
RCWD/City of Temecula Non-Functional Turf Removal and Irrigation Upgrade Project

Work Plan

Attachment 3 consists of the following items:

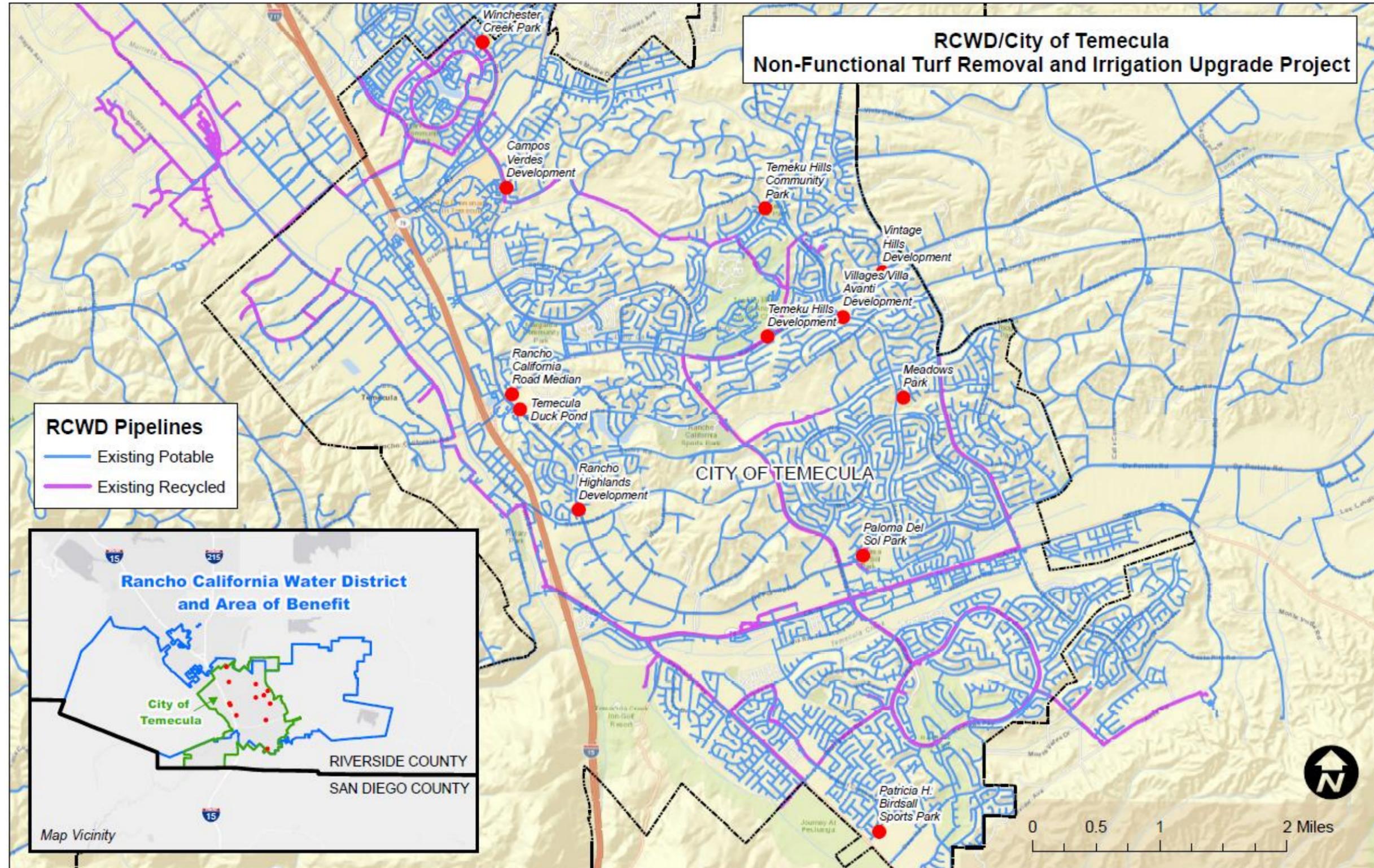
- ✓ **Work Plan.** Detailed information regarding the tasks that will be performed for the RCWD/City of Temecula Non-Functional Turf Removal and Irrigation Upgrade Project.
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The Rancho California Water District's (RCWD/District) proposal for funding from the Department of Water Resources' (DWR) 2014 Water-Energy Grant Program is comprised of a single project called the ***RCWD/City of Temecula Non-Functional Turf Removal and Irrigation Upgrade Project*** (Project), which includes the removal of approximately 388,820 square feet of turf at 12 city-owned and maintained developments, parks, and medians, the replacement of that turf with lower water use plant materials, and the improvement of the efficiency of the irrigation systems within the areas where the turf was removed. The District has partnered with the City of Temecula (City) to implement the Project, and both entities are collectively committed to meeting the water, energy, and greenhouse gas (GHG) emission reduction goals stated in Attachment 2 of this proposal.

System Map

Figure 3-1 shows the District and City boundaries, the project locations of each turf removal site, the associated water infrastructure, and the areas of benefit. The District and City boundaries are shown in the call out box – the District boundary is shown in blue and the City boundary is shown in green, with the Project locations shown in red.

Figure 3-1: RCWD/City of Temecula Non-Function Turf Removal and Irrigation Upgrade Project System Map



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As water supplier to the area, the District's entire service area (which includes the City) benefits from Project implementation through:

- **Water Savings**
Local water demand will be reduced, resulting in increased water supply reliability for all customers
- **Energy Savings**
Local demand for energy will be reduced, resulting in a decreased impact on energy infrastructure system
- **GHG Emission Reductions**
Risks to the environment and to human health and welfare will result from reduced GHG emissions

Each Turf Removal Site is shown on the System Map designated by the location of the site, and the site name. **Individual maps of each Turf Removal Site are included in Appendix B** showing the turf area to be removed and replaced with drought tolerant plant materials and improved irrigation systems.

Project Description

The RCWD/City of Temecula Non-Functional Turf Removal and Irrigation Upgrade Project (Project) is proposed for funding by Rancho California Water District (District/RCWD) in partnership with the City of Temecula (City). The Project seeks to reduce current potable and recycled water supply used for the irrigation of non-functional turf, while reducing energy consumption and greenhouse gas (GHG) emissions.

The Project will consist of the following activities:

- **Non-Functional Turf Removal and Replacement:** The City will remove approximately 388,820 square feet (SF) of non-functional high-water use turf at 12 sites throughout the City, including developments, parks, and medians, and replace with lower water use plant material including drought tolerant and aesthetically pleasing California natives.
- **Irrigation System Improvements:** Replace traditional and inefficient irrigation system spray head components with high-efficiency components such as rotating nozzles and/or drip emitters. Pipe replacement and repair will also be made on existing water supply lines and deficient irrigation lines, as necessary, to reduce water losses in the system. Each of the sites will also be equipped with weather-based irrigation controllers.

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- Public Outreach and Education: The use of site signage, information materials, and press releases to demonstrate to and educate the local community on the importance of water use efficiency and conservation strategies, including the use of California native/drought tolerant landscapes.

The Project's water and energy reduction goals, as detailed in Attachment 2, include the following:

- Water Savings: Annual = 10.51 million gallons; Life of Project = 315.3 million gallons
- Energy Savings: Annual = 75,470 kWh; Life of Project = 2,264,093 kWh
- Greenhouse Gas Emission Reductions: Annual = 20,981 kg CO₂e; Life of Project = 629,418 kg CO₂e

Upon award of a DWR Water-Energy Grant, the funding will be used, in combination with in-kind matching funds committed by RCWD and the City, to pay for design, replacement plant materials, replacement irrigation system components, and for the contractors to perform the retrofit work at each site.

Project Partners

RCWD is the Project applicant and will be the grantee with the State. The City of Temecula is a project partner and is the lead implementing agency for the Project and will oversee all contractors and project work. This partnership will require an agreement between the District and the City to reimburse project costs from grant funding. Both the District and the City have identified in-kind matching funds.

Work Plan Tasks

The following presents the work items necessary for implementation of the Project. Work Plan items are shown for any work after July 1, 2014. The Project does not require acquisition of easements as the property is completely within the City ownership and within the RCWD service area. Therefore, easements are not included in the Work Plan.

Task 1: Project Administration and Reporting

Project administration will be performed by RCWD and City staff. Project administration tasks will include overall grant management, project coordination and management, communication with the project team, and project meetings.

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RCWD will be responsible for Progress Report and Invoice submission to DWR. On a quarterly basis, the City will prepare progress reports and submit to RCWD. The City will also collect invoices from and pay contractors for labor and materials associated with the Project, document in-kind labor, and invoice RCWD. RCWD will generate quarterly Progress Reports in compliance with grant requirements, and summary invoices with backup documentation showing expenditures for the Project, including RCWD in-kind labor for matching funds, and submit to DWR for reimbursement.

The City will ensure a Department of Industrial Relations-approved Labor Compliance Program (LCP) is in place for construction of the Project. The LCP activities that will be implemented throughout the construction phase of the Project are listed below:

- Project coordination, pre-construction, and progress meetings throughout the Project
- Monitor and audit contractors certified payrolls and related documents; monitor contractors' compliance with apprenticeship requirements; Identify potential labor compliance issues and conduct investigations
- Job-site reviews and worker interviews/verify interview against submitted payrolls
- Prepare monthly reports on status of labor compliance
- Administrative reviews, project management and staff assignment status meetings
- Project closeout and archiving

Task 1 Deliverables: Quarterly Progress Reports, Project Completion Report, DWR Invoices with backup, and proof of labor compliance upon request.

Task 2. Project Evaluation/Design/Engineering

Conduct Project Design and Engineering. The City will secure a qualified consultant to complete project design and engineering through a Request For Proposal (RFP) and selection process. The selected consultant will be awarded a contract through City Council approval and an agreement will be executed. The consultant will develop design plans at 30%, 60%, 90% and 100%, and will provide plan check submittals during the design process. The consultant will develop Plans, Specifications, and Estimate (PS & E).

Task 2 Deliverables: 100% Final Design Plans and Specifications for Each Site, and Final Plant Materials List

**RCWD/City of Temecula Non-Functional
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California Environmental Quality Act (CEQA) documentation will be prepared by the City for implementation of the Project. The following activities will be conducted: City Public Works Engineering Review – prepare request, location maps, project details, and other required documentation and submit to the City Planning Department. The Planning Department will review project sites, assess environmental conditions relevant to the proposed Project sites, prepare the appropriate environmental document and submit to the appropriate regulatory agencies, as necessary.

Task 3 Deliverables: CEQA Document - recorded

Task 4: Permitting

The City will coordinate with RCWD to submit any applications and obtain all necessary permits required. All work to be performed within existing City right-of-way.

Task 4 Deliverables: Copies of approved applications and/or permits

Task 5: Project Monitoring Plan

The Project Monitoring Plan will be prepared and submitted to DWR in accordance with the grant agreement requirements, prior to disbursement of grant funds for construction or monitoring activities for the Project. The Project Monitoring Plan is described in more detail in Attachment 6 and will include the following elements:

- Project Description
- Project Goals, Desired Outcomes, Targets, Measurement Tools and Methods
- Monitoring, Assessment and Performance Measures: Baseline conditions, monitoring systems to be utilized, methodology of monitoring, frequency of monitoring, and location of monitoring points

Task 5 Deliverable: Project Monitoring Plan

Task 6: Project Construction/Implementation**Construction Contracting**

Construction contracting for the Project will be handled by City staff in compliance with Public Contract Code. The City adheres to proper bidding procedures per the Public Contract Code and as such, posts bid opportunity (Notice Inviting Bids) on an electronic bidding site, PlanetBids, place advertisement with widely circulated periodicals, and notice trade papers. A bid opening date and time are specified and upon close of bid, bids are open electronically and witnessed by

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the City Clerk's office. The apparent low bidder and all proponents' submittals are reviewed for accuracy of bid, bid bond, and supplemental bid documents. Once the lowest responsible bidder is identified, the project manager prepares agenda report for the next City Council meeting to award a construction contract to the contractor.

The contractor is responsible to submit all contract documents, insurances, permits, etc., as required by the agreement prior to construction start.

Construction***Mobilization and Site Preparation – Turf Removal:***

Spray non-functional turf areas to be removed. This consists of the removal of non-functional turf at each site which includes a "grow and kill" strategy involving a 3-4 week spray plan and remove top three to four inches of dead turf and top soil.

Project Construction:

Project construction includes the following components:

Install Efficient Irrigation System. An efficient drip irrigation system and/or more efficiency spray nozzles, depending on site conditions, will be installed in the areas where turf was removed to accommodate new, low-water use shrub materials. Lateral lines and irrigation valves will have recycled water distribution capabilities.

Install Soil Amendments. Dependent on each sites soils conditions, use appropriate amendment products to enhance soil enrichment to ensure growth of new plant materials.

Install Plantings. New drought tolerant plants will be installed in the areas where the turf was removed and the drip system was installed.

Install Mulch. Post planting, install 3" of mulch to minimize invasive weed growth, minimize water runoff and support water retention for plant materials.

Install and Program Smart Irrigation Controller. Existing irrigation timers will be replaced with "Smart" weather-based irrigation controllers. The controllers will be programmed according to the needs of the new plantings.

Install Educational/Informational Signage. Signage will be installed at each of the conversion sites to provide visitors with information about irrigation efficiency and drought tolerant plants.

Performance Testing and Demobilization:

Project performance testing will be coordinated among RCWD and City staff and consist of post-conversion site audits and post-conversion consumption monitoring.

Post – Conversion Site Audits. For quality control purposes, each of the sites will have the irrigation systems audited by RCWD and City staff following construction. These post-conversion audits will include distribution uniformity tests and will document improvements

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made to the system. Information from the audit will be used to verify smart irrigation controller settings. The audit will also include an inspection of the newly installed plant materials to verify proper selection and installation. The post-conversion site audit will be the final activity of construction. At conclusion of the site audit, project construction will be considered demobilized.

Post – Conversion Consumption Monitoring. RCWD staff will monitor the water consumption at each of the sites following the site conversions and compare pre- and post-conversion water consumption to document water savings benefits.

Public Outreach

Public information materials and noticing will be developed to promote landscape best management practices (BMPs) to the community. Information provided will demonstrate work done to improve the efficiency of irrigation systems and decrease overall water demand through the use of native plant landscaping.

Construction Administration

City staff will conduct the construction administration activities. Construction administration activities will consist of oversight during the construction process to ensure appropriate removal of non-functional turf, and installation of proper water-efficient irrigation equipment, plant materials, and signage.

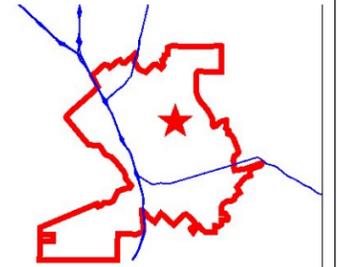
Task 6 Deliverables: Advertisement for bids, bid results, construction contracting and award, construction photographs (before & after), project completion verification (project acceptance), and public outreach materials.

Appendix B to Attachment 3 includes the following:

✓ **Turf Removal Site Maps for the following 12 sites:**

1. Temeku Hills Development
2. Rancho Highlands Development
3. Villages Development
4. Vintage Hills Development
5. Campos Verdes Development
6. Rancho California Road Median
7. Temecula Duck Pond
8. Winchester Creek Park
9. Meadows Park
10. Paloma Del Sol Park
11. Temeku Hills Community Park
12. Patricia H Birdsall Sports Park

Temeku Hills Development DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2006

0 550 1100 1650 ft.

Map center: 6298019, 2130748

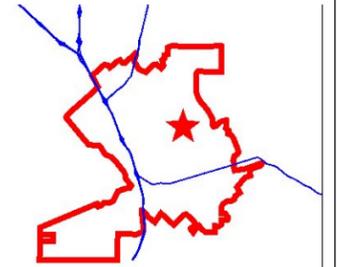


Scale: 1:5,552

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Notes: Remove approximately 92,750 square feet of non-functional turf and replace with drought tolerant plant materials

Villages/Villa Avanti Development DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2006

0 600 1200 1800 ft.

Map center: 6299618, 2129629

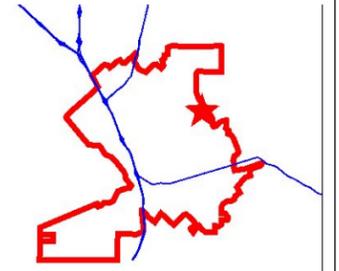


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Notes: Remove approximately 21,925 square feet of non-functional turf and replace with drought tolerant plant materials

Vintage Hills Development DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2006

0 250 500 750 ft.

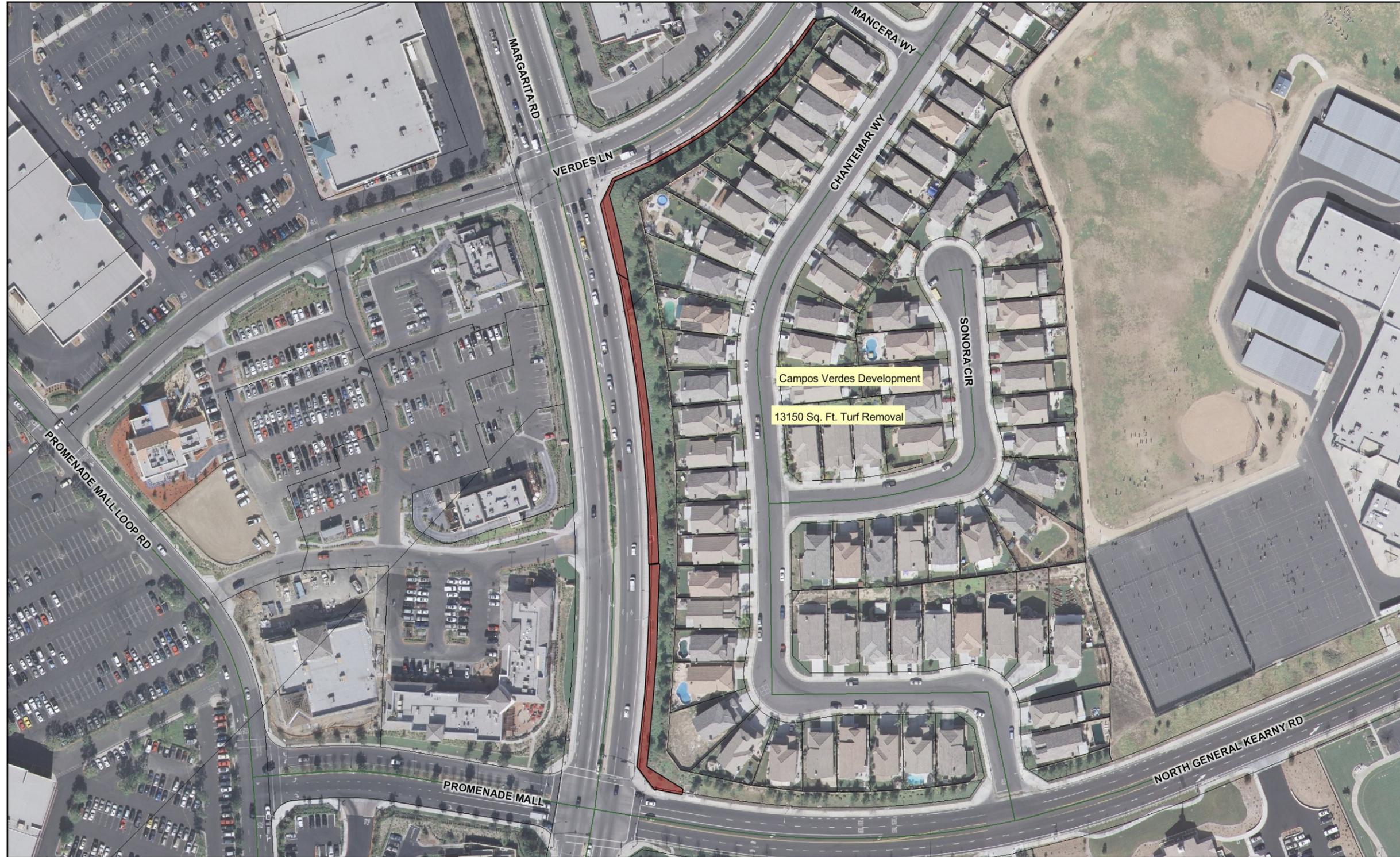
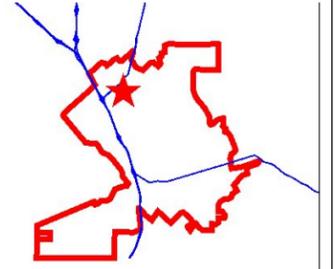
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Scale: 1:2,562

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Notes: Remove approximately 16,650 square feet of non-functional turf and replace with drought tolerant plant materials



Legend

- City
- Streets
- Parcels
- Aerial 2006



Map center: 6287843, 2136499

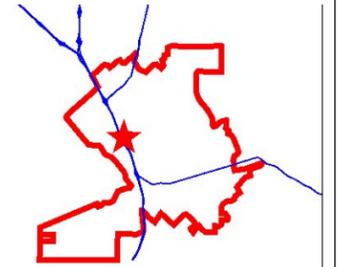


Scale: 1:1,794

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Notes: Remove approximately 13,150 square feet of non-functional turf and replace with drought tolerant plant materials

Rancho California Road Median DWR Grant Turf Removal Site



Legend

- City
- Aerial 2011 Transparent
- Streets
- Parcels



Map center: 6287349, 2127422

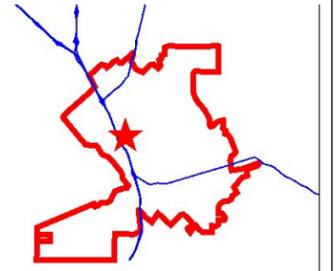


Scale: 1:342

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Notes: Remove approximately 1,500 square feet of non-functional turf and replace with drought tolerant plant materials

Temecula Duck Pond DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2006

0 140 280 420 ft.

Map center: 6288274, 2127740

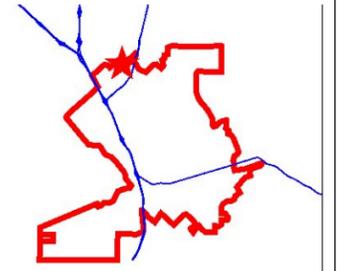
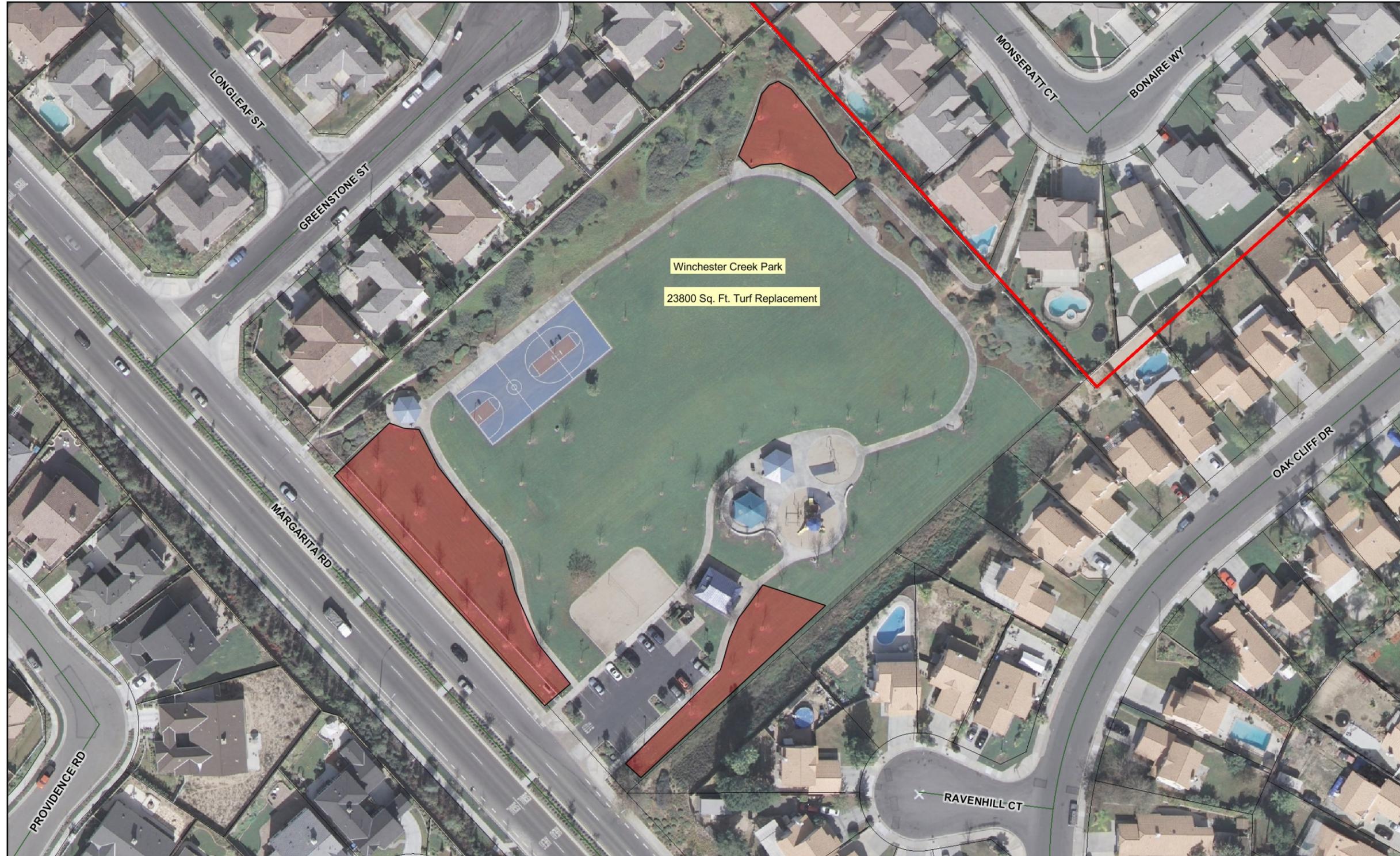


Scale: 1:1,495

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Notes: Remove approximately 28,500 square feet of non-functional turf and replace with drought tolerant plant materials

Winchester Creek Park DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2006

0 100 200 300 ft.

Map center: 6286985, 2142603

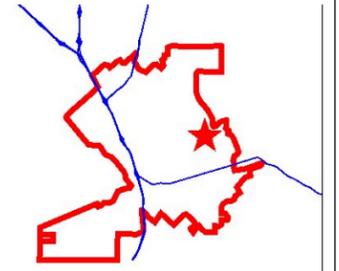


Scale: 1:1,025

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Notes: Remove approximately 23,800 square feet on non-functional turf and replace with drought tolerant plant materials

Meadows Park DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2006

0 80 160 240 ft.

Map center: 6304144, 2127749

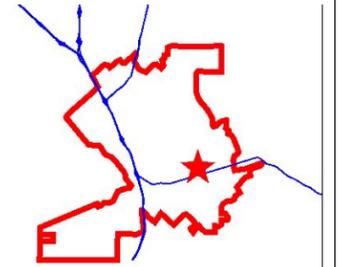


Scale: 1:854

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Notes: Remove approximately 17,800 square feet of non-functional turf and replace with drought tolerant plant materials

Paloma Del Sol Park DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2006

0 125 250 375 ft.

Map center: 6302688, 2121184

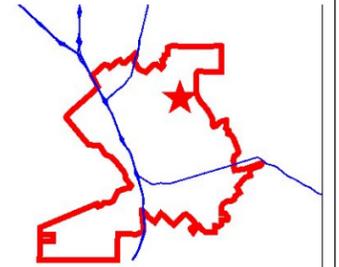


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Notes: Remove approximately 28,250 square feet of non-functional turf and replace with drought tolerant plant materials

Temeku Hills Community Park DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2006

0 130 260 390 ft.

Map center: 6298996, 2135575

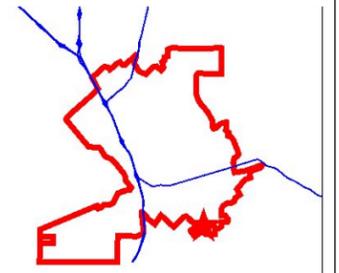


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Notes: Remove approximately 32,750 square feet of non-functional turf and replace with drought tolerant plant materials

Patricia H Birdsall Sports Park DWR Grant Turf Removal Site



Legend

- City
- Streets
- Parcels
- Aerial 2012

0 275 550 825 ft.

Map center: 6303890, 2109555



Scale: 1:2,791

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: Remove approximately 56,245 square feet of non-functional turf and replace with drought tolerant plant materials