupted. The sites are evaluated the following spring and the watering schedule is adjusted to meet the plant needs. Most commonly, the sites are watered every other week for the second year. Watering amounts differ at each site depending upon the plant needs. Occasionally, instead of a bi-weekly watering scheme, the District Biologist will direct the contractor to deep water certain plants on a monthly basis to promote deep root growth. Ultimately, the goal is to have each revegetation site self-sustaining once the second rainy season is met.

In addition to watering the restoration sites, the revegetation contractor is responsible for weeding the sites. Each site is unique; however, all sites have a 3-foot diameter weed free zone maintained around each plant for at least the first year following installation. This eliminates the competition for water and sunlight. Beyond the 3-foot weed free zone, the site is allowed to have some weeds such as grasses or other low growing herbaceous species that help reduce erosion. The more noxious weeds such as castor bean, giant reed, poison hemlock, fennel, wild radish, and mustard are removed from the site repeatedly until the restoration plants are established and will not be out competed by the weeds. Noxious weeds can be selectively sprayed with Rodeo or Roundup herbicides but are most commonly removed by hand. Herbicides will be administered under the supervision of a Pest Control Advisor and the applicator will use care in avoiding natives.

Post-project Monitoring

Post-project monitoring will consist of determining water and weeding regimes, identifying areas of high mortality, and scheduling subsequent revegetation for those areas experiencing a greater than 30% mortality.

The revegetation sites will be checked at least once every three months to monitor the mortality rates and weed growth. As previously mentioned, the sites will be watered using different methods and schedules depending upon site conditions and age of the plants. The District Biologist will monitor the health and establishment of the plants and determine the ongoing watering and weeding needs at each site. Photos will be taken of each site at least once a year until they are established and do not need any further weeding, watering or replanting.

If a site experiences more than 30% mortality, additional plants will be installed during the next maintenance planting season and the watering and weeding schedule will be adjusted to accommodate the new, smaller plants.

References

Riley, Ann. 1998. Restoring Streams in Cities: a guide for planners, policymakers, and citizens.

URS Corporation. 2000. Creek Inventory and Assessment Study, City of Santa Barbara

IMPACTS AND MITIGATION MEASURES*

ALPHABETICAL LIST OF DEFINITIONS

A

Impacts

AQ = Air Quality

AQ-A. Equipment Emissions. Temporary emissions of reactive organic compounds (ROC), particulate matter, and NOx associated with gasoline and diesel-powered heavy-duty maintenance equipment, as well as employee vehicles and trucks transporting excavated materials to and from maintenance sites. (Class II Impact)

AQ-B. Fugitive Dust Emissions. Temporary emissions of fugitive dust (particulate matter) due to earth moving activities during maintenance, including channel shaping, desilting, bank stabilization by placing fill or grading banks, bank protection construction or repair, pilot channel construction, and access ramp construction. (Class II Impact)

Mitigation Measures

A-1 – Reduce Emissions. Implement the following Santa Barbara County APCD-approved measures for each piece of heavy-duty diesel construction equipment to minimize NO_x emissions: (1) The engine size of construction equipment shall be the minimum practical size; (2) Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated clean diesel engines) should be utilized wherever feasible; (3) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest number is operating at any one time; (4) Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or precombustion chamber engines; (5) Catalytic converters shall be installed on gasoline-powered equipment, if feasible; (6) Diesel catalytic converters shall be installed, if available; and (7) Diesel powered equipment should be replaced by electrical equipment, whenever feasible.

A-2 – Reduce Fugitive Dust. Implement the following Santa Barbara County APCD-approved measures to minimize fugitive dust emissions: (1) After clearing, grading, earth moving or excavation is complete, the disturbed area must be treated with watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur; (2) During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this shall include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency shall be required whenever the wind speed exceeds 15 mph. Reclaimed water shall be

* Extracted from the Final Program Environmental Impact Report, Updated Routine Maintenance Program, November 2001

used whenever possible; (3) Minimize the amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less; (4) Gravel pads should be installed at all access points to prevent tracking of mud onto public roads; (5) If importation, exportation, and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation; (6) Trucks transporting fill material to and from the site shall be tarped; and (6) Dust control requirements shall be shown on all grading plans.

B

Mitigation Measures

B-1 - Compensatory Habitat Mitigation. The District shall provide compensatory habitat mitigation for the removal of riparian and wetland habitat associated with brushing, herbicide spraying, channel shaping, bank stabilization by placing fill or grading banks, pilot channel construction, bank protection installation, access ramp construction, and channel desilting. The mitigation shall be required for all vegetated habitat, with the exception of areas dominated by aggressive, noxious non-native weeds (e.g., giant reed). The restoration treatment shall occur either on-site (i.e., along suitable portions of the drainage and its tributaries where the project is located) or off-site (Los Carneros Mitigation Bank) in accordance with the updated restoration plan described in the updated Program EIR, using a 1:1 acreage replacement ratio. A 2:1 ratio shall be used for impacts due to new grade stabilizers and non-vegetated bank protection, as described in the updated Program EIR. Prior to the use of the Los Carneros Mitigation Bank, the District shall consult with other organizations with expertise in habitat restoration (e.g., Wetlands Recovery Project) to determine if they have any knowledge of any on-site opportunities. Mitigation for specific affected areas shall only occur once during the next ten years of the maintenance program. That is, once habitat mitigation has been achieved for a portion of a drainage, no further mitigation is required for future maintenance of that reach or site over the next ten years regardless of the type of maintenance activity, provided the previous habitat mitigation has been successfully implemented, and the District continues to minimize habitat impacts to the extent feasible. After ten years, the habitat mitigation requirement shall begin again, regardless of previous habitat mitigation. Native trees with a diameter at breast height of 6 inches or more that are removed shall be replaced at a 10:1 ratio at the restoration site, independent of the replacement of habitat based on acreage. To the extent feasible, habitat restoration opportunities shall be sought on the tops of banks and landward of the creek that could provide a bio-filtering benefit for overland stormwater runoff. In addition, the District will seek opportunities to use regionally rare plants in the restoration plans, as feasible.

B-2 – Minimize Vegetation Removal from Channel Bottom. The District shall minimize vegetation removal from the channel bottom to the least amount necessary to achieve the specific maintenance objectives for the reach (i.e., removing obstructive vegetation or silt-trapping vegetation). Brushing and herbicide application for vegetation control on the channel bottom shall be conducted in a non-continuous, mosaic-like manner, to the extent feasible, allowing small patches of in-channel native vegetation to persist.

B-3 - Construction Monitoring During Maintenance Activities. The District Biologist shall monitor maintenance activities daily to ensure that the appropriate methods and limits are used. Results of the monitoring shall be documented in the annual post-maintenance report. These activities include brushing, herbicide application, channel shaping, desilting, bank stabilization by placing fill or grading banks, bank protection construction or repair, grade stabilizer construction or repair, pilot channel construction, and access ramp construction.

B-4 - Restore Temporarily Disturbed Areas. The District shall restore channel banks containing riparian or wetland vegetation that are temporarily disturbed by maintenance or construction activities associated with the following: channel shaping, placement of bank protection, ramp construction, and repair or construction of bank protection and grade stabilizers. Restoration objectives, methods, plant species, maintenance, and monitoring shall follow the guidelines in the updated restoration plan described in the Program EIR. The restoration of channel bed habitats shall only occur if it would not conflict with the maintenance needs in the affected reach.

B-5 – Pre-Construction Biological Surveys and Avoidance Measures. A District biologist shall inspect all maintenance areas in creeks and basins during the annual spring field assessments (April and May) to determine if any sensitive plants, fish, or wildlife species are present, or habitats for these species are present. If the species are present, the District shall modify maintenance activities to avoid removal or substantial disturbance of the key habitat areas or features. Avoidance and impact minimization measures shall be described in the Annual Plan for each maintenance project. If a rare plant could be affected, the District shall relocate the plant by cultivation or seeding methods to a suitable nearby site. If a sensitive fish or wildlife species will be present at a maintenance site during the work period, the District shall schedule the work to avoid the species, if possible. If avoidance is not feasible, the District shall attempt to relocate the species or population with approval from the California Department of Fish and Game, US Fish and Wildlife Service or National Marine Fisheries Service, as appropriate. This measure applies to all currently known sensitive species that occur in maintained drainages and basins, as well as species that are determined to be sensitive in the future. Endangered species experts with handling permits shall be consulted during relocation efforts to provide additional assurances that relocation is effective. Such consultation shall include assistance in field efforts, as warranted.

B-6 – Construction Monitoring for Sensitive Species. The District Biologist shall monitor, on a daily basis, earth and vegetation disturbing maintenance activities located at and adjacent to locations where sensitive species are known to occur. The need for monitoring and the areas to be monitored shall be determined during the annual field assessment in the spring. The objective of the monitoring is to ensure that key habitat features or species locations are avoided.

B-7 – Post Maintenance Channel Bed Treatment. The District shall roughen the channel bed after channel desilting maintenance to create microtopography that will encourage re-establishment of aquatic habitats over time. Pools and riffles shall be recreated in the work area if they were removed during maintenance, to the extent feasible. Modifications of the creek bed shall be consistent with geomorphological considerations identified through mitigation measure H-1.

C

Impacts

CR=Cultural Resources

CR-A. Disturb Cultural Resources. There is a remote potential for certain earth-disturbing maintenance activities to disturb buried prehistoric and historic archeological sites and isolated artifacts. This impact would occur only on undisturbed upland sites outside watercourse channels and basins due to incidental excavation grading banks for stabilization, installing or repairing bank protection, and constructing access ramps. (Class II Impact).

Mitigation Measures

C-1 - Unexpected Archeological Finds. If cultural materials are unexpectedly uncovered during maintenance activities, the District shall immediately consult with a qualified archeologist who shall inspect the material and coordinate with the District to halt or redirect earth-disturbing maintenance work until the significance of the material is determined, and the location is cleared for further work.

C–2 – Archeological Surveys. The District shall conduct an archeological field investigation in maintenance areas that may be disturbed by excavation activities associated with routine maintenance when such work occurs in upland areas outside watercourses and basins that: (1) appear to represent undisturbed ground not subject to previous excavations or significant grading; and (2) contain known significant archeological sites. The investigation shall be conducted by a qualified cultural resource specialist.

F

Impacts

FAW = Fish Aquatic Species and Wildlife

FAW-A. Displace Wildlife due to Vegetation Removal in the Channel Bottom. Removal and/or thinning of vegetation from channel bottom due to brushing, herbicide application, desilting, and channel shaping cause a temporary reduction in vigor and/or cover of successional riparian habitats and emergent wetlands. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. These actions could reduce foraging and loafing habitat for certain riparian and wetland dependent bird species. It can also reduce habitat heterogeneity for reptiles and small mammals, and degrade aquatic habitats by removing protective cover and increasing temperatures. While the long term functions and values of the habitat temporarily disturbed by maintenance would be replaced through the District's updated habitat restoration program, there will be a temporal impact to wildlife that cannot be fully mitigated. (Class I Impact)

FAW-B. Adverse Effects of Maintenance on Aquatic Habitat. Channel shaping, bank stabilization by placing fill or grading banks, sandbar removal, excessive removal and/or thinning of in-channel vegetation, and pilot channel construction could reduce vegetation cover, pools and gravel beds, organic input from overhanging vegetation supporting aquatic productivity, and instream cover and debris providing micro-habitat. In addition, fish and aquatic organisms could be directly displaced. These impacts are temporary and reversible. (Class I Impact)

FAW-C. Displace Wildlife for Hard Bank Protection. Placement of “hard” bank stabilization without native vegetation would permanently reduce the amount of existing and future bank riparian vegetation. This action could also adversely affect nesting and foraging habitat for riparian-dependent bird species, as well as cover for riparian amphibians, reptiles, and mammals. (Class II Impact)

FAW-D. Displace Wildlife for New Access Ramps. Construction or maintenance of access ramps could temporarily reduce the amount of riparian habitat. This action could adversely affect nesting, cover, and foraging habitat for riparian-dependent bird species, as well as cover for riparian amphibians, reptiles, and mammals. (Class II Impact)

FAW-E. Displace or Remove Sensitive Fish and Wildlife. Disturbance of channel banks and bed from heavy equipment during channel shaping, placement of bank protection, channel shaping, desilting operations, ramp construction, and repair of bank protection and grade stabilizers could remove and displace sensitive fish and wildlife species, depending upon location and time of year. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. Species that could be directly affected include the southern steelhead trout, arroyo chub, southwestern pond turtle, two-striped garter snake, San Diego horned lizard, California red-legged frog, silvery legless lizard, and tri-colored blackbird. Species that could be indirectly affected due to habitat modification include southwestern willow flycatcher, least Bell’s vireo, yellow warbler, yellow breasted chat, purple martin, warbling vireo, Wilson’s warbler, Swainson’s thrush, blue grosbeak. (Class II Impact)

FAW-F. Fish and Wildlife Exposure to Herbicide The analyses presented in Section 5.2.3 indicated that the application of herbicides to control emerging vegetation on the channel bed is not expected to introduce substantial amounts of herbicide to the water in the drainage where fish, aquatic organisms, and humans could be exposed, because of reasons: (1) no herbicide is directly applied to open water; (2) overspray is minimized by precise spraying by trained field crews; (3) most spraying occurs in the fall when flows are absent in drainages; (4) glyphosate is strongly absorbed by soil particles and not easily mobilized once it has contact with soils or wet sediments; and (5) residual herbicide in soils or sediments are subject to microbial degradation. However, there is a potential, albeit very remote, that adverse herbicide concentrations may be temporarily present in aquatic areas immediately after spraying due to excessive or poor application. (Class II Impact)

FAW-G. Fish Passage Impacts from New Grade Stabilizers .New grade stabilizers may be installed to stabilize the bed of a channel that is being lowered due to headcutting. A new or reconstructed stabilizer could create a vertical drop, which may become a fish passage impediment or barrier over time, depending on the height of the vertical drop. (Class II Impact)

FAW-H. Increased Water Temperatures in Aquatic Habitats. Brushing and spraying cause the removal of vegetation in the channel bed which could increase the temperature of water present due to greater solar radiation. The higher temperatures could adversely affect the quality of aquatic habitats in the channel bottom, if present. (Class III Impact)

FAW-I. Effects of Sediments and Turbidity on Aquatic Organisms. The following activities could cause a temporary increase in sediment and turbidity levels: brushing, mowing, and spraying channel bed vegetation; channel shaping, desilting, bank stabilization by placing fill or grading banks, pilot channel construction, equipment movement on the channel bed, and pilot channel clearing in basins. The higher levels could adversely affect fish and aquatic organisms present in any aquatic habitats. (Class III Impact)

FAW-J. Impact of Accidental Releases on Aquatic Organisms. There is a very low potential for the accidental discharge of fuel, oil, and herbicides to a channel or debris basin during routine maintenance. Such spills may affect fish and aquatic organisms, if present. (Class III Impact)

Mitigation Measures

F-1 – Assist Others with Fish Passage Impediment Removal Projects. Subject to available resources, the District shall provide technical and regulatory assistance to other parties (agencies and non-governmental organizations) seeking to remove or modify fish passage impediments along reaches maintained by the District. Assistance shall include review and recommendation concerning project plans; and identifying a CEQA lead agency and assisting in the preparation of a CEQA document for the proposed project; and general assistance in acquiring access easements and permits.

H

Impacts

H = Hydrology

H-A. Preventing a Build up of Channel Resistance May Increase Velocities. Channel resistance is reduced by brushing, mowing, spraying, and discing to remove obstructive and/or silt-trapping vegetation; and by removing storm debris and obstructive sandbars. These actions can result in higher velocities, which in turn could theoretically cause minor and localized channel degradation that contributes to bank erosion in the affected reach. This impact is expected to occur very infrequently, if at all, and would only have localized hydraulic impacts. To ensure that this impact is avoided under the current program, the District would conducts an “engineering analysis” (Mitigation Measure H-1) to determine the need, nature, and extent of maintenance activities each year along maintained drainages, and give full consideration of incidental adverse hydraulic effects associated with channel maintenance. (Class II Impact)

H-B.   Reduced Bank Stability due to Giant Reed Removal. The District may periodically remove giant reed plants from stream banks for habitat restoration purposes if the stands are large and appear to represent a significant threat to the local riparian vegetation. Removal of large stands could destabilize banks and result in increased local bank erosion and downstream sedimentation. Hydraulic impacts would be localized. In addition, large stands of giant reed on banks that are vulnerable to erosion are few in number. (Class II Impact)

H-C. Unintended Bank Erosion from Hard Bank Protection. Installation of hard bank protection could cause local bank erosion and channel bed degradation on the opposite banks due to increased flow velocities. This impact is expected to occur rarely, if at all, and would only have localized hydraulic impacts. (Class II Impact)

H-D. Effect of Equipment on Channel Bed. For large maintenance projects, the movement of equipment in the channel bed can disrupt any armored layer on the channel bed and loosen sediments. It may also reduce the channel topographic diversity, which imparts a certain resistance to flow, thereby increasing flow velocities and sediment transport capacity. (Class II Impact)

H-E. Impact of Removing Channel Obstructions (Excessive Desilting). Excessive desilting could result in lowering the channel bed below its previous invert elevation, which could contribute to oversteepened banks that are prone to failure. This impact is expected to occur very infrequently, if at all, and would only have localized hydraulic impacts. (Class III Impact)

H-F. Altered Channel Sinuosity and Slope. Creation of a straight pilot channel could theoretically reduce sinuosity, increase channel slope, and cause channel bed degradation. This impact is expected to occur very infrequently, if at all, and would only have localized hydraulic impacts. (Class III Impact)

H-G. New Grade Stabilizer. The District may occasionally need to stabilize the bed of a channel that is being degraded. A new grade stabilizer will prevent channel bed degradation, which in turn, leads to oversteepened banks. However, it could create a scour pool beneath the grade stabilizer and cause a need for repeated repairs. (Class III Impact)

H-H. Steep or Exposed Access Ramps. Creating an overly steep and unstabilized access ramp can cause increased local bank erosion. (Class III Impact)

H-I. Impacts of Reduced Sediments. Periodic removal of the sediments from the basins contributes to the reduction in overall sediment supply to the downstream reaches of the drainages. Reduced sediment supply can result in channel degradation over time. (Class III Impact)

Mitigation Measures

H-1 - Maintenance Need Analysis. The District shall evaluate relevant hydraulic factors when determining the need, type, and extent of channel maintenance for non-exempt watercourses where natural geomorphic processes are largely intact. Key factors that shall be included in the evaluation include: (1) hydraulic benefits of maintaining the bankful channel (if present) dimensions, natural sinuosity, and natural channel bed roughness; and (2) potential adverse hydraulic effects of excessive brushing, channel shaping, equipment activity in the channel, and bank hardening. Hydraulic principles of creating and maintaining channel stability and sediment transport equilibrium shall be applied, if applicable. The analyses and determinations relevant to this issue shall be documented in the Annual Plan. Clear maintenance objectives with attainable benefits for the protection of life, property, and habitat shall be established for each project and presented in the Annual Plan. A primary objective of this measure is to minimize maintenance activities to the extent feasible, consistent with District's program objectives.

H-2 - Extent of Desilting. The depth of channel desilting shall not cause bank undercutting or channel headcutting. The District shall make a field determination of the maximum depth of desilting based on channel capacity objectives, an evaluation of channel invert elevation and slope through the project reach, and a consideration of the maximum allowable bank length and slope that would cause bank instability. To the extent feasible, banks and bank vegetation shall not be disturbed or reconstructed during desilting to avoid destabilizing the banks.

H-3 - Post Desilting Restoration. After desilting, the District shall restore the channel geometry at the desilting site to a more natural state, as feasible, based on the channel shape, dimension, and slope upstream and downstream of the project site. The channel geometry shall be designed to enhance post-maintenance sediment transport through the desilted reach. If banks are disturbed during desilting, they should be set at a slope that matches existing undisturbed banks and stabilized, to the extent feasible and taking into account available right of way.

H-4 - Pilot Channel Construction. If it is necessary to construct a pilot channel or substantially modify an existing low flow channel, the District shall attempt to maintain the low flow channel length, width, slope, substrate, and sinuosity that are characteristic of the project reach, as determined by field observations of undisturbed low flow channels upstream and downstream of the project reach.

H-5 - Bank Protection Methods. The construction of bank protection shall be limited to situations where bank stabilization is necessary because the banks are vulnerable to continued erosion which could cause a threat to critical public infrastructure, valuable habitat, or otherwise in the public interest and it has been determined that natural slope settling would not achieve the necessary stability. The District shall evaluate different types of bank protection methods, then select one that is most suitable based on the following order of decreasing preference: (1) vegetation stabilization only; (2) bio-technical methods in which vegetation is incorporated with natural type structural components such as woody branches, natural rock, logs, natural fibers and geotextiles, and biodegradable temporary geotextiles; (3) ungrouted rip rap with vegetation; (4) pipe and wire revetment while retaining vegetation; (5) grouted rip rap; and (6) concrete sackwalls, gabion walls, soil cement, and gunite. Only native plants common to the region shall be used in all bank protection projects. Hard bank protection such as grouted and ungrouted rip-rap, pipe and wire revetment, gunite, concrete sackwalls, gabion walls, and soil cement shall only be used if the District has determined that the above methods will not achieve the desired results, are not cost effective, are logistically or technically infeasible, and/or would create greater incidental environmental impacts. Incorporation of plant material into bank protection, and maintenance and monitoring of such plantings, shall follow the guidelines in the updated Routine Maintenance Program Restoration Plan. The installation of new bank protection shall not adversely affect the stability of nearby banks. Bank protection projects that exceed 150 linear feet at any one single location would be considered a separate project, not included in the routine maintenance program.

H-6 – Removal of Giant Reed from Banks. If the District will remove a stand of mature giant reed from the bank for habitat restoration purposes, the following measures shall be implemented to ensure that the bank will remain stable after treatment. To the extent feasible, the least invasive method of giant reed removal shall be used, and the removal of native vegetation from the banks shall be minimized. The District shall stabilize the banks after giant reed removal using biotechnical methods that include native plants. This measure shall also apply if similarly large stands of other non-native plants are removed from banks.

H-7 – New or Repaired Grade Stabilizers. Prior to installing a new grade stabilizer to control channel bed degradation, the District shall conduct the hydraulic analysis described in H-1. In addition, the District shall first consider stabilizer designs that use native ungrouted rock. The new structure shall not create a passage impediment for fish. This measure also applies to the repair or reconstruction of existing stabilizers. Detailed plans for new and repaired grade stabilizers shall be presented in Annual Plans, including a consideration of alternative designs and justification for the selected design.

H-8 – Access Ramps. The distance between access ramps shall be determined by balancing the impacts of driving equipment on the channel bed versus creating extra access points. Access ramps shall be placed in areas with minimum potential for erosion. Access ways shall be sited, constructed, and maintained in a manner that minimizes disturbance to native vegetation, wildlife, and aquatic organisms. The width of all new ramps shall be minimized to the extent feasible. Unneeded access ramps shall be removed and restored to a natural condition. For ramps that will be used infrequently (e.g., every three years or more), the District shall seed or plant the ramp after each use with native species, compatible with adjacent vegetation and resistant to occasional vehicle use, to prevent infestations of noxious weeds. Permanent and frequently used ramps shall be stabilized with vegetation, as feasible, and designed to minimize unauthorized vehicle access.

H-9 - Landowner Information Regarding Bank Protection. The District shall provide information to landowners along creeks that wish to stabilize eroding banks on their property. The District shall prepare a guide for landowners that describes methods of bank protection, with an emphasis on bio-technical solutions. The booklet shall be written for an educated layperson and include clear diagrams about materials and installation methods. It shall also include discussions of hydraulic and biological impacts when considering bank protection, and permits required from local, state, and federal agencies. The District shall also make staff available to conduct site visits with property owners to provide guidance on an as-needed basis.

N

Impacts

N = Noise

N-A. Maintenance Equipment Noise. Maintenance activities that require the use of heavy equipment, such as channel shaping and desilting, could temporarily increase the ambient indoor and outdoor noise levels for noise-sensitive receptors located in close proximity to the watercourse where maintenance work is conducted. This impact would be limited to weekdays between 8 AM and 5 PM, with a limited duration of several days at any one location. Increased ambient noise levels could cause a nuisance to noise sensitive receptors, such as residences, schools, nursing homes, and day care centers. (Class II Impact)

Mitigation Measures

N-1 – Minimize Noise. Routine maintenance work shall be limited to weekdays and the hours of 7:30 AM and 4:30 PM. Equipment and haul trucks shall be equipped with functioning and properly maintained muffler systems, including intake silencers where necessary. Additional reductions in noise emissions shall be provided, as feasible, by performing noisy operations, such as chipping and loading spoils into dump trucks on the banks, as far away as practicable from sensitive receptors.

P

P = Public Health and Safety

PH-A. Excessive Herbicide Release and Exposure. Excessive application of herbicide to vegetation on the bottom of a channel or debris basin, including substantial application to the bed itself and open water, could result in increased concentrations in downstream water, which could affect the public. Excessive application of herbicide to vegetation could also adversely affect hikers using the watercourse as a trail or for recreation. This situation would arise from poor application methods or procedures, and is expected to occur rarely, if at all. (Class III Impact)

R

Impacts

R = Recreation

R-A. Potentially Adverse Herbicide Concentrations. The application of herbicides to control emerging vegetation on the channel bed is not expected to introduce substantial amounts of herbicide to the water in the drainage where fish, aquatic organisms, and humans could be exposed. However, there is a potential for localized elevated concentrations of glyphosate in drainages due to excessive application of herbicides or poor application methods that result in overspray which would degrade water quality, and affect recreational users along creeks. This impact would be localized and temporary. (Class II Impact)

R-B. Impacts of Reduced Sediment Supply to Beaches. Periodic removal of the sediments from the basins contributes to the reduction in overall sediment supply to local beaches. (Class II Impact)

R-C. Temporary Disruption of Trail and Park Use. Maintenance activities near a public trail may disrupt the use of the trail for a short period of time, and/or disrupt the use of the creek for informal recreation. (Class III Impact)

R-D. Reduced Beach Sand Supply. The periodic removal of sediments from debris basins contributes to the cumulative loss of beach sand supply. (Class III Impact)

Mitigation Measures

R–1 - Minimize Impacts to Trail and Park Users. To the extent feasible, the District shall provide temporary detours for hikers using public trails that must be closed for maintenance work. All work areas shall be marked by signs, and by flagging if necessary to protect the public from hazardous conditions. The District shall notify appropriate County and City parks departments prior to initiating maintenance work in public parks. The work area shall be visibly marked, and measures taken to prevent public entry. If feasible, work shall be restricted to off-peak park hours.

R-2 – Disposal of Sediments at Beaches. Sediments removed from debris basins or creeks on the South Coast during long-term maintenance of the basins and during routine maintenance of creeks, respectively, shall be disposed at local beaches to the extent feasible. Only suitably sized sediments shall be disposed at the beaches, as permitted by applicable regulatory agencies.

V

Impacts

V= Visual

V-A. Visual Impacts in Channels. Certain maintenance activities could reduce the visual quality of riparian corridors that are visible from both private viewpoints (e.g., private roads, backyards of private residences) and public viewpoints (e.g., public parks roads). These channel maintenance activities include channel shaping, bank protection construction or repair, bank stabilization, and desilting. An adverse visual impact would occur if such activities remove substantial amounts of riparian vegetation or very large specimen trees (such as oaks, sycamores) and/or substantially modifies the banks and bed of a watercourse such that the affected reach is clearly characterized as a man-altered landscape feature. (Class II Impact)

V-B. Visual Impacts in Basins. The grading of a pilot channel in the middle of a debris basin would reduce the amount of vegetation in the basin. The removal of vegetation and accumulated sediment from debris basins will periodically reduce the amount of riparian vegetation in the basin. These impacts would be minor because they are temporary and affect a very small area; the basin (i.e., visual setting) is a man-made feature; and public access to the basin and/or nearby public viewing locations is generally prohibited. (Class III Impact)

Mitigation Measures

V–1 - Minimize Visual Impacts in Channels. The District shall minimize brushing in the channel bottom (per Mitigation Measure B-1), minimize remove of bank vegetation (per Mitigation Measure H-2), incorporate natural channel dimensions during channel reshaping (per Mitigation Measure H-1), restore all temporarily disturbed areas with native riparian trees and shrubs (per Mitigation Measure B-4), and use biotechnical methods with riparian vegetation for bank protection and repair, as feasible (per Mitigation Measure H-4). Implementation of these measures will reduce short and long-term visual impacts.

W

Impacts

WQ = Water Quality

WQ-A. Potentially Reduce the Amount of Natural Biofiltering. Removal and/or thinning of vegetation from channel bottom due to brushing, herbicide application, desilting, and channel shaping cause a temporary reduction in vigor and/or cover of successional riparian habitats and emergent wetlands. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. It could potentially reduce the bio-filtration effects (if any) of emergent wetlands present along the wetted channel and debris basin bottom. As such, maintenance activities could contribute to an overall decrease in water quality. (Class I Impact)

WQ-B. Potentially Adverse Herbicide Concentrations. The application of herbicides to control emerging vegetation on the channel bed is not expected to introduce substantial amounts of herbicide to the water in the drainage where fish, aquatic organisms, and humans could be exposed because of the following reasons: (1) no herbicide is directly applied to open water; (2) overspray is minimized by precise spraying by trained field crews; (3) most spraying occurs in the fall when flows are absent in drainages; (4) glyphosate is strongly absorbed by soil particles and not easily mobilized once it has contact with soils or wet sediments; and (5) residual herbicide in soils or sediments are subject to microbial degradation. However, there is a potential for localized elevated concentrations of glyphosate in drainages due to excessive application of herbicides or poor application methods that result in overspray which would degrade water quality. While this impact would be localized and temporary, it is considered a significant, but mitigable cumulative impact because of the wide use of herbicides throughout the county. (Class II Impact)

WQ-C. Accidental Spills and Leaks. Accidental leakage or spill of fuel and/or oil from heavy equipment working within or directly adjacent to the watercourse or in a debris basin can cause discharge of pollutants to the creek, which would degrade water quality. This impact is anticipated to be highly localized because most accidental spills are limited in quantity (e.g., less than 50 gallons) and would occur in the dry season when flows are absent. Potential accidental spills of herbicides from applicators. (Class II Impact)

WQ-D. Temporary Sedimentation and Turbidity. Channel shaping, desilting, bank stabilization by placing fill or grading banks, bank protection construction or repair, pilot channel construction, access ramp construction, and excessive removal and/or thinning of in-channel vegetation could cause localized increases in suspended sediments and turbidity which could temporarily degrade water quality. This impact would also occur due to debris basin desilting and to a lesser degree, to pilot channel and outlet works clearing. (Class III Impact)

WQ-E. Increase Water Temperatures. Brushing and spraying remove of vegetation from the channel bed which could redcue shade and increase water temperatures. The magnitude of the impact is low because most of the vegetation affected under the program does not occur in standing water nor provide critical shading. The District does not remove bank vegetation, which provides most of the shade along creeks, as part of the program. (Class III Impact)

WRR = Wetland, Riparian Habitat and Rare Plants

WRR-A. Reduce Amount and Quality of Channel Bottom Habitat. Removal and/or thinning of vegetation from channel bottom due to brushing, herbicide application, desilting, and channel shaping cause a temporary reduction in vigor and/or cover of successional riparian habitats and emergent wetlands. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. Although the functions and values of the habitat temporarily disturbed by maintenance would be replaced through the District's habitat restoration program, there is a potentially adverse cumulative effect of annual habitat disturbances throughout the County. (Class I Impact)

WRR-B. Remove Bank Habitat. The District may place "hard" bank protection (i.e., grouted rip-rap) to stabilize a severely eroded bank. Under the updated maintenance program, the use of hard bank protection would only be allowed if no other alternatives using biotechnical methods are available or feasible. This impact would occur very rarely and typically involve a limited reach (e.g., less than 200 feet). Use of hard bank protection would permanently reduce the amount of existing and future bank riparian vegetation. (Class II Impact)

WRR-C. Access Ramp Habitat Impacts. Construction or maintenance of access ramps could temporarily reduce the amount of riparian habitat. (Class II Impact)

WRR-D. Temporary Habitat Disturbance. Disturbance of channel banks and bed from heavy equipment during channel shaping, placement of bank protection, desilting operations, ramp construction, and repair of bank protection and grade stabilizers could temporarily remove wetland, riparian and aquatic habitats in work areas. (Class II Impact)

WRR-E. Displace Sensitive Plants. Disturbance of channel banks and bed from heavy equipment during channel shaping, placement of bank protection, channel shaping, desilting operations, ramp construction, and repair of bank protection and grade stabilizers could remove regionally rare plant species This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. This impact is expected to occur infrequently because so few sensitive plants occur in the areas maintained. (Class II Impact)

WRR-F. Facilitate Weed Colonization. Disturbance of channel banks and bed from heavy equipment during channel shaping, placement of bank protection, desilting operations, ramp construction, and repair of bank protection and grade stabilizers could facilitate colonization of disturbed areas by non-native invasive weeds. This same impact could occur due to clearing pilot channels and outlet works in debris basins, as well as removing sediments from basins. (Class III Impact)

Mitigation Measures

W-1 - Reduce Sedimentation. The District shall minimize the amount of surface disturbance and vegetation removal to the extent feasible during all maintenance activities in order to reduce the area of disturbed soils that could be eroded during winter runoff. No stockpiles or dewatering operations shall be established in the channel bed or basin bottom. All fill shall be compacted to reduce erosion. All disturbed banks and terraces above the low flow channel shall be seeded with appropriate riparian grasses and herbs and/or planted with willows, mulefat, or other woody plant species. The objectives of the seeding and/or planting are to stabilize these areas and reduce erosion. The selection of species to be used and the density of seeding or planting shall balance the need for maintaining channel capacity while meeting these objectives. If work must occur in a wetted channel that has continuous flow downstream of the work site, the District shall either temporarily divert streamflow around the work site, or provide temporary sediment containment downstream of the site. In addition, the District shall check silt fencing, diversions, and settling ponds twice a day.

W-2 – Responsible Herbicide Application. To the extent feasible, the primary herbicide application each year shall occur during the months of August through November, when stream flows are minimal. In some instances, a follow-up application will be made in the spring to reduce the frequency of maintenance.   Herbicides shall be applied by hand-held sprayers rather than from truck mounted sprayers to the extent feasible. The dilution and application of herbicides shall be conducted in strict accordance with all label recommendations, including all restrictions related to public health, worker safety, and the protection of aquatic organisms. Herbicides shall not be applied when winds at the application site exceed 5 miles per hour, within 12 hours of a forecasted rain event, or when vegetation surfaces are covered with water from recent rainfall or dew. Herbicides shall be applied carefully to plant surfaces in minimal effective amounts, minimizing drift to non-target plants and overspray onto the ground or to open water. Signs shall be placed to warn the public if herbicides are applied within 50 feet of any public recreation location, such as a trail, picnic spot, or other site of regular human activity. The signs shall remain for 48 hours after the application of the herbicide. The District shall also notify residences and businesses located adjacent to drainages to be treated with herbicides. Notification shall occur by mail within 7 days of the planned maintenance work.

W-3 - Maintain Biofiltering by Reseeding Channel Bottom Areas. To the extent feasible and consistent with the maintenance objectives, the District shall avoid removal of emergent herbaceous wetland vegetation on the channel bottom that is rooted in or adjacent to the low flow channel or a pond. This same type of vegetation shall be protected, to the extent feasible, during the removal of taller obstructive woody vegetation on the channel bottom. In addition, the District shall re-seed desilted channel areas that formerly contained emergent vegetation, provided that suitable native seeds from plants that provide biofiltration are available and that the new vegetation will not significantly affect channel conveyance or significantly increase the need for future maintenance. Seeding shall occur after the major winter runoff has occurred and stream flows have receded to prevent loss of seeds.

W-4 - Prevent Accidental Spills and Leaks. The mixing and dispensing of herbicides and equipment fueling or maintenance shall not occur within a channel or a basin. Spill containment and clean-up procedures for herbicides and vehicle fuels and oils shall be developed by the District. All field personnel shall be trained and all field vehicles shall be equipped with appropriate materials.

W-5 - Water Quality Monitoring During Herbicide Application for Large Projects. The District shall monitor concentrations of glyphosate downstream of large maintenance projects that involve herbicide application. Large projects are defined as projects that involve continuous or near-continuous herbicide application along reaches of more than 250 feet where there is flowing water along the entire reach. Water samples shall be collected from the flowing water at the following locations: Site A - above the work site, representing the ambient water quality conditions; Site B - immediately downstream of the work site; and Site C - approximately 200 feet downstream of the work site. Samples shall be collected using the following protocol: (1) Prior to herbicide application – samples at Site A, and Sites B and C if there is a storm drain outlet or similar feature within the maintenance reach that may contribute off-site flow and possible herbicides to the water samples; (2) 24 and 96 hours after herbicide application – samples at Sites A, B, and C. If glyphosate concentrations exceed 15 mg/l in the 24-hour sample or 10 mg/l in the 96-hour sample, the District shall modify the spray program at all remaining maintenance sites to be sprayed. Modification may include reducing the rate of herbicide application and/or using hand removal techniques. The District shall continue to apply herbicides only if the glyphosate concentrations are consistently below the 24 and 96-hour thresholds. If the 24 and/or 96-hour thresholds are exceeded five times during the maintenance year, regardless of location, the District shall cease application of herbicides in aquatic situations until the program can be modified to reduce concentrations to the acceptable range.

W-6 – Public Education Regarding Creek Water Quality. The District shall prepare information brochures for residents located along maintained drainages that explain: (1) how the District applies herbicides in a responsible manner, and provides guidelines on how landowners can use herbicides for residential and commercial uses in a similarly responsible manner to minimize water quality impacts to the creeks; and (2) how landowners can reduce pollution to the creek from their activities by employing best management practices for landscape fertilization; disposal of household paints, hazardous materials and petroleum products; management of trash and landscaping debris; and handling of pet wastes. The brochure shall be prepared in coordination with Project Clean Water and mailed to affected areas on a 3-year rotating basis. It shall include the Project Clean Water phone numbers for technical assistance and for reporting illegal dumping. The brochure shall also include information on how landowners can make their land available for habitat restoration under the routine maintenance program.

W-7 – Reporting Water Quality Incidents. The District shall train its maintenance crews to identify and report incidents or materials observed in the creeks during routine maintenance work that could cause significant water quality impacts, including illegal dumping of trash, pet waste, and green waste; homeless encampments; and drain outlets with evidence of poor water quality. The staff shall contact appropriate authorities in the County or affected municipalities.

W-8 - Reduce Overall Herbicide Use. The District shall make every feasible effort to reduce the overall amount of herbicides used in the maintenance program over the next ten years through more restrictive and selective applications, greater use of manual clearing, actions to reduce in channel obstructive vegetation through shading by new canopy trees, and coordination with the the County's Integrated Pest Management Strategy to identify more environmentally friendly pesticides. The IPM Strategy was adopted by the Board of Supervisors to promote the maintenance of the County's landscapes in way that protects and enhances natural resources and public health, while providing a framework for evaluating pesticide use by County Departments in pursuit of their missions.

2001 PEIR CLASS I, II AND III IMPACTS WITH ASSOCIATED MITIGATION MEASURES SANTA YNEZ RIVER PROJECT

Class I Impacts

No Class I Impacts are identified for the Santa Ynez River Routine Maintenance Project.

WATER QUALITY CLASS II IMPACTS

SY-WQ-A. Equipment Leaks and Spills. Accidental leakage or spill of fuel and/or oil from the mowing equipment working within the channel can cause discharge of pollutants and degrade water quality.

Mitigation:
SY-H-1. *- Prevent Equipment Leaks and Spills.* Equipment fueling or maintenance shall not occur within the river channel. Spill containment and clean-up procedures for vehicle fuels and oils shall be developed by the District. All field personnel shall be trained and all field vehicles shall be equipped with appropriate materials.

WATER QUALITY CLASS III IMPACTS

SY-WQ-B. Temporary Sedimentation and Turbidity. Mowing activities would generate vegetative debris that is discharged to the riverbed and susceptible to being suspended in winter runoff. This debris could cause temporary increases in suspended solids and turbidity in downstream areas. This impact is not considered significant because the effect would be temporary, similar to natural suspended material in winter flows, and the sediments produced would be very small compared to the sediments from the entire watershed.

Mitigation:
No mitigation required for a Class III (adverse but not significant) impacts.

WETLAND, RIPARIAN HABITAT AND RARE PLANTS CLASS II IMPACTS

SY-WRR-A. Habitat Disturbance. Periodic disturbance to immature willow scrub due to mowing operations. Early to mid-successional woody vegetation dominated by willows in the channel bottom is periodically mowed, then allowed to re-sprout and develop for 3 to 5 years, depending upon runoff conditions. The amount of such habitat disturbed during each maintenance event will not exceed 16 acres.
Mitigation:

SY-B -1 – Compensatory Habitat Mitigation*.* The District has already initiated long-term compensatory habitat mitigation for the periodic disturbance of riparian habitats in the river channel, establishing 18 acres of various riparian habitats along the river upstream of the project site at three permanent mitigation sites, per the requirements of the California Department of Fish and Game. The creation, maintenance, and protection of these restoration sites represents full and complete mitigation for removal of up to 16 acres of riparian habitat at any time in the future as part of the project. However, subject to available resources, to further mitigate impacts of future periodic maintenance activities on riparian habitat, the District shall remove giant reed plants by the use of herbicides from the lower Santa Ynez River (Robinson Bridge to 13th Street Bridge) and prevent the colonization of this reach of the river for the life of the maintenance project. Stands of giant reed shall be removed, as needed in each reach maintained, in an on-going and proactive program to protect the lower river from this aggressive species. The District shall consider additional habitat restoration if and when future mitigation opportunities arise along the lower river through efforts by other public agencies and private entities.

SY-B-2 – Limits of Disturbance**.** Prior to clearing, District personnel shall place flagging, stakes, or other readily visible markers along the margins of the swaths to be cleared. No more than 16 acres of riparian woodland shall be mowed within the river channel. No clearing shall occur within 25 feet of the primary low-flow channel except when it is necessary to connect cleared swaths from one side of the low flow channel to the other side, or when it is necessary to clear a path across the low-flow channel for temporary equipment and crew access.

SY-B-3 – Minimize Surface Disturbance***.*** Disturbance of the riverbed shall be avoided to the extent feasible. The riverbed shall not be scraped, pushed, excavated, filled, or otherwise directly manipulated by equipment. Vegetative material cut from the riverbed shall be less than six feet in length. Cut vegetative material shall be allowed to fall in place, and shall not be collected, stockpiled, and/or disposed in a directed and purposeful manner.

SY-B-4 – Training and Monitoring. Prior to clearing, the District biologist shall conduct a training session with construction personnel to instruct them on areas to avoid and other environmental protection measures. The District biologist shall be present at all times during clearing activities to ensure that limits of work are observed. Monitoring activities shall be recorded daily.

SY-WRR-B. Disturbance to Wetlands. Mowing operations and accessing the river channel could in advertently disturb ponds and wetlands. The latter are defined as areas dominated by perennial wetland herbs such as watercress, spikerush, cattails, and bulrushes, and do not have a substantial number or density of willow trees or large mulefat plants.

Mitigation:
SY-B-5 – Avoid Ponds and Wetlands. No clearing shall occur within 25 feet of ponds and wetlands. Prior to clearing, District personnel shall place flagging, stakes, or other readily visible markers around ponds and wetlands to be avoided.

See Mitigation Measure SY-B-1- Compensatory Habitat Mitigation

SY-WRR-C. Access Ramp Habitat Impacts. Construction or maintenance of access ramps could temporarily reduce the amount of riparian habitat, which in turn could adversely affect nesting, cover, and foraging habitat for riparian-dependent bird species, as well as cover for riparian amphibians, reptiles, and mammals.

Mitigation:
SY-B-6 – Access Ramp Restoration. After each mowing event, the access ramps shall be seeded with low-growing native grasses, herbs, and shrubs common to the river banks of the project reach to restore habitat after the mowing event, but without dense woody plants that would preclude it use for the next maintenance event.

SY-WRR-D. Impacts to Rare Plants. Accessing the river channel with the crew and mower could potentially affect the regionally rare Lompoc figwort which occurs in woodland habitat along the river banks. Although this species is not known to be present at any of the existing access points, there is a remote possibility that it may be present in the future.

Mitigation:
SY-B-7 - Pre-Construction Biological Surveys. The District biologist shall conduct a biological survey no later than five (5) days prior to the clearing to confirm the limits of the work area, the flagging of environmentally sensitive areas, and to search for: (1) Lompoc figwort at access points; and (2) the western pond turtles and California red-legged frog, both of which could occur in ponds or portions of the low flow channel. The latter species would be physically captured and removed if they occur in areas where clearing or equipment access must occur. They would not be removed from ponds that are protected from clearing or from the low flow channel that is protected by a 25-foot wide buffer zone. The District biologist has the requisite permits and authorizations to handle and relocate these species from CDFG and USFWS. If the Lompoc figwort is present, the District shall modify access routes, if feasible, to avoid removal or disturbance. If the plant cannot be avoided, the District shall relocate the plant by cultivation or seeding methods to a suitable nearby site.

FISH, AQUATIC SPECIES, AND WILDLIFE CLASS II IMPACTS

SY-FAW-A. General Impacts to Wildlife. Mowing will temporarily displace wildlife that utilize immature willow scrub, and reduce the quality of the habitat. Between mowing events, the habitat would recover and be recolonized by wildlife.

Mitigation:
SY-B-8 – Seasonal Avoidance. Clearing shall occur during the months of October 1st to December 1st, to prevent conflicts with the riparian breeding birds, and the endangered southwestern willow flycatcher and the least Bell's vireo.

See Mitigation Measures:
SY-B-2- Limits of Disturbance
SY-B-5- Avoid Ponds and Wetlands

SY-FAW-B. Displace or Disturb Sensitive Wildlife. Mowing operations and accessing the river channel could displace or disturb the California red-legged frog and the southwestern pond turtle. These species are residents in ponds and wetland areas of the river channel. Impacts to these species would be avoided. The willow flycatcher, least Bell's vireo, and various regionally rare riparian breeding birds are absent from the river during the work period. Periodic mowing of immature willow scrub would not adversely affect the quality of the habitat for these species.

Mitigation:
SY-B-9 - Monitor for Sensitive Species. The District biologist shall monitor clearing events located at or near sensitive species locations, as determined during the pre-construction survey. The objective of the monitoring is to ensure that key habitat features or species locations are avoided, and to relocate species if they are unexpectedly encountered in a work area. The District biologist shall examine ponds and channels near the work areas for the presence of pond turtles and/or red-legged frogs; and move these species if it appears that they may be indirectly affected by the clearing activities. Results of the monitoring shall be documented in a post-maintenance report.

See Mitigation Measures:
SY-B-2-Limits of Disturbance
SY-B-5- Avoid Ponds and Wetlands
SY-B-7- Pre-Construction Biological Surveys
SY-B-8-Seasonal Avoidance

SY-FAW-C. Disturbance to Migrating Steelhead. Mowing operations and accessing the river channel could displace or disturb steelhead if they are migrating through the project reach. The southern steelhead migrates upstream from December 1st through March 1st. Smolts migrate downstream to the lagoon or ocean during the period February through May. The mowing will be restricted to the period October through November, and as such, will avoid impacts to migrating steelhead.

Mitigation:
See Mitigation Measure:
SY-B-8 Seasonal Avoidance

SY-FAW-D. Equipment Leaks and Spills, as it affects aquatic organisms and sensitive species (see Water Quality)

Mitigation:
See Mitigation Measure SY-H-1-Prevent Leaks and Spills

HYDROLOGY
CLASS III IMPACTS

SY-H-A. Reduced Channel Resistance. Mowing in-channel vegetation may have a slight effect on velocities of low to moderate flows that would otherwise pass through this vegetation. The reduction in channel resistance could result in increase in velocities of certain flows, which in turn, could cause increased channel bed scour and downstream sedimentation. This hydraulic impact is expected to be negligible due to the small area removed, the low resistance of the vegetation being mowed, and the wide channel available for flows to spread.

Mitigation:
No mitigation required for a Class III (adverse but not significant) impacts.

AIR QUALITY
Class III Impacts

SY-AQ-A. Equipment Emissions. Temporary emissions of reactive organic compounds (ROC), particulate matter, and NOx associated with the mower and chain saws.

Mitigation:
SY-A-1 – Reduce Emissions. Implement the following Santa Barbara County APCD-approved measures for each piece of heavy-duty diesel construction equipment to minimize NO_x emissions: (1) The engine size of construction equipment shall be the minimum practical size; (2) Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated clean diesel engines) should be utilized wherever feasible; (3) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest number is operating at any one time; (4) Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or pre-combustion chamber engines; (5) Catalytic converters shall be installed on gasoline-powered equipment, if feasible; (6) Diesel catalytic converters shall be installed, if available; and (7) Diesel powered equipment should be replaced by electrical equipment, whenever feasible.

SY-AQ-B. Fugitive Dust Emissions. Temporary emissions of fugitive dust (particulate matter) due to mower operations.

Mitigation:
No feasible measures can be employed to reduce unavoidable dust created during mowing operations and none are required for Class III (adverse but not significant) impacts.

NOISE
CLASS III IMPACTS

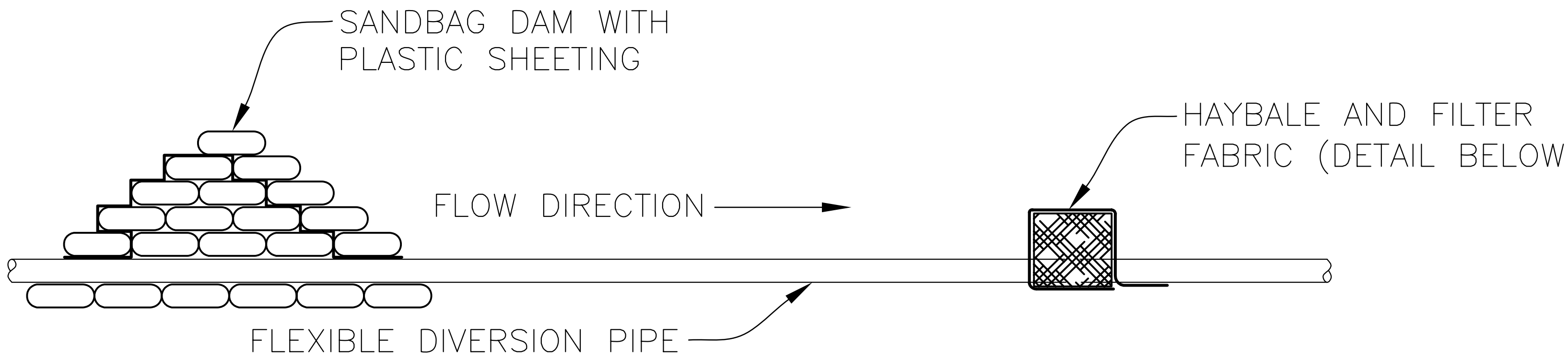
SY-N-A. Mower Noise. Mowing and chain saw operations would temporarily increase the ambient noise levels in adjacent land uses. However, there are no noise-sensitive receptors in proximity to the project site. This impact would be limited to weekdays between 7 AM and 5 PM, with a limited duration of several days at any one location.

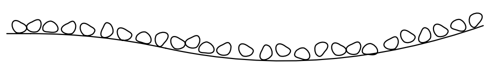
Mitigation:
No mitigation required for Class III (adverse, but not significant) impacts.

VISUAL
CLASS III IMPACTS

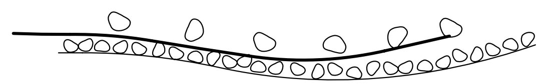
SY-V-A. Visual Impacts of Mowing. Mowing would increase the open areas in the river channel, exposing open sandy floodplain. This impact would be minor because only a small proportion of the channel would be affected, dense woodland and mature trees on the banks would be avoided, and public viewing locations of the river channel are not present.

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

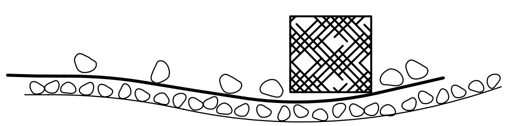




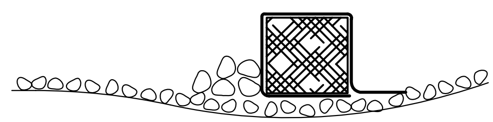
1. PREPARATION—SMOOTH A FLAT AREA OF CHANNEL BY MOVING COBBLES AND SAND (PERFORMED WITH HANDTOOLS ONLY)



2. LAY FILTER FABRIC OVER CHANNEL, ANCHOR LIGHTLY WITH COBBLE



3. PLACE HAYBALE AT ONE END OF FILTER FABRIC



4. WRAP FILTER FABRIC OVER HAYBALE, ANCHOR LEADING EDGE WITH COBBLE

HAYBALE AND FILTER FABRIC INSTALLATION

N.T.S.

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

TEMPORARY WATER DIVERSION

Plant Lists

Annual Routine Maintenance Plan

ADOBE CANYON CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN
AMARANTHACEAE		
Amaranthus sp.	Amaranth	I
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Apium graveloens	Celery	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyote Bush	N
Centaurea melitensis	Tocalote	
Cirsium vulgare	Bull Thistle	I
Gnaphalium sp.	Everlasting	I
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Milk 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

CAPRIFOLIACEAE		
Lonicera sp.	Garden Honeysuckle	I
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium murale	Nettle-Leaved Goosefoot	I
RUBIACEAE		
Galium trifidum	Bedstraw	I
SALICACEAE		
Populus fremontii	Fremont Cottonwood	N
Salix exigua	Narrowleaf Willow	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SAURURACEAE		
Anemopsis californica	Yerba Mansa	N
TYPHACEAE		
Typha sp.	Cattail	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N
VERBENACEAE		
Verbena lasiostachys	Verbena	N

VASCULAR PLANT LIST
ALAMO PINTADO CREEK

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

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

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

* I = Introduced
N = Native

ARROYO PAREDON CREEK
VASCULAR PLANT LIST

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

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

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

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

* I = Introduced
N = Native

VASCULAR PLANT LIST
ARROYO BURRO CREEK

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

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

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

* I - Introduced
N – Native

VASCULAR PLANT LIST
BRADLEY CANYON CHANNEL

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

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

* I - Introduced
N - Native

CANADA DE LA PILA CREEK
VASCULAR PLANT LIST

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

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

* I = Introduced
N = Native

CAT CANYON CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
AMACARDOACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium Maculatum	Poison Hemlock	I
ASTERACEAE		
Ambrosia Psilostachya	Western Ragweed	I
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyote Bush	N
Carpobrotus edulis	Iceplant	I
Ciriusum vulgare	Bull Thistle	I
Heterotheca grandiflora	Telegraph Weed	N
Isocoma venetus ssp. verniodes	Coast Goldenbrush	N
Lactuca serriola	Prickly Lettuce	I
Picris echioides	Ox Tongue	I
Silybum marianum	Milk thistle	I
Sisymbrium irio	London Rocket	I
Xanthium strumarium	Cocklebur	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CHENOPDIACEAE		
Chenopodium murale	Nettle-Leaved Goosefoot	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
EUPHORBIACEAE		
Euphoria peplus	Petty Surge	I
FABACEAE		
Melilotus indicus	Yellow Sweet Clover	I

MALVACEAE		
Malva parviflora	Cheeseweed	I
PLANTAGINACEAE		
Plantago major	Common Plantain	I
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Cynodon dactylon	Bermuda Grass	I
Lolium perenne	Italian Ryegrass	I
Piptatherum miliaceum	Rice grass	I
Polypogon monspeliensis	Rabbitfoot Grass	I
POLYGONACEAE		
Polygonum arenastrum	Common Knotweed	I
Rumex crispus	Curly Dock	I
PRUMULACEAE		
Angallis arvensis	Scarlet Pimpernel	I
ROSACEAE		
Rubus ursinus	Calif. Blackberry	N
SALICACEAE		
Salix exigua	Narrowleaf Willow	N
Salix lasiolepis	Arroyo Willow	N
TROPAEOLACEAE		
Tropaelum majus	Garden Nasturtium	I
URTICACEAE		
Urtica holosericea	Giant Nettle	N

* I = Introduced
N = Native

CEBADA CANYON CHANNEL
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
ASTERACEAE		
Artemisia california	Calif. Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Gnaphalium californicum	Pearly Everlasting	N
Lactuca serriola	Prickly Lettuce	I
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		
Salix lasiolepis	Arroyo Willow	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N

* I = Introduced
N = Native

VASCULAR PLANT LIST
CIENEGUITAS CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
AMARANTHACEAE		
Amaranthus deflexus	Low Amaranth	I
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Apium graveolens	Celery	I
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARACEAE		
Zantedeschia aethiopica	Calla-Lily	I
ARALIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Ambrosia psilostachya	Western Ragweed	N
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Carduus pycnocephalus	Italian Thistle	I
Conyza bonariensis	Flax-Leaved Fleabane	I
Conyza canadensis	Horseweed	I
Cotula coronopifolia	Brass Buttons	I
Gnaphalium luteo-album	Weed Everlasting	I
Lactuca serriola	Prickly Lettuce	I
Malacothrix saxtitilis var. tenuifolia	Cliff Aster	N
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Milk Thistle	I
ASTERACEAE		

Sonchus arvensis	Prickly Sow Thistle	I
Sobchus oleraceaus	Sow Thistle	I
Xanthium strumarium	Cocklebur	I
BRASSICACEA		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
CACTACEAE		
Opuntia sp.	Beavertail Cactus	N
CAPRIFOLIACEAE		
Lonicera japonica	Garden Honeysuckle	I
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Artiplex hastata	Hastate-Leaved Saltbush	I
Artiplex semibaccata	Australian Saltbush	I
Chenopodium ambrosioides	Mexican Tea	I
Chenopodium murale	Nettle-Leaved Goosefoot	I
Salsola iberica	Russian Thistle	I
CONVOLVULACEAE		
Convolvulus althaeoides	Garden Morning Glory	I
Convolvulus arvensis	Bindweed	I
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Scirpus californicus	California Bulrush	N
EUPHORBIACEAE		
Eremocarpus setigerus	Turkey Mullein	N
Ricinus communis	Castor Bean	I
FABACEAE		
Acacia decurrens	Green Wattle	I
Lathyrus latifolius	Common Sweetpea	I
Melilotus alba	White Sweet Clover	I
Melilotus indicus	Yellow Sweet Clover	I
Vicia sativa	Spring Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N

OLEACEAE		
Fraxinus dipetala	Flowering ash	N
GERANEACEAE		
Erodium botrys	Broad-Leaf Filaree	I
JUGLANDACEAE		
Juglans regia	English Walnut	I
JUNCACEAE		
Juncus effusus var. brunneus	Common Rush	N
LAMIACEAE		
Marrubium vulgare	Horehound	
Mentha spicata	Spearmint	I
Stachys bullata	Wood Mint	N
MALVACEAE		
Malva parviflora	Cheeseweed	I
MORACEAE		
Ficus carica	Cultivated Fig	I
MYRTACEAE		
Eucalyptus globulus	Blue Gum	I
OXALIDACEAE		
Oxalis pes-caprae	Sour Grass	I
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
Plantago major	Common Plaintain	I
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Agrostis stolonifera	Redtop	I
Avena fatua	Wild Oats	I
Avena barbata	Slender Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Bromus mollis	Soft Chess	I
Cortaderia atacamensis	Pampas Grass	I
Cynodon dactylon	Bermuda Grass	I
Hordeum glaucum	Glaucus Barley	I
POACEAE		

Koeleria macrantha	June Grass	I
Lolium perenne	Italian Ryegrass	I
Oryzopsis miliacea	Rice Grass	I
Paspalum dilitatum	Dallas Grass	I
Paspalum distichum	Knotgrass	I
Pennisetum clandetinum	Kikuyu Grass	I
Pennisetum setaceum	Fountain Grass	I
Phalaris stenoptera	Harding Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Polygonum arenastrum	Common Knotweed	I
Polygonum lapathifolium	Willow Smartweed	N
Polygonum punctatum	Dotted Smartweed	N
Rumex crispus	Curly Dock	I
PORTULACACEAE		
Portulaca oleracea	Purslane	N
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
ROSACEAE		
Heteromeles arbutifloia	Toyon	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus balsamifera	Black Cottonwood	N
Salix lasiolepis	Arroyo Willow	N
SOLANACEAE		
Nicotiana glauca	Tobacco tree	I
Solanum douglasii	Douglas Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha domingensis	Cattail	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N

* I = Introduced
N = Native

DAVIS CREEK
VASCULAR PLANT LIST

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

FOXENWOOD 3 BASIN
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN
AMARANTHACEAE		
Amaranthus albus	Tumbleweed	I
APIACEAE		
Conium maculatum	Poison Hemlock	I
ASTERACEAE		
Ambrosia psilostachya	Western Ragweed	I
Baccharis salicifolia	Mulefat	N
Cotula coronopifolia	Brass Buttons	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Sisymbrium irio	London Rocket	I
CYPERACEAE		
Heleocharis sp	Spike Rush	N
Scirpus californicus	California Bulrush	N
EUPHORBIACEAE		
Eremocarpus setigerus	Turkey Mullein	N
FABACEAE		
Metilotus albus	White Sweet Clover	I
LAMIACEAE		
Marrubium vulgare	Horehound	I
MYRTACEAE		
Eucalyptus sp.	Eucalyptus	I
ONAGRACEAE		
Epilobium paniculatum	Willow-Herb	N
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Piptatherum miliaceum	Rice Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		

Polygonum lapathiflium	Willow Smartweed	N
Rumex crispus	Curly Dock	I
SALICACEAE		
Salix lasiolepis	Arroyo Willow	N

*I = Introduced
N = Native

VASCULAR PLANT LIST
GREEN CANYON DRAINAGES

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

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

* I = Introduced
N = Native

VASCULAR PLANT LIST
LAS VEGAS CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
APIACEAE		
Foeniculum vulgare	Sweet Fennel	I
ASTERACEAE		
Baccharis glutinosa	Mulefat	N
Baccharis pilularis ssp. Consanguinea	Coyote Bush	N
Picris echioides	Ox Tongue	I
Xanthium strumarium	Cocklebur	I
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Raphanus sativus	Wild Radish	I
EUPHORIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Vicia benghalensis	Vetch	I
JUGLANDACEAE		
Juglans regia	English Walnut	I
PLANTAGINACEAE		
Plantago major	Common plantain	I
PLANTANACEAE		
Plantanus racemosa	Western Sycamore	N
POLYGONACEAE		
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
ROSACEAE		
Rubis ursinus	Blackberry	N
SALICACEAE		
Populus trichocarpa	Black Cottonwood	N
Salix laevigata	Red Willow	N

Salix lasiolepis	Arroyo Willow	N
Salix hindisan	Sandbar Willow	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
TROPAEOLACEAE		
Teopaeolum majus	Garden Nasturtium	I

* I = Introduced
N = Native

LAS POSITAS CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	***COMMON NAME***	***ORIGIN****
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ASTERACEAE		
Artemisia doulgasiana	Mugwort	N
Baccharis glutinosa	Mulefat	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Senecio mikanioides	German Ivy	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
FABACEAE		
Vicia benghalensis	Vetch	N
FAGACEAE		
Qurcus agriolia	Coast Live Oak	N
JUGLANDACEAE		
Juglans regia	English Walnut	I
MYRTACEAE		
Eucalyptus globulus	Blue Gum	I

SCIENTIFIC NAME	***COMMON NAME***	***ORIGIN***
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
Plantago major	Common Plantain	I
POACEAE		
Arundo donax	Giant Reed	I
Cortaderia atacamensis	Pampas Grass	I
POLYGONACEAE		
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Rosa californica	Wild Rose	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SOLANABEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TYPHACEAE		
Typha sp.	Cattail	N

*N = NATIVE
I= INTRODUCED

VASCULAR PLANT LIST
MARIA YGNACIO CREEK

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

MIGUELITO CHANNEL OUTLET
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Apium graveolens	Celery	I
Conium maculatum	Poison Hemlock	I
Foenicumum vulgare	Sweet Fennel	I
ASTERACEAE		
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pillaris	Coyote Bush	N
Cirisium vulgare	Bull Thistle	I
Lactuca serriola	Prickly Lettuce	I
Picris ecioides	Ox Tongue	I
Silybum marianum	Milk Thistle	I
Sonchus arvensis	Prickly Sow Thistle	I
Xanthium strmarium	Cocklebur	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CARIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CYPERACEAE		
Scirpus californicus	California Bulrush	N
FABACEAE		
Metilotus albus	White Sweet Clover	I
Metilotus indicus	Yellow Sweet Clover	I
FAGACEAAE		
Quercus agrifolia	Coast Live Oak	N
PLANTANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		

Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Lolium perenne	Italian Ryegrass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus balsamifera	Black Cottonwood	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SCROPHULARIACEAE		
Scrophularia californica	California Figwort	N
SOLANCEAE		
Nicotiana glauca	Tobacco Tree	I
Solananum douglasii	Douglas Nightshade	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N

*I = Introduced
N = Native

VASCULAR PLANT LIST
MONTECITO CREEK

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

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

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

* N - Native
I - Introduced

VASCULAR PLANT LIST
ORCUTT- SOLOMON CREEK

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

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

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

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

* I = Introduced
N = Native

VASCULAR PLANT LIST
PICAY CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
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 douglasiana	Mugwort	I
Baccharis glutinosa	Mulefat	I
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Milk Thistle	I
Xanthium strumarium	Cocklebur	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Saambucus mexicana	Elderberry	N
CONVOLVULACEAE		
Calystegia macrostegia	Morning-Glory	N
CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
Scirpus californicus	California Bulrush	N

EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Melilotus albus	White Sweet Clover	I
Vicia benghalensis	Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
LAMIACEAE		
Mentha citrata	Bergamont Mint	N
ONAGRACEAE		
Epilobium adenocaulon	Willow-Herb	N
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Avena fatua	Wild Oats	I
Pennisetum clandestinum	Kikuyu Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Rumex crispus	Curly Dock	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Rubus ursinus	California Blackberry	N
SALICACEAE		
Salix lasiolepis	Arroyo Willow	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
TROPAEOLACEAE		

Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N

* N - Native
  I - Introduced

VASCULAR PLANT LIST
REFUGIO CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
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
ASTERACEAE		
Ambrosia psilostachya	Western Ragweed	I
Artemisia californica	California Sagebrush	N
Artemisia douglasiana	Mugwort	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Carduus pycnocephalus	Italian Thistle	I
Cotula coronopifolia	Brass Buttons	I
Helenium puberulum	Sneezeweed	I
Lactuca serriola	Prickly Lettuce	I
Picris echioides	Ox Tongue	I
Silybum marianum	Milk Thistle	I
Sonchus arvensis	Prickly Sow Thistle	I
Taraxcum officinale	Common Dandelion	I
Xanthium strumarium	Cocklebur	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CHENOPODIACEAE		
Chenopodium ambrosioides	Mexican Tea	I

EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Melilotus indicus	Yellow Sweet Clover	I
Vicia benghalensis	Vetch	N
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
PLATANACEAE		
Platanus racemosa	Western Sycamore	N
POACEAE		
Arudo donax	Giant Reed	I
Avena fatua	Wild Oats	I
Bromus rubens	Foxtail	I
Echinochloa crusgalli	Barnyard Millet	I
Oryzopsis miliacea	Rice Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
ROSACEAE		
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus balsamifera	Black Cottonwood	N
Salix lasiolepis	Arroyo Willow	N
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N
URTICACEAE		
Urtica holosericea	Giant Nettle	I

* N - Native
I - Introduced

VASCULAR PLANT LIST
RODEO-SAN PASQUAL CREEK AND BASIN

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

SOLANACEAE		
Solanum douglasii	Douglas Nightshade	N
URTICACEAE		
Urtica holosericea	Giant Nettle	N
VERBENACEAE		
Verbena lasiotachys	Verbena	N

* I = Introduced
N = Native

VASCULAR PLANT LIST
ROMERO CREEK

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

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

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

* N - Native
I - Introduced

SAN ANTONIO CREEK - GOLETA
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum temateia	Giant Horsetail	N
ANACARDIACEAE		
Schinus molle	Pepper Tree	I
toxicodendron diversilobum	Poison Oak	N
APIACEAE		
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 glutinosia	Mulefat	N
Baccharis pilularis ssp. Consanguinea	Coyote Bush	N
Gnaphalium califoricum	Pearly Everlasting	N
Gnaphalium luteo-album	Weedy Everlasting	I
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	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		
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 latifloius	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		
Gilia achilleaefolia	Gilia	N
POLYGONACEAE		
Rumex crispus	Curly Dock	I
Rumex hymenosepalus	Wild Rhubard	I

PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
RHAMNACEAE		
Rhamnus californica	Coffeeberry	N
Ceanothus spinosus	Greenbark	N
ROSACEAE		
Heteromeles arbutifolia	Toyon	N
Pyracantha sp.	Pyracantha	I
Rosa californica	Wild Rose	N
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus trichocarpa	Black cottonwood	N
Salix exigua	Narrowleaf Willow	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Wiilow	N
SCROPHULARIACEAE		
Mimulus aurantiacus	Monkey Flower	N
Mimulus guttatus	Mash Monkey Flower	N
Scropularia californica	California Figwort	N
Veronica anagallis-aquatica	Speedwell	I
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
Solanum xantii	Chaparral Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N
VERBENACAEAE		
Verbena lasiostachys	Verbena	N

* I = Introduced
N = Native

VASCULAR PLANT LIST
SAN ANTONIO CREEK - LOS ALAMOS

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

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

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

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

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

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

*I = Introduced
N = Native

VASCULAR PLANT LIST
SAN JOSE CREEK

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

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

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

PINACEAE		
Pinus radiata	Monterey Pine	I
PLATAGINACEAE		
Plantago major	Common Plantain	I
Plantago lanceolata	Plantain	I
PLANTANACEAE		
Platanus racemosa	Ca. Sycamore	N
POECEAE		
Agrostis semiverticellata	Water Bent	I
Arundo donax	Giant Reed	I
Avena fatua	Wild Oat	I
Bromus diandrus	Ripgut Grass	I
Bromus mollis	Soft Chess	I
Cortadena jubata	Pampas Grass	I
Cynodon dactylon	Bermuda Grass	I
Echinochloa crusgalli	Barnyard Millet	I
Elymus condensatus	Giant Rye	I
Hordeum murinum	Foxtail	I
Lolium multiflorum	Italian Ryegrass	I
Lolium miliacea	Rice Grass	
Pennisetum clandestinum	Kikuyu Grass	I
Polypogon interruptus		
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Polygonum arenastrum	Common Knotweed	I
Polygonum lapathifolium	Willow Smartweed	I
Polygonum punctatum	Dotted Water Smartweed	N
Rumex crispus	Curly Dock	I
PTERIDACEAE		
Pteridium aquilinum var. pubescens	Western Bracken	N
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Contoneaster lacteus	Cotoneaster	I
Heteromeles arbutifolia	Toyon	N
Malosma laurina	Sumac	N
Prunus illicifolia	Holly-leaved Cherry	N
Pyracantha sp.	Fire Thorn	I
Rosa californica	CA. Rose	N
Rubus procerus	Himalya Berry	I
Rubus ursinus	CA. Blackberry	N

SALICACEAE		
Populus balsamifera	Black Cottonwood	N
Salix exigua	Sandbar Willow	N
Salix lasiolepsis	Arroyo Willow	N
Salix laevigata	Red Willow	N
Salix lucida	Yellow Willow	N
SCROPHULARIACEAE		
Scrophularia californica	CA. Figwort	N
Veronica anagallis-aquatica	Water Speedwell	I
SOLANACEAE		
Datura wrightii	Jimson Weed	N
Nicotiana glauca	Tree Tobacco	I
Solanum doughasii	Douglas Nightshade	N
Solanum nigrum	Black Nightshade	I
Solanum xanti	Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Nasturium	I
TYPACEAE		
Typha domingensis	Narrow-leaved Cattail	N
Typha latifolia	Broad-leaved Cattail	N
ULMACEAE		
Ulmus sp.	Elm	I
Ulmus parviflorus	Chinese Elm	I
VISCACEAE		
Phoradendron tomentosum	Bigleaf Mistletoe	N

* N = Native
I = Introduced

VASCULAR PLANT LIST
SANTA MARIA AIRPORT/ABEX CHANNELS

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

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

* I - Introduced
N - Native

SANTA MARIA RIVER
VASCULAR PLANT LIST

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

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

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

* I = Introduced
N = Native

Table 3

Santa Ynez River - West of Lompoc

Plant Species Inventory

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

(continued)

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

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

(continued)

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

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

(continued)

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

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

(continued)

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

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

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

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

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

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

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

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

(continued)

Table 3
(continued)

Santa Ynez River - West of Lompoc
Plant Species Inventory

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

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

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

*California Native Plant Society List 4 species

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

VASCULAR PLANT LIST
TANGLEWOOD CHANNEL

SCIENTIFIC NAME	COMMON NAME	ORIGIN
AMARANTHACEAE		
Amaranthus albus	Tumbleweed	I
APIACEAE		
Apium graveolens	Celery	I
Conium maculatum	Poison Hemlock	I
Foenicumum vulgare	Sweet Fennel	I
ASTERACEAE		
Ambrosia psilostachya	Western Ragweed	I
Anthemis cotula	Mayweed	I
Artemisia douglasiana	Mugwort	N
Baccharis pillaris	Coyote Bush	N
Carduus pycnocephalus	Italian thistle	I
Cirisium vulgare	Bull Thistle	I
Conyza canadensis	Horseweed	I
Cotula coronopifolia	Brass Buttons	I
Gnaphalium chilense	Cottonvatting	N
Senecio vulgare	Common Groundsel	I
Silybum marianum	Milk Thistle	I
Xanthium spinosium	Spiny Cocklebur	I
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium -aquaticum	Watercress	I
Sisymbrium irio	London Rocket	I
CHENOPODIACEAE		
Chenopodium album	Lamb's Quarters	I
Chenopodium macrospermum var. farinosum	Coast Goosefoot	I
Chenopodium murale	Nettle-Leaved -Goosefoot	I
CYPERACEAE		
Eleocharis macrostachya	common spikerush	N
Cyperus alternifolius	Umbrella Plant	I
Scirpus californicus	California Bulrush	N

EUPHORBIACEAE		
Eremocarpus setigerus	Turkey Mullein	N
FABACEAE		
Lotus purshianus var. purshianus	Spanish Clover	N
Lotus salsuginosus	Lotus	N
Metilotus albus	White Sweet Clover	I
LAMIACEAE		
Marrubium vulgare	Horehound	I
LEMNACEAE		
Lemna sp.	Duckweed	N
MALVACEAE		
Malva prviflora	Cheeseweed	I
PAPAVERACEAE		
Eschscholzia californica	California Poppy	N
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Cynodron dactylon	Bermuda Grass	I
Lolium perenne	Italian Ryegrass	I
Phalaris stenoptera	Harding Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Rumex crispus	Curly Dock	I
Rumex fueginus	Golden Dock	I
PRIMULACEAE		
Anagallis arvensis	Scarlet Pimpernel	I
SOLANCEAE		
Nicotiana glauca	Tobacco Tree	I

* I = Introduced
N = Native

VASCULAR PLANT LIST
TECOLOTE CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telmateia	Giant Horsetail	N
ANACARDIACEAE		
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	I
Foeniculum vulgare	Sweet Fennel	I
APOCYNACEAE		
Vinca major	Periwinkle	I
ARARLIACEAE		
Hedera helix	English Ivy	I
ASTERACEAE		
Artemisia douglasiana	Mugwort	N
Baccharis douglasiana	Mulefat	N
Baccharis pilularis ssp. consanguinea	Coyote Bush	N
Cirsium vulgare	Bull Thistle	I
Gnaphalium californicum	Everlasting	
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Milk Thistle	I
Venegasia carpesioides	Canyon Sunflower	N
Xanthium strumarium	Cocklebur	I
BETULACEAE		
Alnus rhombifolia	White Alder	N
BORAGINACEAE		
Heliotropium curassavicum		N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus sativus	Wild Radish	I
Rorippa nasturtium-aguaticum	Watercress	I

CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
POACEAE		
Avena fatua	Wild Oats	I
Bromus diandrus	Ripgut Grass	I
Elymus condensatus	Giant Rye	N
Hordeum glaucum	Glaucus Barley	I
Lolium perenne	Italian Ryegrass	I
Oryzopsis miliacea	Rice Grass	I
Phalaris stenoptera	Harding Grass	I
POLYGONACEAE		
Rumex conglomeratus	Green Dock	I
Rumex crispus	Curly Dock	I
PRIMULACEAE		
Anagallis arvenis	Scarlet Pimpernel	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
ROSACEAE		
Heteromeles arbutifolia	Toyon	N
Pyracantha sp.	Pyracantha	I
Rubus ursinus	California Blackberry	N
SALICACEAE		
Populus fremontii	Fremont Cottonwood	N
Salix hindsiana	Sandbar Willow	N
Salix laevigata	Red Willow	N
Salix lasiolepis	Arroyo Willow	N
SCHROPHULARIACEAE		
Mimulus aurantiacus	Sticky Monkey -Flower	N
Scrophularia californica	California Figwort	N
Veronica angallis-aquatica	Speedwell	I
SOLANACEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TAMARICACEAE		
Tamarix sp.	Tamarisk	I

TROPAELACEAE		
Tropaeolum majus	Garden nasturtium	I
TYPHACEAE		
Typha sp.	Cattail	N

* I = Introduced
N = Native

VASCULAR PLANT LIST
TECOLOTITO CREEK

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

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

* I = Introduced
N = Native

VASCULAR PLANT LIST
TORO CREEK

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
EQUISETACEAE		
Equisetum telemateia	Giant Horsetail	N
ANACARDIACEAE		
Malosma laurina	Laurel Sumac	N
Toxicodendron diversilobum	Poison Oak	N
APIACEAE		
Conium maculatum	Poison Hemlock	N
APOCYNACEAE		
Vinca major	Perwinkle	I
ARALIACEAE		
Hedera Helix	English Ivy	I
Ageratina adenophora	Ironweed	I
Artemisia caloifornica	California Sagebush	N
Artemisia douglasiana	Mugwort	N
Baccharis salicifolia	Mulefat	N
Baccharis pilularis	Coyote Bush	N
Gnaphalium luteo-album	Weedy Everlasting	I
Picris echioides	Ox Tongue	I
Senecio mikanioides	German Ivy	I
Silybum marianum	Mild Thistle	I
Venegasia carpesioides	Canyon Sunflower	N
BETULACEAE		
Alnus rhombifolia	White Alder	N
BRASSICACEAE		
Brassica nigra	Black Mustard	I
Raphanus Satuvus	Wild Radish	I
CAPRIFOLIACEAE		
Sambucus mexicana	Elderberry	N
CONVOLVULACEAE		
Calystegia Macrostegia ssp. cyclostegia	Morning-Glory	I

CYPERACEAE		
Cyperus alternifolius	Umbrella Plant	I
EUPHORBIACEAE		
Ricinus communis	Castor Bean	I
FABACEAE		
Vicia benghalensis	Vetch	I
FAGACEAE		
Quercus agrifolia	Coast Live Oak	N
HYDROPHYLACEAE		
Phacelia ramossissima	Branching Phacelia	N
LAMIACEAE		
Mentha citrata	Bergamont Mint	I
Salvia mellifera	Black Sage	N
MALVACEAE		
Lavatera cretica	Cretan Lavatera	I
MYRTACEAE		
Eucalyptus camaldulensis	Red Gum	I
PLANTAGINACEAE		
Plantago lanceolata	English Plantain	I
PLATANACEAE		
Plantanus racemosa	Western Sycamore	N
POACEAE		
Elymus condensatus	Giant Rye	N
Pennisetum clandestinum	Kikuyu Grass	I
Polypogon monspeliensis	Rabbitsfoot Grass	I
POLYGONACEAE		
Polygonum lapathifolium	Willow Smartweed	N
Rumex crispus	Curly Dock	I
RANUNCULACEAE		
Clematis ligusticifolia	Creek Clematis	N
RHAMNACEAE		
Ceanothus spinosus	Greenbark	N

ROSACEAE		
Heteromeles arbutfolia	Toyon	N
Rosa californica	Wild Rose	N
Rubus ursinus	California Blackberry	N
SCHROPHULARIACEAE		
Scrophularia californica	California Figwort	N
SOLANCEAE		
Nicotiana glauca	Tobacco Tree	I
Solanum douglasii	Douglas Nightshade	N
TROPAEOLACEAE		
Tropaeolum majus	Garden Nasturtium	I

* I = Introduced
N = Native

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

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

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

* I = Introduced
N = Native

VASCULAR PLANT LIST
ZACA CREEK

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

* I = Introduced
N = Native

ZANJA DE COTA CREEK
VASCULAR PLANT LIST

SCIENTIFIC NAME	COMMON NAME	ORIGIN*
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		
Eucaplyptus 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

*I = Introduced
N = Native