Valley Water

2020

South Santa Clara County Stormwater Resource Plan

Prepared By:

Watershed Stewardship and Planning Division

Environmental Planning Unit

Valley Water

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January 2020

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Acronyms

ASBS	Areas of Special Biological Significance
Basin Plan	Water Quality Control Plan for the Central Coast Basin
BMP	Best Management Practice
CEQA	California Environmental Quality Act
CIP	Capital Improvement Plan
COC	Community of Concern
CWA	Clean Water Act
DAC	Disadvantaged Community
DDD	Dichlorodiphenyldichloroethane
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GSI	Green Stormwater Infrastructure
IRWM	Integrated Regional Water Management
IRWMG	Integrated Regional Water Management Group
IRWMP	Integrated Regional Water Management Plan
MS4	Municipal Separate Storm Sewer System
MTC	Metropolitan Transportation Committee
PCBs	Polychlorinated biphenyls
ROW	Right of Way
RWMG	Regional Water Management Group
RWQCB	Regional Water Quality Control Board
South County	Southern Santa Clara County
SSURGO	Soil Survey Geographic Database
SWRP	Stormwater Resource Plan
TAC	Technical Advisory Committee
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
USGS	United States Geological Survey
Valley Water	Santa Clara Valley Water District
WAAP	Wasteload Allocation Attainment Program

Executive Summary

Previously, stormwater was not viewed as a resource in the way it is understood today, but rather as water that was conveyed directly to waterways to avoid flooding in urban areas during rain events. Today, conveyance of stormwater to receiving waters occurs through runoff that enters municipal separate storm sewer systems (MS4s) that are a typical feature of urban infrastructure, and as overland runoff in less urbanized areas. While MS4s are important and help prevent flooding, there are opportunities to increase use of stormwater to reduce runoff and provide benefits to water supply, water quality, and the community. Furthermore, capture and use of stormwater onsite in both urban and agricultural areas through green stormwater infrastructure prevents pollutants from entering receiving waters while also lessening the intensity of peak storm flows.

A Stormwater Resource Plan (SWRP) is a planning document that describes the local watershed, identifies water quality issues, and potential local and regional Green Stormwater Infrastructure (GSI) projects that can be constructed to improve local surface water quality. The South Santa Clara County SWRP serves as a planning document for planned and future regional stormwater projects in South Santa Clara County. The SWRP provides a comprehensive overview of the watershed and describes current and historical geographic, environmental, and regulatory characteristics that affect how water resources are managed in the area today. The plan recognizes stormwater as a resource that can be used and managed in ways that benefit water supply, water quality, and the community.

The SWRP includes a metrics-based analysis to identify areas most suitable for future GSI projects in South Santa Clara County using location specific data such as land use, impervious area, slope, soil infiltration, groundwater recharge potential, flood zoning, proximity to contaminated sites, priority development area, and economic state of the surrounding community. In addition to providing information to aid future projects, planned stormwater projects were ranked using a multi-benefit approach that considered water quality source control, water supply, habitat or natural hydrology enhancement, co-location with other projects, community benefits, and project status.

Development of the SWRP was a collaborative process between Valley Water and partner agencies including the City of Morgan Hill, City of Gilroy, and the County of Santa Clara. A technical advisory committee was formed with subject matter experts from each agency to provide guidance during the SWRP development process. Funding for the SWRP development was provided by the Safe, Clean Water and Natural Flood Protection Program.

Chapter 1: Introduction

1.1 Background and Purpose

In 2014, Assembly Bill 1471 also known as the Water Quality, Supply, and Infrastructure Improvement Act (Proposition 1) authorized $7.545 billion in general obligation bonds for water related projects that include water supply, watershed protection and restoration, improvements to groundwater and surface water quality, and flood protection. Under Proposition 1, $200 million in stormwater grant funding was allocated for multi-benefit stormwater management projects. Round 1 of the stormwater grant program included $10 million for planning grants and $80 million for implementation grants, for a total of $90 million. In 2016, Valley Water, in collaboration with the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) received a Round 1 stormwater planning grant totaling $471,708 for development of the Santa Clara Basin SWRP in North Santa Clara County that was successfully completed in 2019. Under Water Code section 10560, a SWRP is a requirement to receive grant funds for stormwater and dry weather runoff capture projects from any bond approved by voters after January 2014.

In 2019, Valley Water began development of a SWRP for South Santa Clara County in collaboration with the Cities of Gilroy, Morgan Hill, and the County of Santa Clara. Projects identified in this Stormwater Resource Plan satisfy the SWRP project inclusion requirement for Round 2 implementation grant funding under Proposition 1 and future bond-funded grants. Preparation of the South Santa Clara County Stormwater Resource Plan was funded through the Interagency Urban Runoff Program under the Safe, Clean Water and Natural Flood Protection Program.

Traditional approaches to stormwater management include implementing best management practices (BMP). A BMP is a practice that is effective at prevention or reduction of pollution created by nonpoint sources of runoff. Examples of BMPs used to reduce urban runoff pollutants and provide measures to treat runoff from private and public development projects before it enters the storm drain system include storm drain inlet protection barriers and filters, vegetated filter strips, and street sweeping. A more recent approach to stormwater management is to recognize stormwater as a resource and construct multi-benefit GSI systems, which use a combination of vegetation, soils, and infiltration to restore natural hydrologic processes and capture stormwater runoff. GSI benefits the community and the environment by reducing pollutants that would otherwise enter the storm drain system, recharging ground water, and assisting with flood prevention. This SWRP applies to portions of the Pajaro River Watershed within South Santa Clara County. South Santa Clara County drains to the Monterey Bay and includes two local cities and three major sub-watersheds, including Uvas, Llagas, and Pacheco. The main products developed in the plan include a prioritized list of multi-benefit GSI projects and a map showing areas of opportunity for runoff capture and use throughout South Santa Clara County.

1.2 Previous and Current Planning Efforts

Central Coast Basin Water Quality Control Plan (Basin Plan)
The Central Coast Basin Plan, developed by the Central Coast Regional Water Quality Control Board, describes the beneficial uses of water in the basin and lists water quality objectives that must be maintained to allow for beneficial uses. The Basin Plan also includes an Implementation Plan describing the programs, projects, and actions necessary to achieve objectives. The Basin Plan summarizes State and Regional Board plans and policies for protecting water quality and describes statewide and regional monitoring and surveillance programs.

Pajaro River Watershed Integrated Regional Water Management Plan (IRWMP)
The Pajaro IRWMP is a long-term planning document with a goal to preserve the watershed's economic and environmental health and well-being. The plan contains water supply, water quality, flood management, and environmental protection and enhancement goals. Progress reports for the Pajaro IRWMP are developed every 5 years or as needed by the Regional Water Management Group, which consists of the Pajaro Valley Water Management Agency, the San Benito County Water District, and Valley Water.

Valley Water One Water Plan
The One Water plan is a long-term master planning document for integrated water resources in Santa Clara County. One Water serves as Valley Water's flood management and stream stewardship master plan and provides a framework for measuring improvements in watershed health through science-based metrics and targets. The plan will help Valley Water maximize water supply, flood protection, and environmental stewardship goals and objectives. A preliminary plan for the Coyote Watershed is under review, and the Guadalupe Watershed plan is in progress. The expected completion date for all watersheds in the One Water Plan is 2021, including those in South Santa Clara County.

Valley Water Groundwater Management Plan
The Groundwater Management Plan describes the groundwater management framework including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The plan satisfies the objectives of the Sustainable Groundwater Management Act and provides information on the Santa Clara and Llagas subbasins that are located entirely in Santa Clara County.

Valley Water Water Supply and Infrastructure Master Plan
The Water Supply and Infrastructure Master plan ensures effective and efficient investment strategies for new water supplies to meet future water needs of Santa Clara County. The plan forecasts how water needs and water supply may change over the next 20 years taking consideration of population growth, aging infrastructure, additional regulations, land use changes, and climate changes that can impact water supplies. The Ensure Sustainability water supply strategy and Monitoring and Assessment Program in the plan are tools used to help

guide the plan and adapt to changing conditions over time. The plan is reviewed annually and updated every five years.

Valley Water Urban Water Management Plan
The Urban Water Management Plan is required under California's Urban Water Management Planning Act for urban water suppliers serving more than 3,000 customers or providing more than 3,000-acre feet annually. The plan documents information on water supply, water reuse, recycled water, water conservation programs, water shortage contingency planning, and water supply reliability in Santa Clara County under different scenarios and is updated every five years. It also provides demand and supply projections that form the basis of the Water Supply and Infrastructure Master Plan.

Valley Water Safe, Clean Water and Natural Flood Protection Program
On November 6, 2012, Santa Clara County voters approved Measure B for the Safe, Clean Water and Natural Flood Protection Program as a countywide special parcel tax. The 15-year program sunsets June 30, 2028, and replaced the Clean, Safe Creeks and Natural Flood Protection Plan that was approved in November 2000. The program includes five separate priorities that were decided on through a comprehensive community engagement process including Priority A: Ensuring Safe, Reliable Water Supply, Priority B: Reduce Toxins, Hazards and Contaminants in our Waterways, Priority C: Protect our Water Supply from Earthquakes and Natural Disasters, Priority D: Restore Wildlife Habitat and Provide Open Space, and Priority E: Provide Flood Protection to Homes, Businesses, Schools and Highways. Each year a Safe, Clean Water Report is prepared that includes progress updates and fiscal year accomplishments for each priority. The program has an Independent Monitoring Committee appointed by Valley Water's Board of Directors that reviews the report annually. The program is also subject to three independent audits.

Valley Water Reservoir and Raw Water Operations Planning
Valley Water's reservoir operations are based largely on water supply needs, however environmental, flood protection, and recreational needs also affect operations. Planning includes evaluation of transfer opportunities, imported water, treated water demands, groundwater recharge needs, and water carryover storage targets. These factors are taken into consideration under various hydrologic conditions, regulatory constraints, and fishery management needs.

Valley Water Capital Improvement Program
The Capital Improvement Program is a 5-year projection of Valley Water's capital funding for planned capital projects. The goal of the program is to document planned projects to help integrate work with the larger community and other local agency planning efforts. The current program encompasses Fiscal Year 2019-20 to Fiscal Year 2023-24 and includes sixty-seven projects that total $5.6 billion, with $1.219 billion anticipated to receive funding from outside sources. The program includes water supply, flood protection, water resources stewardship, buildings and grounds, and information technology projects.

Valley Water Countywide Water Reuse Master Plan
The purpose of the Countywide Water Reuse Master Plan is to integrate recycled and purified water as a local, reliable, environmentally adaptive, drought-proof water supply and to guide strategic investment of public funds over the next 20 years. The strategy of the plan is to integrate and expand existing recycled water systems and develop purified water systems within Santa Clara County in partnership with recycled water producers, wholesale and retail suppliers, end users, and interested parties. The plan itself will propose infrastructure and provide a roadmap for developing 24,000-acre feet per year of potable reuse by 2028. The final plan is expected to be completed by summer 2020.

Chapter 2: South Santa Clara County Watershed Identification

2.1 Watersheds and Subwatersheds

The South Santa Clara County SWRP planning area includes the southern part of Santa Clara County which encompasses the northern portion of the Pajaro River Watershed and drains to Monterey Bay (Figure 1, or for more details see Appendix 2). The SWRP planning area lies within the Pajaro River Watershed IRWMP boundary, but accounts for only 28% (365 square miles) of the IRWMP total area. The Pajaro River Watershed Integrated Regional Water Management Group (IRWMG) is not currently developing a SWRP for the remainder of the watershed. The northern part of Santa Clara County is not included in this SWRP because it drains to San Francisco Bay, is regulated by the San Francisco Bay Regional Water Quality Control Board, and was already included in the Santa Clara Basin SWRP completed in 2019.

The northern extent of the SWRP planning area is consistent with the northern portion of the Pajaro River Watershed IRWMP, with the exception of the northernmost Morgan Hill city limits despite draining north to the San Francisco Bay. The SWRP planning area extends to the south along the Santa Clara and San Benito County line which also follows the Pajaro River. To the west, the SWRP planning area follows the Santa Clara County line which is consistent with the Upper Uvas Creek and Lower Uvas Creek subwatersheds. The portion of the Pajaro Watershed located southwest of Santa Clara County is not included in this SWRP as it is part of the Santa Cruz County SWRP completed in 2016.

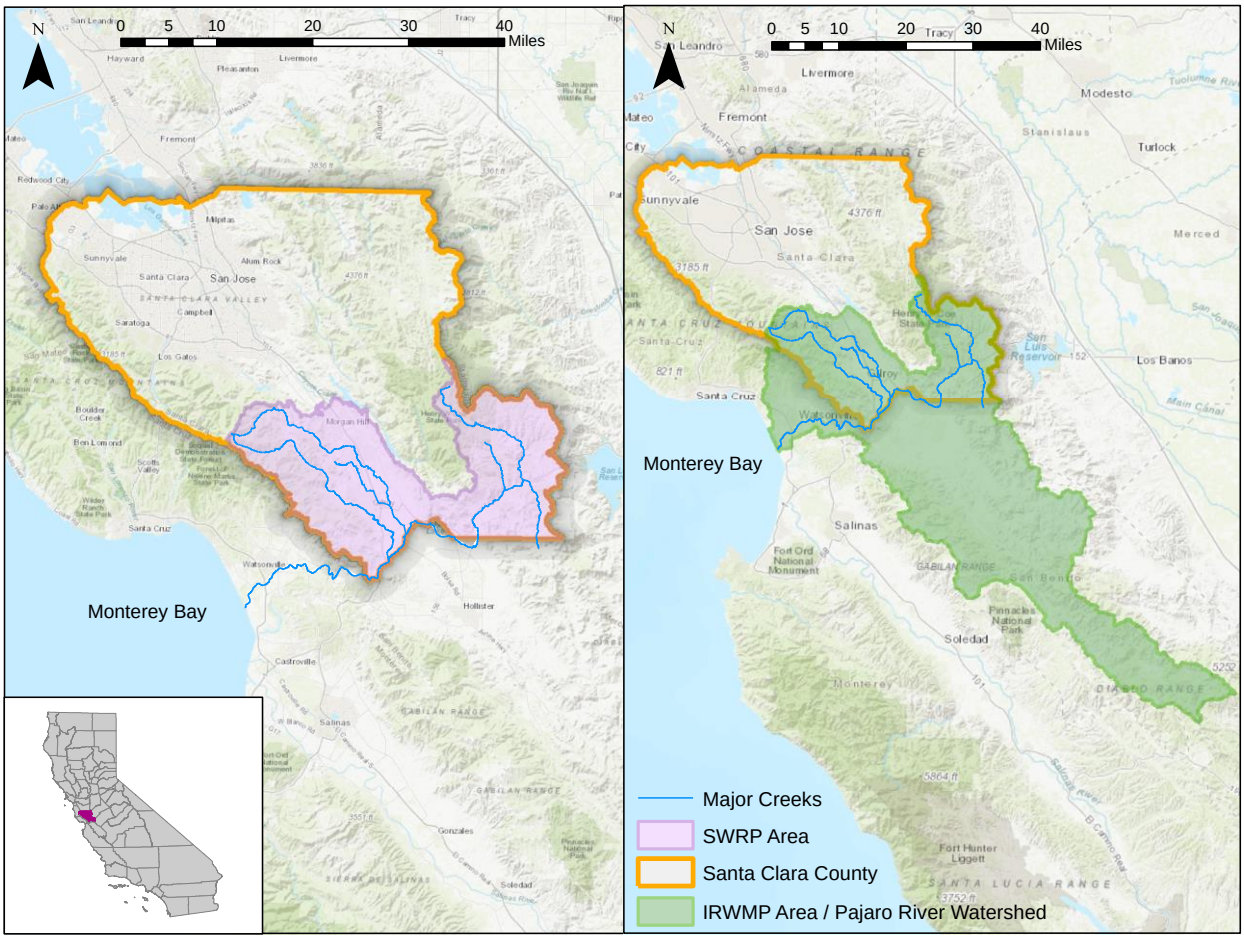

Figure 1: SWRP, IRWMP, and Pajaro River Watershed Areas

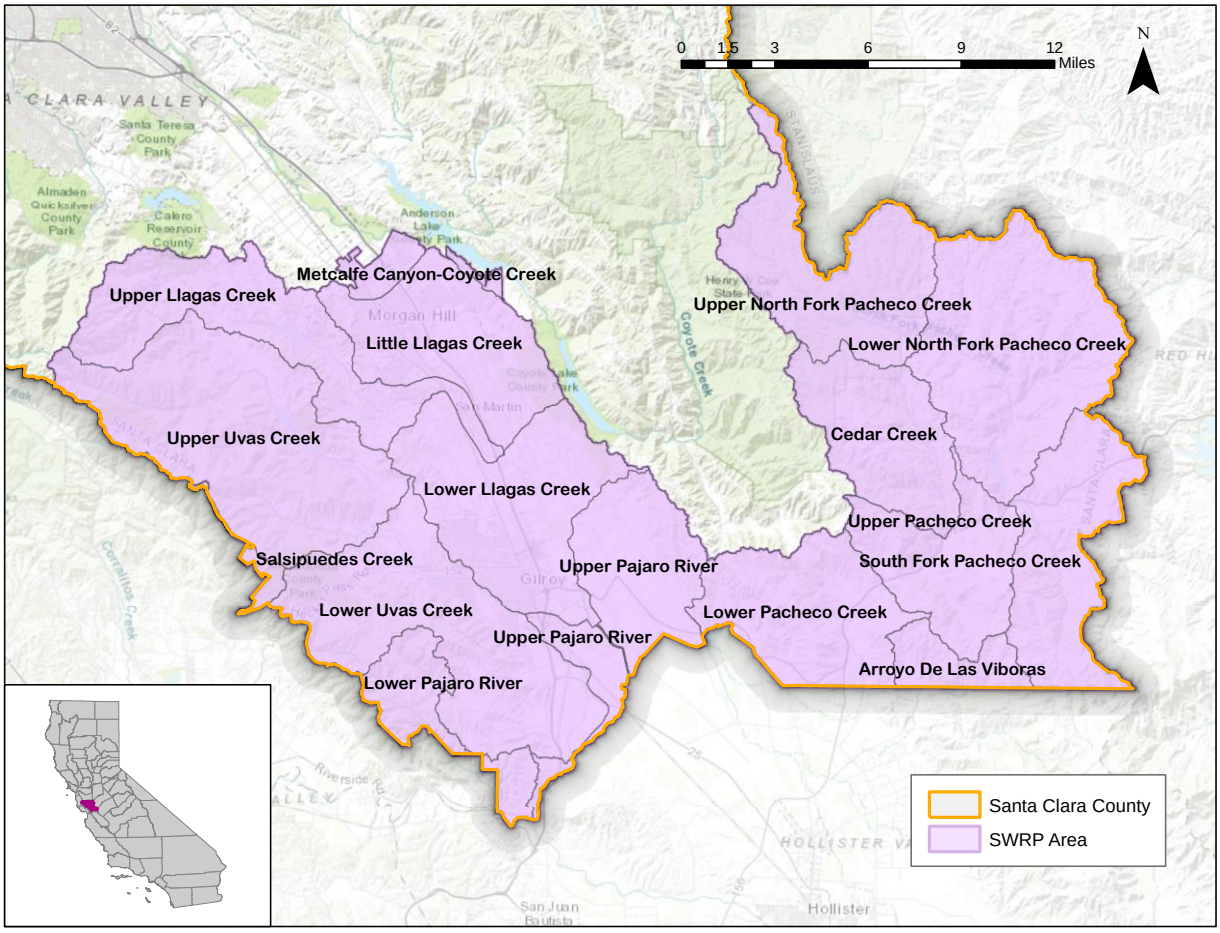

Figure 2: Subwatersheds within the SWRP Area

Upper North Fork Pacheco Creek

The Upper North Fork Pacheco Creek subwatershed encompasses 27 square miles in the Diablo Range. North Fork Pacheco Creek headwaters form in this subwatershed and include Mississippi Creek, Coon Creek, and small unnamed tributaries (Figure 2).

Lower North Fork Pacheco Creek

The Lower North Fork Pacheco Creek subwatershed encompasses 40 square miles east of the Upper North Fork Pacheco Creek subwatershed. North Fork Pacheco Creek enters the subwatershed from the east and is fed by Bullhead Canyon, Cow Canyon and Pine Spring Canyon. Chimney Canyon and Chimney Gulch form in the north-eastern portion of the subwatershed. Upstream of Chimney Canyon is Oak Springs Reservoir. Chimney Canyon and Chimney Gulch both flow into East Fork Pacheco Creek. East Fork Pacheco Creek flows into North Fork Pacheco Creek upstream of Pacheco Lake Reservoir. The North Fork Dam is a 100-foot earthen dam built in 1939 that impounds North Fork Pacheco Creek and forms the Pacheco Lake Reservoir in the southern portion of the subwatershed. Pacheco Lake Reservoir, owned by the Pacheco Pass Water District, has a capacity of 5,500-acre feet of water. In 2017 Valley Water began investigating a plan to build a new dam in the location of the existing Pacheco

Lake Reservoir to increase storage capacity. In July 2018, the Pacheco Reservoir Expansion Project received $484.55 million in funding under Proposition 1. The expansion project is currently in the planning and permitting phase and once completed would increase storage capacity to 140,000-acre feet.

South Fork Pacheco Creek
South Fork Pacheco Creek subwatershed covers an area of 28 square miles southeast of the Lower North Fork Pacheco Creek subwatershed. South Fork Pacheco Creek is fed by Wildcat Canyon and Comstock Canyon in the south and unnamed tributaries in the north. At the drainage point of the subwatershed, South Fork Pacheco Creek combines with North Fork Pacheco Creek downstream of Pacheco Lake Reservoir to form the main stem of Pacheco Creek. Eighty-five percent of the 28 square mile subwatershed is within the SWRP planning area except for the headwaters that form Wildcat Canyon on the southern border.

Arroyo De Las Viboras Creek
The headwaters of the Arroyo De Las Viboras Creek form within the SWRP area and continue outside of the SWRP area into Tequisquita Slough. The subwatershed is split at the Santa Clara County line, with six square miles of the 23-square mile subwatershed in the SWRP boundary.

Cedar Creek
Cedar Creek subwatershed covers an area of 20 square miles. Canada De La Dormida and its tributaries form much of the headwaters of Cedar Creek to the northwest. Hagerman Canyon also flows into Cedar Creek from the west, downstream of its confluence with Canada De La Dormida.

Upper Pacheco Creek
Upper Pacheco Creek subwatershed encompasses 19 square miles and contains the upper main stem of Pacheco Creek that begins downstream of the Pacheco Lake Reservoir Dam. Main tributaries to Pacheco Creek in the subwatershed include Bell Creek, Harper Canyon, and Elephant Head Creek.

Lower Pacheco Creek
Lower Pacheco Creek subwatershed covers an area of 34 square miles, 24 of which are within the SWRP boundary. Pacheco Creek continues through the Lower Pacheco Creek subwatershed. Carmen Creek flows into Pacheco Creek from the west. Pacheco Creek continues through the watershed and terminates at San Felipe Lake. Milias Creek flows south into Ortega Creek which also flows to San Felipe Lake, along with other unnamed tributaries. San Felipe Lake is a perennial sag pond that formed a natural shallow impoundment due to the fault scarp of the Calaveras Fault.

Little Llagas Creek
Little Llagas Creek subwatershed covers an area of 24 square miles in the central, northern portion of the SWRP planning area. Anderson and Coyote Reservoirs are directly east of the subwatershed and outside of the SWRP planning area because they are within the Coyote

watershed and drain north to San Francisco Bay. West Little Llagas Creek, Butterfield Channel, and the Madrone Channel flow south through the City of Morgan Hill. Dewitt Creek and Edmundson Creek flow in to West Little Llagas Creek from the west. Butterfield Channel joins West Little Llagas Creek at the south end of the City limits. Madrone Channel is a constructed channel intended to provide drainage for adjacent HWY 101. West Little Llagas Creek and Madrone Channel merge to form East Little Llagas Creek. Tennant Creek, Foothill Creek, and South Corralitos Creek merge to form Corralitos Creek which also flows in to East Little Llagas Creek. San Martin, Center, and New Creek also flow to East Little Llagas Creek.

Lower Llagas Creek

Lower Llagas Creek subwatershed drains 31 square miles. Llagas Creek flows through the eastern half of the subwatershed. Tributaries to the east include Church Creek, Rucker Creek, Skillet Creek, Panther Creek, South Panther Creek, and Live Oak Creek. The main tributary to the west includes West Branch Llagas Creek and its tributaries Day Creek, Lions Creek, and Upper Miller Slough. Both North Morey Channel and South Morey Channel flow in to Lions Creek before it joins West Branch Llagas Creek. Princevalle Drain joins Lower Miller Slough before it flows to Llagas Creek.

Upper Pajaro River

Upper Pajaro River Watershed covers an area of 55 square miles, however only 24 square miles are within the SWRP area in Santa Clara County. The Pajaro River within the Upper Pajaro River subwatershed begins at San Felipe Lake and flows along the Santa Clara County line. Tributaries to the Pajaro River in the Santa Clara County portion of this subwatershed include Alamias Creek, Jones Creek, Crews Creek, San Ysidro Creek, Dexter Creek, and Llagas Creek. Millers Canal, located in the subwatershed, was completed in 1874 to transfer water from San Felipe Lake to the Pajaro River.

Lower Pajaro River

Lower Pajaro River subwatershed covers an area of 52 square miles, yet only 10 square miles lie within the SWRP area. Hatfield Canyon and Star Creek are tributaries of Pescadero Creek, which eventually flows to the Pajaro River outside the SWRP area. Sargent Creek starts within the SWRP area and then joins the Pajaro River at the SWRP boundary.

Upper Llagas Creek

Upper Llagas Creek subwatershed covers an area of 29 square miles and forms the northwestern border of the SWRP. Llagas Creek flows through the subwatershed until it meets Chesbro Reservoir. Tributaries to Llagas Creek upstream of Chesbro Reservoir include Twin Falls Creek, Edson Canyon, Limekiln Canyon Creek, Baldy Ryan Canyon, and Canada Garcia. Heron Creek and Tilton Creek also flow in to Chesbro Reservoir. Chesbro reservoir was built in 1955, has a storage capacity of 7,495 acre feet, and is used for groundwater recharge. Llagas Creek continues through the subwatershed at the outlet of Chesbro Reservoir. Downstream of Chesbro Reservoir, tributaries to Llagas Creek include Paradise Creek, Machado Creek, and Hayes Creek. Downstream of its confluence with Hayes Creek, Llagas Creek passes through Lake Silveira. Lake Silveira is a small former aggregate quarry that was flooded. Downstream of Lake

Silveira, Llagas Creek exits the subwatershed at its confluence with East Little Llagas Creek and Creek.

Upper Uvas Creek
Upper Uvas Creek is the largest subwatershed within the SWRP planning area covering an area of 47 square miles. Headwaters of the Upper Uvas Creek subwatershed form in the Santa Cruz Mountains where unnamed tributaries as well as Swanson Canyon, Alec Canyon, and Croy Creek flow in to Uvas-Carnadero Creek. Little Uvas Creek flows in to Uvas-Carnadero Creek. Uvas- Carnadero Creek is impounded by Uvas Reservoir. Hay Canyon, Bastman Canyon Creek, Eastman Canyon Creek, and Mclean Creek also flow to Uvas Reservoir. Uvas Reservoir was built in 1957 with a storage capacity of 9,688 acre feet and is used for downstream groundwater recharge. Downstream of Uvas Reservoir, Solis Creek and Sycamore Creek flow in to Uvas-Carnadero Creek. Little Arthur Creek converges with Uvas-Carnadero Creek at the drainage point of the subwatershed.

Lower Uvas Creek
Lower Uvas Creek subwatershed drains an area of 40 square miles. Uvas-Carnadero Creek flows through the length of the subwatershed. Upper tributaries to Uvas-Carnadero Creek include Bodfish Creek and Burchell Creek. Ousley Canyon, Babbs Canyon, and Galivan Creek are also tributaries. Tar Creek and Tick Creek enter Uvas-Carnadero Creek upstream of its confluence with the Pajaro River at the drainage point of the subwatershed.

2.2 Internal Boundaries

The SWRP area includes the cities of Morgan Hill and Gilroy, as well as the unincorporated census-designated place of San Martin (Figure 3). Other internal boundaries of the SWRP area include numerous public agency lands and a broad range of natural habitat and landcover types (Figure 4, Figure 5).

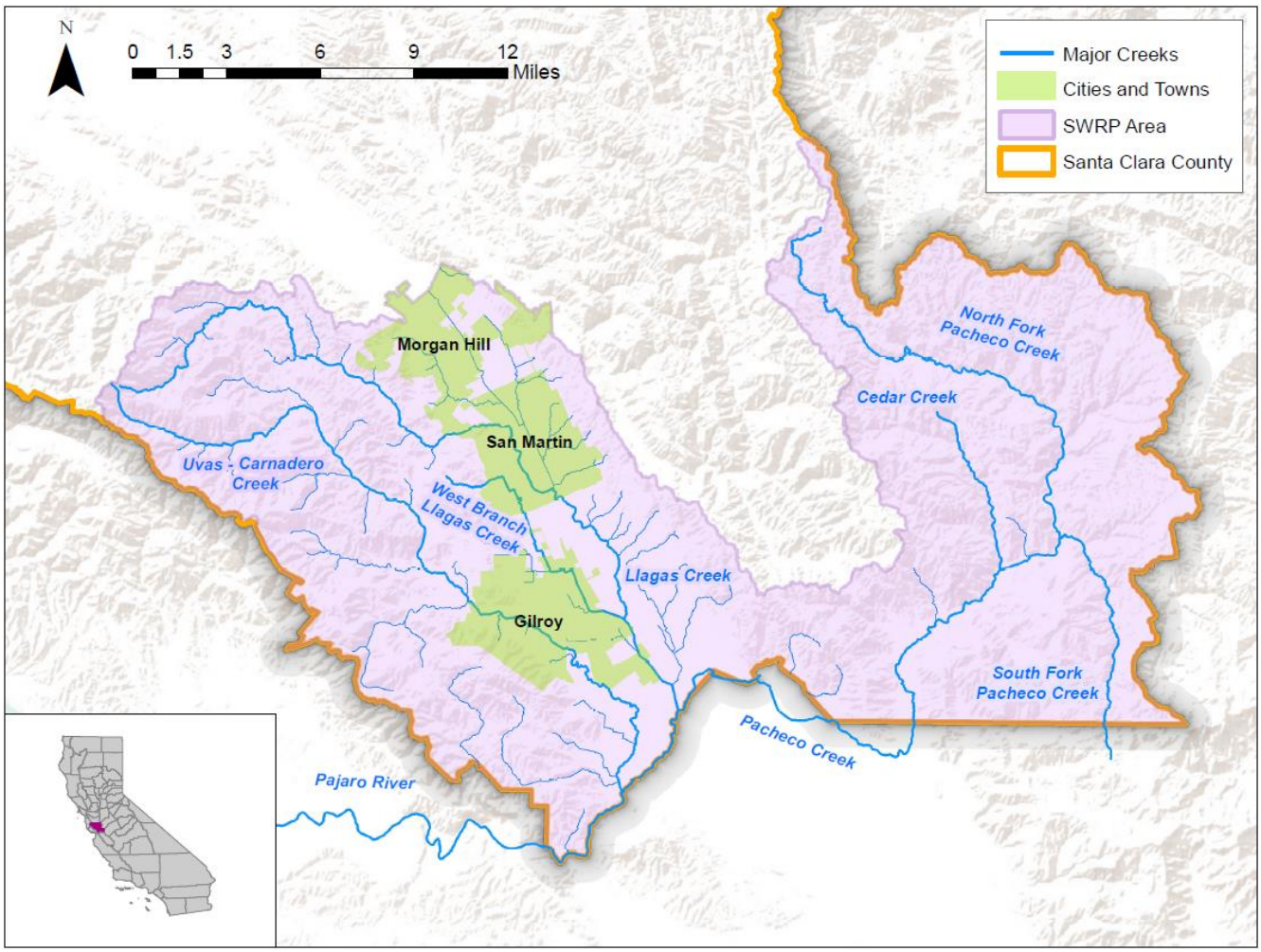

Figure 3: Cities, Towns, and Waterways within the SWRP Area

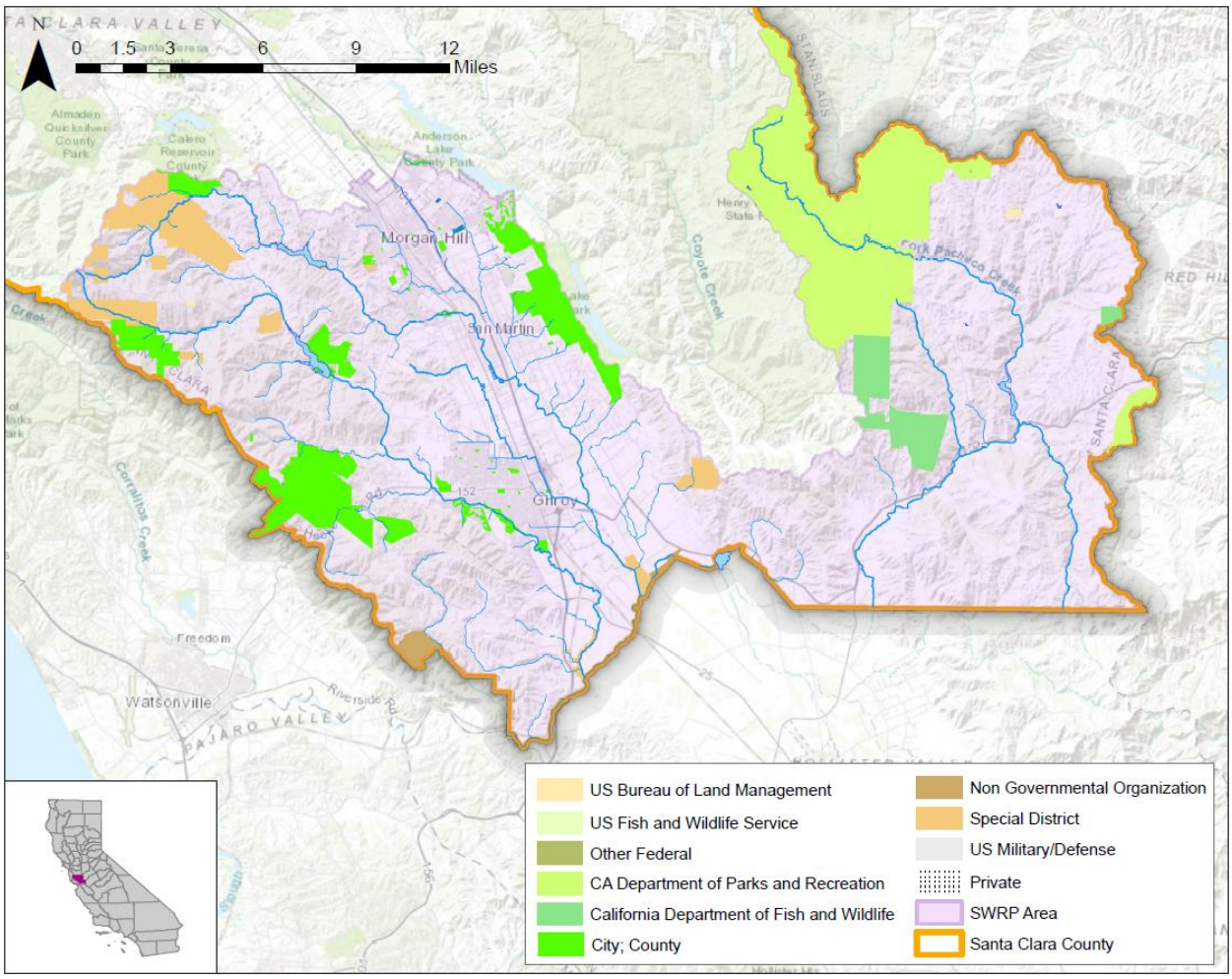

Figure 4: Public Agency Lands and Major Waterways within the SWRP Area

Agencies in the SWRP Area

Valley Water (Santa Clara Valley Water District)

Valley Water is an independent special district that provides wholesale water supply, groundwater management, flood protection, and stream stewardship for its service area, which includes all of Santa Clara County. Valley Water's three drinking water treatment plants can produce up to 220 million gallons of drinking water per day.

Pacheco Pass Water District

The Pacheco Pass Water District is a small independent special district that owns the existing Pacheco Reservoir and North Fork Dam in southeast Santa Clara County and Los Viboras Dam in San Benito County. The district lies within both Santa Clara and San Benito Counties with 76% percent residing in San Benito County. The district is focused on capturing, storing, and releasing local water for groundwater recharge. The Pacheco Pass Water District does not treat or sell water and does not produce electricity at its dams.

Santa Clara County Open Space Authority

The Santa Clara County Open Space Authority manages various preserves and parks throughout the county that provide opportunities for the public to enjoy nature. They also maintain protected lands that are closed to the public for habitat protection and land management.

Loma Prieta Resource Conservation District

The Loma Prieta Resource Conservation District was established in 1942 as a non-regulatory agency for development and management of soil and water-related resource conservation in South Santa Clara County with the mission to assist community members and partners to conserve and improve local natural resources.

Santa Clara Valley Habitat Agency

The Santa Clara Valley Habitat Agency leads the implementation of the Santa Clara Valley Habitat Plan, a 50-year regional plan that focuses on protection of endangered species and natural resources. The plan helps private and public entities plan and conduct projects in ways that lessen impacts to natural resources and threatened and endangered species, and identifies how regional lands will be managed and monitored to benefit species.

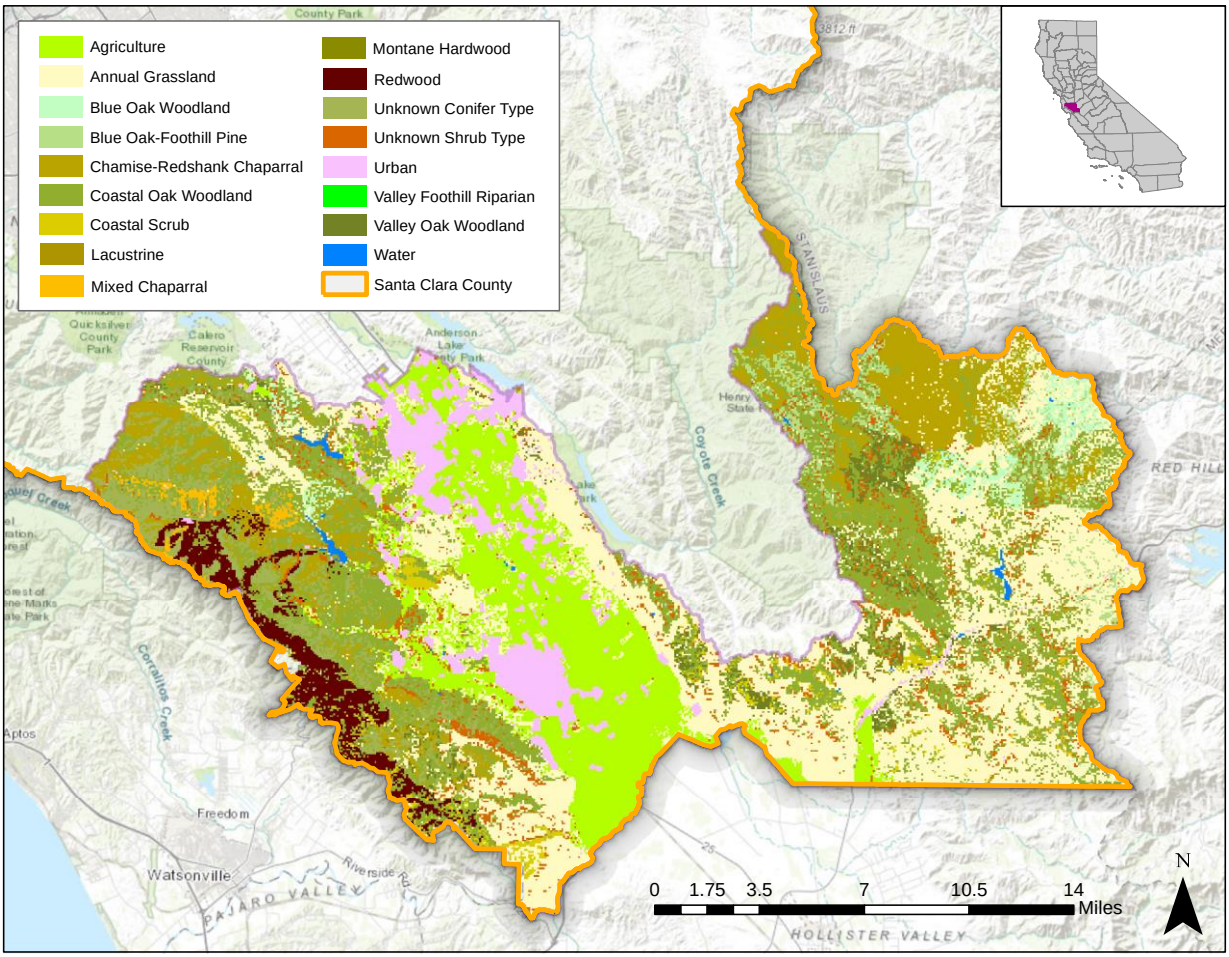

Figure 5: Natural Habitat and Land Cover within the SWRP Area

2.3 Surface and Groundwater Resources

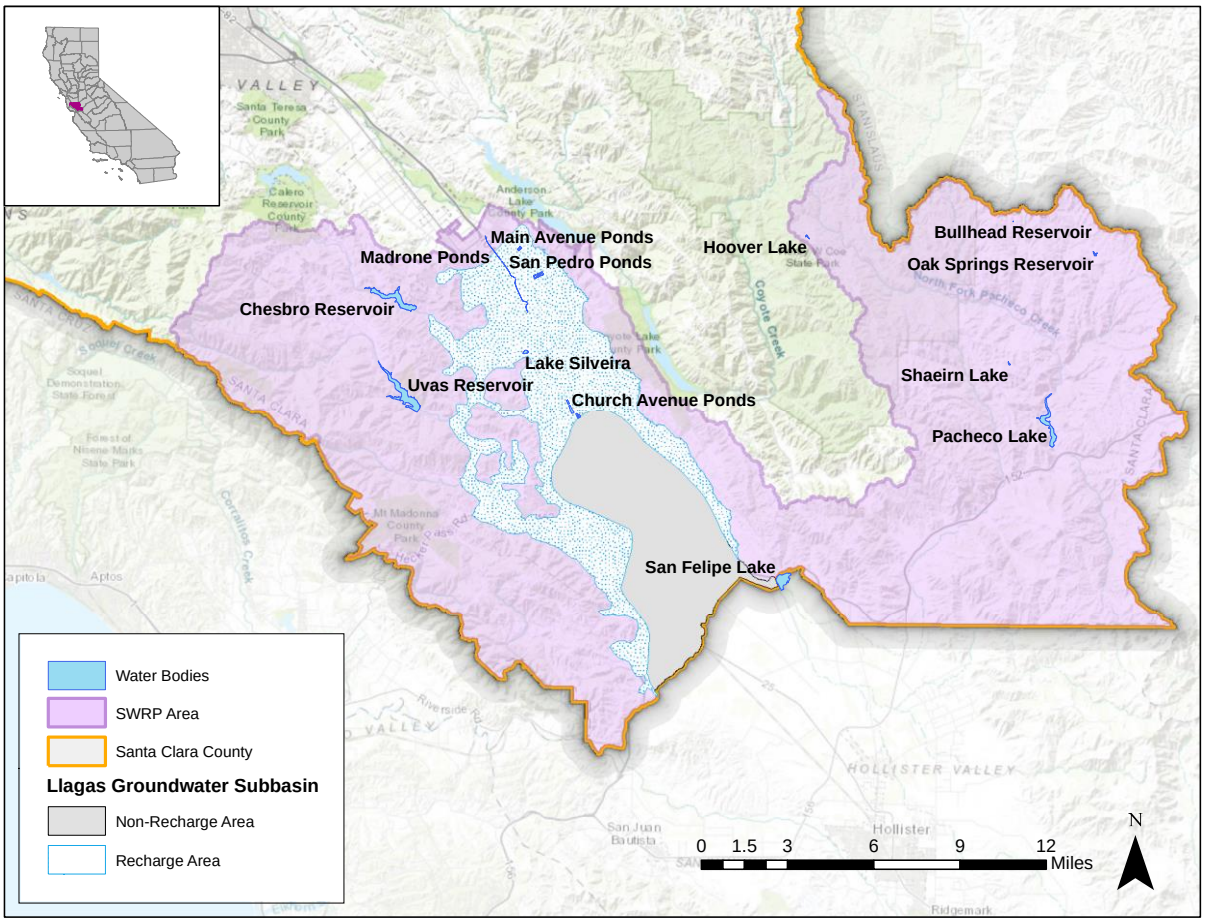

Figure 6: Reservoirs and Groundwater Subbasins within the SWRP Area

The SWRP area encompasses the LLagas Groundwater Subbasin which is part of the Gilroy-Hollister Valley Basin that extends into San Benito County. The Gilroy-Hollister Valley Basin has three other groundwater subbasins outside of the SWRP area. The Llagas Subbasin has a surface area of 88 square miles and is considered high priority by the CA Department of Water Resources due to its overlying population, projected growth, number of wells, irrigation acreage, groundwater reliance, and groundwater impacts. The subbasin includes recharge areas that supply water to the aquifer in the groundwater subbasin and non-recharge areas where the aquifer is bounded above and below by formations of low permeability (Figure 6).

Within the SWRP area there are three reservoirs including Chesbro, Uvas, and Pacheco Lake with a combined storage capacity of 23,133-acre feet. Water from these reservoirs is released downstream to recharge groundwater.

2.3.1 Groundwater Quality

Groundwater resources in the Llagas Subbasin are threatened by elevated nitrate levels from agriculture, septic systems, and animal waste, and elevated perchlorate from a former highway

safety flare plant. The Llagas Subbasin is not affected by saltwater intrusion. The Llagas Subbasin helps provide natural filtration as surface water percolates through layers of soil and rock. Most groundwater in the SWRP planning area can be used for drinking water without additional treatment, unlike surface waters.

2.3.2 Surface Water Quality

Streams of the Pajaro River watershed have various surface water quality impairments and active Total Maximum Daily Loads (TMDLs) as described below. A TMDL is a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

Nutrients: The Pajaro River Basin Nutrient TMDL was adopted in 2015 and includes nitrogen compounds (nitrate, total nitrogen, un-ionized ammonia) and orthophosphate. Other pollutants addressed in the TMDL are biological response indicators including dissolved oxygen, oxygen saturation, chlorophyll a, and microcystins. The TMDL includes parts of Santa Cruz, Santa Clara, San Benito, and Monterey counties within the Pajaro River Basin. Streams impaired under the Nutrient TMDL that fall within the SWRP area include the Pajaro River, Corralitos Creek, Tributary to Corralitos Creek, Carnadero Creek, Llagas Creek, and Furlong Creek. The 2015 Pajaro River Basin Nutrient TMDL replaced the 2005 Pajaro River and Llagas Creek Nitrate TMDL and was expanded to address nutrient-related impairments to domestic and municipal water supply, aquatic habitat, groundwater recharge, and agricultural water supply. The two highest priorities identified by the Regional Board in the TMDL include preventing and correcting threats to human health and preventing and correcting degradation of aquatic habitat. The sources of nutrients to streams of the Pajaro River Basin identified in the TMDL include fertilizer application on irrigated cropland, shallow groundwater inputs to streams, urban runoff, natural sources, livestock and domestic animal manure, NPDES-permitted municipal wastewater treatment facilities, NPDES-permitted industrial and construction stormwater discharges, fertilizer application on golf courses, direct atmospheric deposition to streams, and onsite wastewater treatment systems.

Chlorpyrifos and Diazinon: The 2013 Pajaro River Watershed Chlorpyrifos and Diazinon TMDL applies to the Pajaro River, Pajaro River Estuary, and Llagas Creek. Chlorpyrifos and Diazinon are both man-made organophosphate pesticides used to control invertebrate pests. The TMDL reports agricultural application as the main source of chlorpyrifos and diazinon to the watershed. Under this TMDL, owners and operators of irrigated lands must also comply with the Agricultural Order described in section 3.2.1 of this document.

Sediment: The 2006 Pajaro River Sediment TMDL applies to the Pajaro River, Llagas Creek, Rider Creek, and the San Benito River. All fall within the SWRP planning area except for the San Benito River. Urban and agricultural encroachment upon streams, poor drainage infrastructure, and streambank instability due to removal and/ or loss of riparian vegetation were identified in the TMDL as sources of sediment. Compliance with the Agricultural Order, Municipal Separate Storm Sewer Permit, Land Disturbance Prohibitions, and other applicable waste discharge permits are implementation activities required to achieve load reductions under the TMDL.

Fecal Coliform: The 2009 Pajaro River Fecal Coliform TMDL applies to the following streams within the SWRP boundary: Pajaro River, Llagas Creek, Carnadero/Uvas Creek, Pescadero Creek, Furlong (Jones) Creek, and Pacheco Creek. Probable sources of fecal coliform identified in the TMDL include wildlife, storm drain discharges, domestic animal discharges, sanitary sewer leaks, and private sewer laterals.

In addition to the above TMDLs, Table 1 shows the following waterbodies in the SWRP planning area that are listed as impaired on the 303(d) list.

Table 1: 303(d) Waterbody Impairments

Impairment	303(d) Impaired Waterbody
Chloride	Llagas Creek (below Chesbro Reservoir) Pajaro River
Chlordane	Pajaro River
Conductivity	Llagas Creek (below Chesbro Reservoir)
DDD	Pajaro River
Dieldrin	Pajaro River
E. Coli	Carnadero Creek Furlong Creek Llagas Creek (below Chesbro Reservoir) Pajaro River
Low Dissolved Oxygen	Carnadero Creek Pacheco Creek Pajaro River Uvas Creek (below Uvas Reservoir)
PCBs	Pajaro River
Sodium	Pajaro River
pH	Carnadero Creek Llagas Creek (above Chesbro Reservoir) Pajaro River Uvas Creek (above Uvas Reservoir)
Temperature	Llagas Creek (above Chesbro Reservoir) Uvas Creek (above Uvas Reservoir)
TDS	Llagas Creek (below Chesbro Reservoir)
Turbidity	Carnadero creek Furlong Creek Pacheco Creek Pajaro River Uvas Creek (below Uvas Reservoir)

2.4 Water Supply

Valley Water manages and provides groundwater, surface water, and recycled water within the SWRP boundary. Water usage in South County comes primarily from groundwater (94%) that is replenished from a combination of imported water, local reservoir water, and local rainfall, while local surface water and recycled water make up the remainder.

2.5 Natural Watershed Processes

South Santa Clara Valley was historically dominated by grassland, oak savanna/woodland and wetlands before Euro-American settlement. In the past, streams were more diffuse than today and did not maintain defined channels across the valley floor, but spread into alluvial fans that supported groundwater recharge, or fed wetlands. This diffuse type of shallow drainage also lessened the effect of flood peaks. Due to settlement, more than 40% of the stream networks were artificially constructed with new alignments. Furthermore, as agriculture developed in the valley, groundwater was used predominantly for irrigation. Because of droughts in the late 1800s and early 1900s, and the high demand for irrigation of alfalfa and orchards, groundwater became a less reliable source of water. Surface water storage became an attractive method to recharge groundwater and provide more reliable surface flows. With the addition of reservoirs to the valley, historic open riparian canopy was replaced by densely wooded environments due to altered natural flow regimes. In addition, stream corridors have been narrowed by land use changes over time. Impervious area continues to increase in the watershed with suburban expansion from the San Jose metropolitan area, decreasing infiltration and bringing urban pollutants to streams.

Chapter 3: Water Quality Compliance

3.1 Activities Contributing to Stormwater Pollution

Receiving water quality in South Santa Clara County watersheds is impaired by urbanization, stormwater runoff, and agriculture. Riparian areas have been altered for agricultural uses and flood protection purposes, and portions of the natural landscape are now urbanized. The storm drain infrastructure in the urban areas and network of drainage channels in the rural areas constructed limits opportunities for stormwater percolation and increases peak rates of storm flow. Stormwater runoff can transport trash, sediments, nutrients, pesticides, bacteria, and metals directly to receiving waters, impairing surface water quality. Table 2 summarizes activities that have been identified as sources of pollution to stormwater in South Santa Clara County.

Current receiving water conditions and trends over time have been established through the following data sources:

- MS4 monitoring program data
- Current and historical monitoring data
- Water quality investigations and management programs
- Basin Plan beneficial use designations

- CWA Section 303(d) lists
- Established TMDLs
- Regulatory and other data repositories

Table 2: Stormwater Pollutant Sources

Pollutant	Source Activity	Reference
Nutrients	Fertilizer application on irrigated cropland, shallow groundwater inputs, and urban stormwater runoff.	• TMDL Report for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin, 2015 • Program Effectiveness Assessment and Improvement Plans
Pesticides (Chlorpyrifos and Diazinon)	Agricultural pesticide application and landscape maintenance and pest control.	• TMDL for Chlorpyrifos and Diazinon for the Pajaro River Watershed Monterey, Santa Clara, Santa Cruz, San Benito Counties, California, 2013
Sediment	Agriculture operations, sand/gravel mining, rangeland/grazing, roads, landslides, and urban stormwater runoff.	• Pajaro River TMDL for Sediment, 2005 • Program Effectiveness Assessment and Improvement Plans
Pathogens/Fecal Coliforms	Human waste (e.g., leaking sanitary sewers and septic systems, homeless encampments), livestock manure (e.g., horses, goats, cattle, domestic pigs), pet waste (e.g., dogs, cats), wildlife (birds, rodents, wild pigs), and bacterial growth in the natural and built environment.	• Total Maximum Daily Loads for Fecal Coliform in the Pajaro River Watershed, 2009 • Regional Bacteria TMDL Monitoring Plan for the Pajaro River Watershed (Gilroy, Morgan Hill, Santa Clara County) • Fecal Indicator Bacteria and Source Identification in the Pajaro River Watershed- (Valley Water) • Program Effectiveness Assessment and Improvement Plans
Trash	Storm drain discharges, wind/litter, homeless encampments, and illegal dumping.	• Statewide Water Quality Control Plans for Trash

3.2 Applicable Regulatory Plans and Permits

TMDL implementation plans and applicable NPDES permits that have requirements related to the pollutants in Table 2 are summarized in this section.

3.2.1 Total Maximum Daily Load Implementation Plans

TMDL for Fecal Coliform in the Pajaro River Watershed

The established TMDL for Fecal Coliform applies to the Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek and Pacheco Creek. The Cities of Hollister, Morgan Hill, Gilroy and Watsonville and the Counties of Monterey, Santa Clara and Santa Cruz are assigned the following concentration based wasteload allocation: Fecal coliform concentration, based on a minimum of five samples for any 30-day period, shall not exceed a log mean of 200 MPN (most probable number) per 100mL, nor shall more than ten percent of total samples collected during any 30-day period exceed 400 MPN per 100mL. These waste load allocations are receiving water allocations; stormwater discharge cannot cause or contribute to exceedance of the allocations as measured in receiving water. The Counties of Santa Cruz, Santa Clara and Monterey and the Cities of Hollister, Morgan Hill, Gilroy and Watsonville are assigned allocations in the following water bodies: Pajaro River, San Benito River, Llagas Creek and Tequisquita Slough (NPDES permit Attachment G)[1]. In 2019, the Cities of Morgan Hill, Gilroy, and the County of Santa Clara partnered on a Waste Load Allocation Attainment Program (WAAP) that describes strategies used to abate pollutant sources, reduce pollutant discharges, and attain the waste load allocations for the Fecal Coliform TMDL. Previously, each agency was directed to create their own WAAP after the 2011 Regional WAAP was discontinued, however in fall 2018 they were directed by Regional Water Board staff to create a new WAAP and focus monitoring resources on targeted bacteria source investigation or new intensified bacteria control measures in lieu of annual monitoring of receiving waters. The current Regional WAAP identifies priority controllable sources of fecal coliform in the watershed as homeless encampments, sanitary sewer leaks, on-site wastewater treatment system leaks, private laterals, pet waste, livestock, and controllable wildlife. The achievement date for fecal coliform wasteload allocations is 2023.

TMDL for Sediment in the Pajaro River

The established TMDL for sediment applies to the Pajaro River including Llagas Creek, Rider Creek, and the San Benito River, with wasteload allocations assigned to major sub-watersheds of the affected water. As such, the City of Morgan Hill, City of Gilroy, City of Hollister, and the City of Watsonville shall not discharge sediment to Tres Pinos Creek, San Benito Creek, Llagas Creek, Upper Pajaro River, Corralitos Creek (including Rider Creek) and the mouth of the Pajaro River in excess of the values listed in Attachment G of the NPDES Permit. The allocations represent a 90% reduction in sediment loading from the 2005 estimate to each water body

[1] NPDES Permit Attachment G:
https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/phsii2012_5th/att_g_tmdl_final.pdf

from urban roads. To achieve the reduction in sediment loading, permittees must comply with all requirements in the Phase II Small MS4 NPDES permit. Sections of the permit that reference sediment requirements include E.10 Construction Site Stormwater Runoff Control Program, E.11 Pollution Prevention/ Good Housekeeping for Permittee Operations Program, E.13 Water Quality Monitoring, and E.14 Program Effectiveness Assessment and Improvement Plan. The achievement date for sediment wasteload allocations is 2051.

TMDL for Nutrients in the Pajaro River Basin

The Nutrient TMDL covers parts of Santa Cruz, Santa Clara, San Benito, and Monterey counties within the Pajaro River Basin. Streams under the TMDL that fall within the SWRP area include the Pajaro River, Corralitos Creek, Tributary to Corralitos Creek, Carnadero Creek, Llagas Creek, and Furlong Creek. The TMDL source analysis for nutrients recognizes cropland as the largest source of controllable nutrient loading to surface waters in the Pajaro River Basin. To help dischargers meet pollutant load allocations and achieve the TMDLs, the Regional Board developed an implementation plan with specific requirements for identified nutrient sources. To directly address fertilizer application on irrigated cropland, owners and operators of irrigated lands must comply with the Conditional Waiver of Waste Discharge Requirements for Irrigated Lands, also known as the Agricultural Order. The original Agricultural Order was developed in 2004 under a resolution by the Regional Board as part of the Irrigated Lands Regulatory Program. The 2004 Agricultural Order was extended until 2012, when it was revised to produce the 2012 Agricultural Order 2.0. The current Agricultural Order 3.0 was approved in March of 2017 and will be replaced by 2020. Under Agricultural Order 3.0, owners and operators of irrigated lands are required to submit information about their farm and comply with certain conditions in the Order. The order is also the mechanism for achieving water quality objectives for pesticides and toxicity under the chlorpyrifos and diazinon TMDL in the Pajaro River watershed.

Statewide Trash Amendments

In 2015 the statewide Trash Amendments were implemented by the State Water Board with the objective to provide statewide regulatory consistency to protect aquatic life and public health beneficial uses, and reduce environmental issues associated with trash in state waters, while focusing limited resources on high trash generating areas. In 2017, Phase II Small MS4 Permittees in the SWRP area including Santa Clara County, Morgan Hill, and Gilroy received Water Code Section 13383 orders to implement the trash amendments through their existing stormwater permits. Two compliance tracks exist under the Trash Amendments: Track 1, which includes installation and maintenance of a network of full trash capture systems in storm drains that capture runoff from Priority Land Uses; and Track 2 which consists of any combination of structural or institutional controls that can demonstrate performance equivalent to the Track 1 option. The orders included a timeline of additional requirements specific to the track option chosen by each Permittee including jurisdictional maps, trash assessments, and an implementation plan. Phase II Permittees in South County are expected to achieve final compliance with the statewide amendments by December of 2030.

3.2.2 National Pollutant Discharge Elimination System (NPDES) Permits

The SWRP was written to be consistent with all applicable permits and requirements and was reviewed for accuracy by all municipal permit holders. None of the agencies in the region covered by the SWRP have Areas of Special Biological Significance (ASBS) and thus are not subject to ASBS compliance requirements. NPDES permits applicable to the South County SWRP are listed below:

- Phase II Small MS4 General Permit (Water Quality Order No. 2013-0001-DWQ),
- The Drinking Water System Discharges NPDES Permit (WQ 2014-0194-DWQ),
- Waste Discharge Requirements regulated by the State Water Board (Title 27 CCR, Section 20005 et seq.)
- Conditional Waiver of Waste Discharge Requirements for Irrigated Lands (Order No. R-3-2017-002)
- Industrial General Permit (State Water Board Order No. 2014-0057-DWQ)
- Construction General Permit (Order No. 2009-0009-DWQ)

3.2.3 Requirements for New Development and Redevelopment Projects

Under the Regulated Projects section of the Phase II Small MS4 General Permit, within the second year of the effective date of the permit, all new development or redevelopment projects are to be regulated by the permitee to reduce runoff and pollutants correlated with runoff. Projects on both public and private land will be considered, as will new roadway construction. Any project that creates and/or replaces 5,000 square feet or more of impervious surface will be identified as a Regulated Project and required to implement appropriate measures for site design, source control, runoff reduction, stormwater treatment and baseline hydromodification management.

Chapter 4: Organization, Coordination, and Collaboration

4.1 Participating Agencies

The agencies involved with the development of the SWRP included Valley Water, City of Morgan Hill, City of Gilroy, Santa Clara County and the Pajaro Regional Water Management Group.

4.2 Technical Advisory Committee

A Technical Advisory Committee (TAC) was created with subject matter experts from Valley Water, City of Morgan Hill, City of Gilroy, and Santa Clara County to provide input and review during the SWRP development process. General duties of the TAC members included:

- Participate in scheduled TAC meetings
- Make decisions on the project analysis and prioritization process
- Provide knowledge and understanding of local water resources, hydrologic processes, infrastructure, and provide information on ongoing regional efforts and projects
- Provide feedback on feasibility of potential projects from respective agencies

- Provide requested data for SWRP development and analysis
- Review and provide comments on the draft SWRP

Three in-person TAC meetings were held throughout the development of the SWRP described in Table 3. TAC review and comments on the Draft SWRP was completed electronically via email.

Table 3: Technical Advisory Committee Meetings

Date	Objectives
3/28/2019	• Brief TAC members on project purpose, background, approach, and schedule • Solicit TAC input on technical methodology and metrics of parcel analysis • Solicit TAC for information on planned projects to include in project prioritization • Solicit TAC input on planned methodology for evaluating and prioritizing GSI projects
5/7/2019	• Review results of initial project and parcel prioritization • Solicit TAC input on scoring values for prioritizing GI projects
6/24/2019	• Provide update on project status and solicit TAC input on final ranking results of streets and projects.

4.3 Coordination of Existing Agencies

Agencies and organizations responsible for stormwater and dry weather runoff management objectives of the plan include the City of Morgan Hill, City of Gilroy, Santa Clara County, and Valley Water. Regional groups include the Pajaro Watershed Integrated Regional Water Management Group (IRWMG). Many of these agencies are coordinated through the Valley Water One Water Master Plan and the Pajaro Watershed IRWMG.

The Pajaro River Watershed Integrated Regional Water Management Plan (IRWMP) was developed in 2007 by three agencies known as the Pajaro River Watershed Collaborative. The Collaborative consists of the Pajaro Valley Water Management Agency, San Benito County Water District, and the Valley Water. The Collaborative, also known as the Regional Water Management Group (RWMG) for the Pajaro River Watershed, continues to meet regularly to carry out the mission, goals, and objectives identified in the IRWMP. The Pajaro RWMG is considered a decision-making authority but also receives input from a stakeholder steering committee, implementation project sponsors, and general stakeholders including members of the public and NGOs when implementing the IRWMP. The Pajaro RWMG is responsible for providing information on the State IRWM program requirements and opportunities, updating the IRWM Plan, conducting outreach activities related to the IRWM program, coordinating with

other IRWM regions, and leading IRWM Plan implementation in collaboration with other agencies and organizations.

Nonprofit organizations working on stormwater and dry weather resource planning in the SWRP planning area include the Loma Prieta Resource Conservation District and the Santa Clara County Open Space Authority. Both agencies are currently coordinated through Pajaro River Watershed IRWMG stakeholder meetings.

The northern portion of the Pajaro IRWMP is included in the SWRP area and is the only IRWM Plan in the SWRP area. The Pajaro IRWMP area extends beyond the SWRP planning area to encompass the entire Pajaro River Watershed. The final draft of the SWRP is submitted to the Pajaro RWMG and incorporated in the IRWMP.

To facilitate coordination with stakeholders in the SWRP area, Valley Water staff gave an informational and educational presentation about the South County SWRP development at the Pajaro River Watershed IRWM stakeholder workshop on February 11, 2019. Attendees were provided contact information for participation in the SWRP as a stakeholder, and the presentation and invitation to participate was sent through the IRWMG stakeholder email list.

Currently, the City of Gilroy, the City of Morgan Hill, the County of Santa Clara, and Valley Water coordinate various stormwater management objectives in the watershed. The agencies meet monthly for stormwater coordination in South County and have partnerships in place to meet regulatory requirements. The County of Santa Clara, Morgan Hill, and Gilroy have a regional monitoring program and share a common Bacteria Monitoring Report that fulfills the Bacteria TMDL reporting and monitoring requirements of provision E.14.d of the Phase II Municipal Regional Stormwater Permit. The goal of the monitoring program is to assess progress towards meeting wasteload allocations established in the TMDL for Fecal Coliform and to contribute data towards identification of fecal indicator bacteria sources from the County, Morgan Hill, and Gilroy municipal separate storm sewer systems. The County, Morgan Hill, and Gilroy also share a WAAP under the TMDL for Fecal Coliform. The WAAP describes the strategy that will be used to abate pollutant sources, reduce pollutant discharges and attain the wasteload allocation for storm drain discharges under the TMDL. The shared regional programs and regular meetings also allow the agencies to better coordinate public outreach efforts and stormwater related projects.

Chapter 5: Identification and Prioritization of GSI Opportunities

5.1 Overview

To determine and prioritize opportunity areas for GSI projects, publicly owned parcels and areas of public right of way (ROW) were analyzed using an integrated metrics-based approach in Geographic Information Systems (GIS). GIS is a technology used to perform analysis and visualize existing spatial datasets through maps. For the purposes of the SWRP, GIS was used to evaluate the suitability of certain publicly owned areas for GSI. Two separate GIS analyses were

conducted for GSI suitability including one for parcel areas and another for ROW (public streets). All parcels and ROW areas used for analysis fell within the SWRP boundary.

Following the GIS analysis of existing publicly owned parcels and ROW, public agencies submitted potential projects for incorporation in the SWRP. Areas of submitted projects were analyzed in GIS using the same methods as the parcel analysis and underwent further project specific prioritization as described in section 5.5. Datasets used to conduct all GIS analysis are described in Table 4. Online versions of the prioritization maps described in Chapter 5 are available for reference. [2]

5.2 Datasets

The following public spatial datasets were used to identify and prioritize GSI opportunity areas in the SWRP planning area (Table 4).

Table 4: Spatial Data Used for Analysis

Spatial Data	Description	Source
Impervious Area (%)	% impervious land surfaces	USGS National Map Viewer
Hydrologic Soil Group (A-D)	Soil groups based on runoff potential. A's have the lowest runoff potential while Ds have the highest.	USDA Soil Survey Geographic Database (SSURGO)
Slope (%)	Derived from 3m digital elevation model, describes the steepness of the land surface.	USGS National Map Viewer
Parcels	Parcel shapefiles that include data on ownership and landuse.	Santa Clara County
GeoTracker Cleanup Sites	Sites that impact or have potential to impact groundwater quality. The database includes contaminated sites in the California DTSC Envirostor database, as well as EPA-regulated sites. In addition, the dataset contains various unregulated projects as well as permitted facilities. GeoTracker is considered an all-inclusive database with emphasis on groundwater quality. The dataset includes Leaking Underground Storage Tank Sites, Department of Defense Sites, and non-Cleanup Program Sites regulated under the State Water Resources Control Board.	State Water Resource Control Board GeoTracker database

[2] http://valleywater.maps.arcgis.com/apps/webappviewer/index.html?id=d0e1aca9d49042809f31c07feba72b87

Priority Development Area	Existing neighborhoods served by public transit identified and approved by local government for future growth.	Plan Bay Area 2040
2016 Disadvantaged Community	Community with an annual median household income < 80% of Statewide median.	Department of Water Resources DAC mapping tool.
2018 Community of Concern	Areas which most suffer from economic, health, and environmental burdens. MTC defines communities of concern (COCs) as census tracts that have a concentration of both minority and low-income residents, or that have a concentration of low-income residents and any three or more of the following six disadvantage factors: persons with limited English proficiency, zero-vehicle households, seniors aged 75 years and over, persons with one or more disability, single-parent families, and renters paying more than 50 percent of their household income on housing.	Metropolitan Transportation Commission (MTC)
Stormwater Infrastructure	Locations of storm drain inlets, outfalls and stormwater infrastructure pipelines	City of Morgan Hill/ City of Gilroy
FEMA 100-year flood zone	Areas with a 1% annual chance of inundation from a flood event.	Federal Emergency Management Agency

5.3 Methods

Parcel Opportunity Analysis

All parcels within the SWRP area were initially screened to determine public ownership using the Santa Clara County Tax Assessor's dataset by use code and ownership. Parcels identified as quasi-public such as churches, schools, and universities were also included in the analysis. Results of the initial screening identified 1,332 public or quasi-public parcels as potential opportunity areas for GSI projects. Adjacent parcels with the same owner were aggregated to provide larger potential project opportunity areas, resulting in 483 final GSI opportunity areas. These 483 public and quasi-public opportunity areas were analyzed in GIS using the datasets in Table 4. Values from each dataset were used as a metric to assign points to each individual opportunity area (Table 5). Metrics determined as high priority by the TAC were assigned a weighting factor of 2. Final ranking scores calculated for each parcel opportunity area are shown in Figure 7. The maximum possible score for parcel opportunity areas was 65. Parcels that received higher scores were considered more suitable for GSI project locations. The

prioritized parcels can be used as a tool for future siting of GSI projects. Areas that received higher scores are considered more suitable for GSI opportunities (Figure 7).

Right of Way Analysis

In addition to the parcel analysis, a right of way analysis was conducted for streets in the SWRP area to prioritize locations for future green street projects. Green street projects are right of way projects that incorporate vegetation, soil, and engineered systems such as permeable pavements to slow and treat stormwater runoff coming from impervious surfaces. GIS street data from Santa Clara County were first screened for ownership type, surface type, and speed limit. The analysis process screened for publicly owned streets with paved surfaces (as opposed to dirt or rural roads) that had speed limits less than or equal to 45 miles per hour. To obtain the representative area of each street, the width of each street class was determined using the measure tool and satellite imagery in GIS. The widths were used to determine buffers for each street segment, and the segmented buffers of each street were used as the area for analysis. The same metrics used for the parcel prioritization analysis in Table 5 were used for the street prioritization in Table 6 with the addition of known areas of street flooding provided by local city and county databases. A total of 5,578 street segments were analyzed and prioritized for green street opportunities. The maximum possible score for street segments was 65. Street segments that received higher scores are considered more suitable for green street opportunities (Figure 8).

Table 5: Scoring Metrics for Project Opportunity Areas and Planned Projects

Metric	Points						Weighting Factor
	5	4	3	2	1	0	
Land Use	Parking Lot	Public Building	Park/Open Space	Schools/Golf Course			
Impervious area (%)	80 ≤ x <100	70 ≤ x < 80	60 ≤ x <70	50 ≤ x < 60	40 ≤ x < 50	X <40	2
Slope (%)	1 ≥ x	5 ≥ x >1	10 ≥ x > 5	15 ≥ x >10	25 >x >15		
Dominant Soil infiltration group (A-C/D)	A		B		C/D		
Within FEMA 100-year flood zone	Yes					No	
Within Priority Development Area	Yes					No	
Within Disadvantaged Community or Community of Concern	Yes					No	
Augments water supply (%)	80 ≤ x <100 % of area above groundwater recharge zone and not above groundwater contamination area	70 ≤ x < 80 % of area above groundwater recharge zone and not above groundwater contamination area	60 ≤ x <70 % of area above groundwater recharge zone and not above groundwater contamination area	50 ≤ x < 60 % of area above groundwater recharge zone and not above groundwater contamination area	40 ≤ x < 50 % of area above groundwater recharge zone and not above groundwater contamination area	<40 % of area above groundwater recharge zone OR area is within 500 feet of active contamination site	2
Site is within 500 feet of an active contamination (Geotracker) site	No					Yes	
Proximity to storm drain inlet (ft)	200 ≥ X		500 ≥ x > 200		1,000 ≥ x > 500	X > 1,000	
Dominant Depth to first groundwater (ft)	20 to 30+		10 to 20			0 to 10 or outside of groundwater subbasin	

Table 6: Scoring Metrics for Green Street Opportunity Areas

Metric	Points						Weighting Factor
	5	4	3	2	1	0	
Impervious area	80 ≤ x <100	70 ≤ x < 80	60 ≤ x <70	50 ≤ x < 60	40 ≤ x < 50	X <40	2
Slope	1 ≥ x	5 ≥ x >1	10 ≥ x > 5	15 ≥ x >10	25 >x >15		
Dominant soil infiltration group	A		B		C/D		
Within FEMA 100-year flood zone	Yes					No	
Within Priority Development Area	Yes					No	
Within Disadvantaged Community or Community of Concern	Yes					No	
Augments water supply (%)	80 ≤ x <100 % of area above groundwater recharge zone and not above groundwater contamination area	70 ≤ x < 80 % of area above groundwater recharge zone and not above groundwater contamination area	60 ≤ x <70 % of area above groundwater recharge zone and not above groundwater contamination area	50 ≤ x < 60 % of area above groundwater recharge zone and not above groundwater contamination area	40 ≤ x < 50 % of area above groundwater recharge zone and not above groundwater contamination area	<40 % of area above groundwater recharge zone OR area is within 500 feet of active contamination site	2
Site is within 500 feet of an active contamination (Geotracker) site	No					Yes	
Proximity to storm drain inlet (ft)	200 ≥ X		500 ≥ x > 200		1,000 ≥ x > 500	X > 1,000	
Located in an area of known street flooding?	Yes					No	
Dominant Depth to first groundwater (ft)	20 to 30 +		10 to 20			0 to 10, or area is outside of the GW subbasin	

5.4 Results

Figure 7 shows results of the prioritized GSI project opportunity areas. Each area received a final score between 2 and 51 after summing points from the location specific metrics described in Table 5. Project opportunity areas near urban areas tended to receive higher scores than the rural areas in the western foothills. An enlargement of the western half of the SWRP area is provided in the lower part of Figure 7 for more detail. All result maps are available to view online [3].

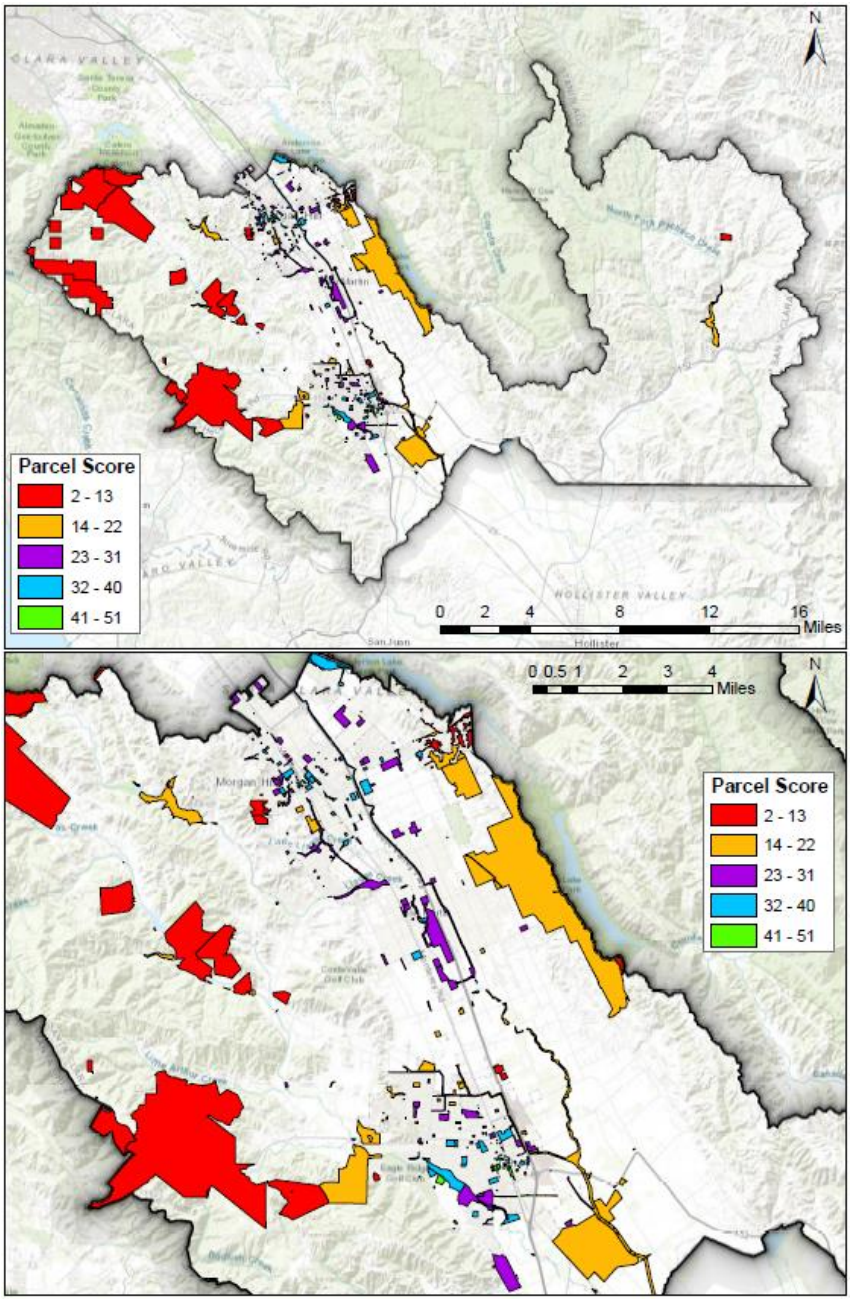

Figure 7: Public Parcels Prioritized for Green Stormwater Infrastructure Opportunities

[3] http://valleywater.maps.arcgis.com/apps/webappviewer/index.html?id=d0e1aca9d49042809f31c07feba72b87

Figure 8 shows results of the public ROW prioritized for green street opportunities. Each street segment received a final score between 7 and 18 after summing points from the location specific metrics described in Table 6. ROW with higher scores are considered more suitable for GSI projects. Segments in and surrounding urban areas tended to receive higher scores than segments in rural areas. As the majority of public ROW exists in the western portion of South County, an enlargement of the western half is provided in the lower part of Figure 8 for more detail.

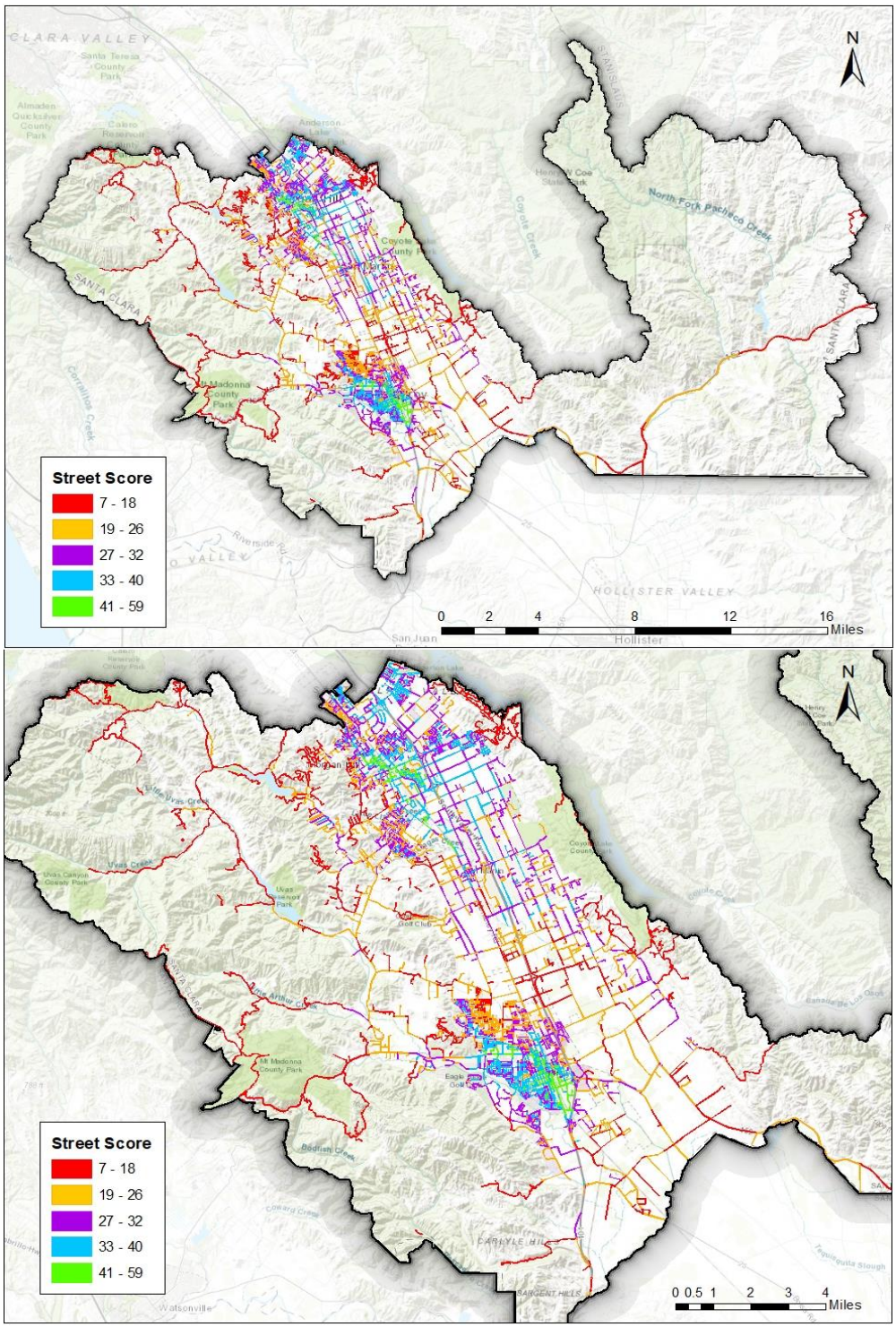

Figure 8: Public Right of Way Prioritized for Green Street Opportunities

5.5 Submitted Projects

A total of nineteen (19) projects from four public agencies were submitted for inclusion in the South County SWRP. Projects varied in type and status and therefore only projects with general proposed locations underwent prioritization analysis in GIS and received a ranking score. Submitted project locations underwent the same prioritization as described in the Parcel Opportunity Analysis of section 5.3 and a second level of prioritization using the metrics described in Table 7. Project specific information in Tables 7 and 8 were self-reported by each agency.

Table 7: Additional Prioritization Metrics for Submitted Projects

Metric	Points						Weighting Factor
	5	4	3	2	1	0	
Water quality source control *Increased infiltration and/or treatment of runoff*	Yes					No	
Water supply/ flood management *Water supply reliability, conjunctive use, and/ or decreased flood risk by reducing the runoff rate and/or volume*	Yes					No	
Environmental *Creates or enhances habitat/ reestablishes natural hydrology*	Yes					No	
Co-located project *The GSI project is co-located with new or redevelopment projects, or municipal capital improvement projects*	Yes					No	
Project status	CEQA started		Planned/ In long term CIP			Conceptual	
Community benefit *Employment opportunities, public education, enhancement or creation of recreational and public use areas*	Yes					No	

Descriptions and green infrastructure benefits of all nineteen projects submitted for incorporation to the SWRP are described in Table 8. Project numbers 3, 5, and 7 do not have specified locations and were excluded from the GIS prioritization and final ranking in Table 9.

Table 8: Projects Submitted to the SWRP

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
1	Butterfield Basin Activation Project	City of Morgan Hill	The City currently owns and operates an off-stream flood control basin, Butterfield Basin. Water flows down the Butterfield Channel and enters West Little Llagas Creek adjacent to the Basin. When the Channel's flow is exceedingly high, the water cascades over a weir and enters the Basin. The proposed project would convert the Basin to an on-stream basin and adjust the outflow pipe to retain stormwater onsite for groundwater recharge. Essentially all water would enter the Basin and only flow out to the Creek during high-flow storms. Installing trash-capture devices at the outflows will facilitate trash capture for a significant segment of Central Morgan Hill.	By increasing the amount of water in the aquifer with a "new" supply, the project will help protect surface water quality, optimize groundwater storage, meet water supply demands during drought and normal water years, meet water needs of disadvantaged communities, implement flood management, enhance the local environment, improve resources, and protect the general watershed including Monterey Bay. The project will capture trash and provide sediment with a better chance to be deposited before entering Llagas Creek. By capturing stormwater and making it available for groundwater recharge, the region will need to rely less on imported water supplies which may be more likely to be interrupted as a result of climate change and regulatory actions. Furthermore, the project will slow down the release of water from urban development into natural waterbodies which could help reduce hydromodification of natural waterways.
2	Corp Yard Stormwater Improvement Project	City of Gilroy	The Corp Yard Stormwater Improvement Project will install Safe Drain filters on Corp Yard stormdrains, install an infiltration trench around the northern and eastern perimeter of the Corp Yard, repave and regrade for better runoff management and install permanent infrastructure	Permanent infrastructure at the Corp Yard will slow flows and allow for better infiltration and reduced contribution to hydromodification. Infiltration trenches will help with groundwater recharge. The Pajaro River is significantly impacted by bacteria and sediment. Permanent covers over the dumpsters will ensure maximum protection of any materials brought in from

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
			at the Corporation Yard that would improve the quality of stormwater runoff from the site while also improving operations. The City of Gilroy currently manages materials at its Corporation Yard using tarps and temporary awning covers. The project proposes to permanently cover the facility dumpsters, water utility supplies, concrete storage bunkers, evidence vehicles, and tires to improve the quality of stormwater runoff. The project will also install a retractable awning over the Corp Yard BBQ and outdoor work area.	parks or other places that contains waste with bacteria from fecal matter (e.g. dog waste from park garbage bins, human waste from encampments, etc.). Permanent covers over the bunkers and repaving the cracked asphalt will reduce sediment runoff from the City facility. Permanent covers, media filters, and infiltration trenches will also prevent other non-TMDL pollutants from exiting the site including heavy metals, nutrients, etc. The project will help the region protect Monterey Bay and enhance our local environment. Permanent infrastructure will reduce pollutants in urban runoff from Gilroy protecting our waters in the sloughs, creeks and Pajaro River as they flow to Monterey Bay.
3	Flood-Managed Aquifer Recharge	Valley Water	Valley Water is currently planning to implement a pilot program that uses open space to capture and recharge stormwater flows, a process referred to as flood-managed aquifer recharge (flood-MAR). A Santa Clara County flood-MAR program may help maximize the benefits of existing open space by using the lands as temporary recharge sites during the wet winter months.	The recharge project would improve water quality, water supply, and flood management using minimal engineering to capture and recharge stormflows on open space.
4	Gilroy Gardens Multi-Benefit Water Capture Project	City of Gilroy	The City currently owns and operates Gilroy Gardens which has three outfalls into Uvas Creek. This Opportunity Project would route the stormwater drainage system to one or more water catchment basins within the park. The project may include a trail component whereby visitors to the park could walk around the basin(s), pending final design.	The project could provide groundwater recharge, pending studies of percolation rates at the project site. This would help the region meet water demands during drought and non-drought years. The project would help the region meet water quality standards. The City is currently named as a responsible party for two Total Maximum Daily Loads (TMDLs); one for bacteria and one for sediment. The project would treat water from the theme park for trash, sediment, fecal matter, and other non-TMDL pollutants before it enters Uvas Creek.

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
				The project will help the region protect surface water quality by treating water for urban runoff pollutants before it makes it into a natural waterbody. By capturing stormwater and making it available for groundwater recharge the region will need to rely less on imported water supplies which may be more likely to be interrupted as a result of climate change and regulatory actions. Furthermore, the project will slow down the release of water from urban development into natural waterbodies which could help with hydromodification in natural waterways.
5	City of Gilroy Multi-Benefit Water Capture Project	City of Gilroy	This Opportunity Project would construct one or more large water capture basin(s). The project would direct water from Miller Slough and/or Princevalle Channel into the basin(s) to allow for infiltration and groundwater recharge, possibly use water to meet agricultural irrigation needs on nearby parcels, and treat stormwater runoff from Miller Slough and/or Princevalle Channel for bacteria, sediment, trash and other pollutants before water enters Llagas Creek. The project may include a trail component whereby the community could walk around the basin(s), pending final design.	The project could provide groundwater recharge, pending studies of percolation rates at the project site. This would help the region meet water demands during drought and non-drought years. The project would help the region meet water quality standards. The City is currently named as a responsible party for two Total Maximum Daily Loads (TMDLs); one for bacteria and one for sediment. The project would treat water from Miller Slough/Princevalle Channel for trash, sediment, fecal matter, and other non-TMDL pollutants before it enters the Llagas Creek and Pajaro River. The project will help the region protect surface water quality by treating water for urban runoff pollutants before it makes it into a natural waterbody. The project could redirect some or all water from Miller Slough/Princevalle Channel into the basin(s). The water in the basin may be used to meet irrigation demands in the agricultural

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
				fields and in this way the project could maximize use of recycled water. By capturing stormwater and making it available for groundwater recharge, and to water the agricultural fields, the region will need to rely less on imported water supplies which may be more likely to be interrupted as a result of climate change and regulatory actions. Furthermore, the project will slow down the release of water from urban development into natural waterbodies which could help with hydromodification in natural waterways.
6	Gilroy Police Department Bioretention Project	City of Gilroy	This project will create a rain garden/water wise garden space along the backside of the Gilroy Police Department building to replace an irrigated turf area.	The Gilroy City Police Department would replace irrigated turf along the back side of the building and redirect storm runoff into a rain garden basin designed to slow rainwater flows, especially during first flush events. This will help reduce pollutant loads from entering nearby waterways and allow for water retention and infiltration with possible groundwater recharge (pending further analysis). This area is on a highly visible street corner and can provide opportunities for public education and outreach at the site.
7	Landscape Rebate Program for Stormwater Capture	Valley Water	This program provides rebates for decentralized stormwater capture projects at a parcel level such as rain gardens, rain barrels, and cisterns. This program took effect in January 2019.	This program incentivizes property owners to use rain gardens, rain barrels, and cisterns by offering rebates. Rain gardens, rain barrels, and cisterns all help capture water and reduce the amount of urban stormwater runoff during rain events. They provide easy ways for the public to help benefit flood management, water supply, water quality, the environment, and the community.
8	Little Uvas Creek Bridge Replacement	Santa Clara County	Replace the existing bridge on Uvas Road with a wider and longer bridge on an improved roadway alignment. Scope of work includes bridge demolition, approach roadway work, bridge	The project could provide stormwater runoff capture by reducing the amount of stormwater during rain events while helping to improve and protect surface water quality by treating water for urban runoff pollutants before entering nearby waterbodies.

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
			construction, retaining wall construction, & environmental mitigation. This project may consider the feasibility of constructing GSI measures such as infiltration basins and trenches, media filters, bioretention areas, vegetated swales, filter strips, or hydrodynamic devices to treat bridge deck runoff.	
9	Llagas Creek Bridge Replacement	Santa Clara County	Replace the existing bridge with a wider and longer bridge on an improved roadway alignment. Scope of work includes bridge demolition, approach roadway work, bridge construction, retaining wall construction, & environmental mitigation. This project may consider the feasibility of constructing GSI measures such as infiltration basins and trenches, media filters, bioretention areas, vegetated swales, filter strips, or hydrodynamic devices to treat bridge deck runoff.	The project could provide stormwater runoff capture by reducing the amount of stormwater during rain events while helping to improve and protect surface water quality by treating water for urban runoff pollutants before entering nearby waterbodies.
10	Morgan Hill Multi-Benefit Water Capture Project	City of Morgan Hill	The project would construct an underground water capture basin under three agricultural parcels. The project would direct water from Madrone Channel into the basin to allow for infiltration and groundwater recharge, use water to meet agricultural irrigation needs on the ground level parcels, and treat stormwater runoff from the Madrone Channel for bacteria, sediment, trash and other pollutants before water enters Llagas Creek.	The project could provide groundwater recharge, pending studies of percolation rates at the project site. This would help the region meet water demands during drought and non-drought years. The project would help the region meet water quality standards. The City is currently named as a responsible party for two Total Maximum Daily Loads (TMDLs); one for bacteria and one for sediment. The project would treat water from Madrone Channel for trash, sediment, fecal matter, and other non-TMDL pollutants before it enters the Llagas Creek and Pajaro River.

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
				The project will help the region protect surface water quality by treating water for urban runoff pollutants before it makes it into a natural waterbody. The project could redirect some or all water from Madrone Channel into an underground basin. The water in the basin would be used to meet irrigation demands in the agricultural fields and in this way the project would maximize use of recycled water. By capturing stormwater and making it available for groundwater recharge, and to water the agricultural fields, the region will need to rely less on imported water supplies which may be more likely to be interrupted as a result of climate change and regulatory actions. Furthermore, the project will slow down the release of water from urban development into natural waterbodies which could help with hydromodification in natural waterways.
11 (ABC)	Morgan Hill Stormwater Capture on Agricultural Lands	City of Morgan Hill	The City is surrounded on many sides by agricultural lands. This project entails establishing agreements with agricultural land property owners to strategically retain stormwater on their property in the winter months for groundwater recharge. The stormwater would be allowed time to infiltrate on their land completely in time for the spring planting season. Potential capture areas include three locations Mira Lagos Drive (11A), Carey and Tennant Avenue (11B), and Foothill Avenue (11C).	By slowing down water runoff from the hills and allowing for infiltration in the ag lands, the project will enhance the local environment by allowing a place for birds to land, protect the watershed and protect general surface water quality, help meet water demand during drought and non-drought years, optimize groundwater storage and implement flood management. Sediment management - by slowing down the flow of stormwater, the project will allow sediment to fall out and deposit onto the agricultural lands and not enter local creeks. The project will result in the retention and detention of stormwater flows which is a core urban runoff management strategy.

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
				By capturing stormwater and making it available for groundwater recharge, the region will need to rely less on imported water supplies which may be more likely to be interrupted as a result of climate change and regulatory actions.
12	New Santa Clara County Animal Shelter	Santa Clara County	Santa Clara County is planning for a new $30 million animal shelter to be constructed to replace the older and smaller Highland campus animal shelter.	This project has the possible opportunity to turn the turf area into a green infrastructure project either during the construction phase or later.
13	Pacheco Reservoir Expansion	Valley Water	The project includes construction and operation of a new dam and reservoir, pump station, conveyance facilities, and related miscellaneous infrastructure (e.g., access roads). The new dam and reservoir would be constructed on Pacheco Creek 0.5 mile upstream from the existing North Fork Dam and would inundate most of the existing Pacheco Reservoir. The project would increase storage in the reservoir from 5,500 AF to 140,800 AF. Water will be collected in the new reservoir during the winter months from runoff from the local watershed area, and diversion of CVP supplies from Pacheco Pipeline, when needed.	In addition to improving water quality from algae in San Luis Reservoir, the water released for groundwater recharge will provide significantly better quality than naturally occurring groundwater in the area. The project will also provide instream flow improvement, riparian enhancement, and partial creek restoration. The area downstream of the proposed new dam will also be reestablished as it is currently inundated by the existing reservoir. The project would also reduce flood risk along Pacheco Creek and downstream disadvantage communities.
14	Red Fox Creek Bridge Replacement	Santa Clara County	Replace the existing bridge with a wider and longer bridge on an improved roadway alignment. Scope of work includes bridge demolition, approach roadway work, bridge construction, retaining wall construction, & environmental mitigation.	The project could provide stormwater runoff capture by reducing the amount of stormwater during rain events while helping to improve and protect surface water quality by treating water for urban runoff pollutants before entering nearby waterbodies.

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
			This project may consider the feasibility of constructing GSI measures such as infiltration basins and trenches, media filters, bioretention areas, vegetated swales, filter strips, or hydrodynamic devices to treat bridge deck runoff.	
15	San Martin Gwinn Elementary GSI Project	Santa Clara County	The County is currently conducting presentations on stormwater management to school aged children at San Martin Gwinn Elementary. The children are mainly in 4th and 5th grade. Presentations teach students how to prevent stormwater pollution including defining stormwater terms, demonstrating how rivers lead to the ocean, explaining why stormwater pollution prevention is important, and listing things they can do to prevent stormwater pollution. The Enviroscape model is also showed to demonstrate how pollution can end up in the bay. Since the school focuses on environmental science, there might be an opportunity to introduce a GI project to the school	Possible opportunity to work with the school to incorporate a GI on current designs/property for further educational purposes.
16	South Gilroy Green Infrastructure	City of Gilroy	This opportunity project seeks to incorporate green infrastructure into medians and frontage areas along Lower Monterey Rd. and Monterey Frontage Rd. and areas surrounding the Gilroy Sports Park.	This project aims to advantageously reduce the hardscape along this portion of Monterey Road and Monterey Frontage Rd. to reduce runoff, increase infiltration and provide greener coverage along the traffic corridor. Future planned development along this section will allow for opportunities for increased community access surrounding the Gilroy Sports Park and incorporate interpretation and outreach opportunities.
17	Upper Llagas Creek Flood Protection Project	Valley Water	The Upper Llagas Creek Flood Protection Project consists of approximately 13.9 miles of flood protection improvements along East Little Llagas Creek, West Little Llagas Creek, and Llagas Creeks within the cities of Gilroy, Morgan Hill, and the	Green stormwater infrastructure features and benefits of the project include drainage swales in both urban and rural settings, reestablishment of flows in Llagas Creek where instream percolation is a beneficial use, construction of a Sycamore Alluvial woodland bench and new creek channel with bankfull benches for

Project #	Project Name	Agency	Project Description	Green Infrastructure Benefits
			unincorporated area of San Martin. When completed, the project will provide flood protection for approximately 1,100 homes, 500 businesses, and more than 1,300 acres of agricultural land in southern Santa Clara County and preserve and enhance the creek habitat for fish and wildlife	increasing infiltration, creation of an urban sediment detention facility to capture urban runoff and contaminated sediments before entering Llagas Creek, wetland creation, riparian planting, and removal of invasive Himalayan blackberry and *Arundo donax*, and creation of an instream island for capturing trash and debris for removal.
18	Uvas Creek Bridge Replacement	Santa Clara County	Replace the existing bridge with a wider and longer bridge on an improved roadway alignment. Scope of work includes bridge demolition, approach roadway work, bridge construction, retaining wall construction, & environmental mitigation. This project may consider the feasibility of constructing GSI measures such as infiltration basins and trenches, media filters, bioretention areas, vegetated swales, filter strips, or hydrodynamic devices to treat bridge deck runoff.	The project could provide stormwater runoff capture by reducing the amount of stormwater during rain events while helping to improve and protect surface water quality by treating water for urban runoff pollutants before entering nearby waterbodies.
19	10th St. Green Infrastructure Project	City of Gilroy	This opportunity project will incorporate green infrastructure into a planned Capital Improvement Project for roadway improvements along 10th St. between Princevalle and Uvas Parkway. This project will co-locate greening infrastructure with the 10th St traffic improvements for Gilroy High School and access to West side housing developments.	The project incorporates green stormwater infrastructure into an already planned roadway improvement project and aims to reduce runoff to waterways from 10th street and adjoining parcels, including Gilroy High School. This will include infiltration basins and bioswales as stormwater diversion measures that will slow and retain rainwater before it enters the Princevalle channel and downstream creeks and sloughs. This project includes updating the school drop off zone in front of Gilroy High School and offers opportunities for community engagement and outreach.

5.5.1 Project Prioritization Results

Each project in Figure 9 underwent analysis as described in section 5.3 and received points for all metrics described in Table 5. Some projects included several options for location and therefore each area was scored separately. Points were summed and projects with higher scores indicate a wider range of benefits. The maximum possible score a project could receive was 95. The final ranking score of each project is shown in Table 8.

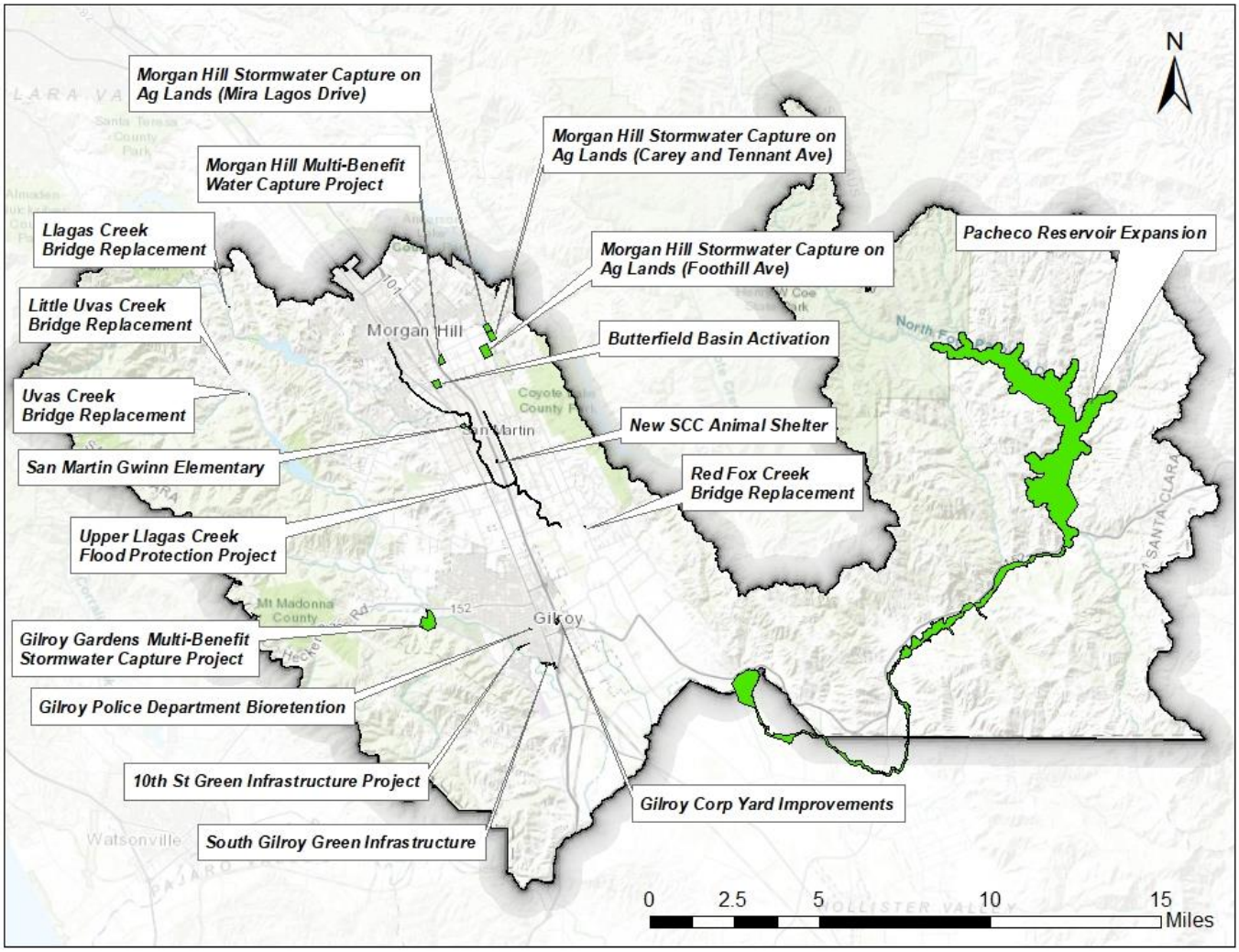

Figure 9: Potential Green Stormwater Infrastructure Project Locations

Table 9: Project Prioritization Results

Project #	Project Name	Total Score
6	Gilroy Police Department Bioretention	71
16	South Gilroy Green Infrastructure	69
17	Upper Llagas Creek Flood Protection Project	61
19	10th Street Green Infrastructure Project	61
2	Corp Yard Stormwater Improvement Project	59
4	Gilroy Gardens Multi-Benefit Water Capture Project	55
10	Morgan Hill Multi-Benefit Water Capture Project	54
1	Butterfield Basin Activation Project	54
11C	Morgan Hill Stormwater Capture on Ag Lands (Foothill Ave)	54
12	New Santa Clara County Animal Shelter	53
11A	Morgan Hill Stormwater Capture on Ag Lands (Mira Lagos Drive)	53
11B	Morgan Hill Stormwater Capture on Ag Lands (Carey and Tennant Ave)	49
13	Pacheco Reservoir Expansion	47
15	San Martin Gwinn Elementary GSI Project	40
18	Uvas Creek Bridge Replacement	32
9	Llagas Creek Bridge Replacement	32
8	Little Uvas Creek Bridge Replacement	32
14	Red Fox Creek Bridge Replacement	31

Chapter 6: Implementation Strategy and Schedule

6.1 SWRP Implementation

Over time the SWRP should be updated to reflect current watershed conditions such as changing water quality priorities from new TMDLs or 303(d) listings, previously implemented projects, and newly planned projects.

As the need arises, Valley Water will update the SWRP and conduct prioritization rankings for new stormwater projects or existing projects with major modifications such as a change of location. Status of projects in the SWRP should also be revised on a regular basis. Future changes to the SWRP may also require revisions to the prioritization scoring method due to new monitoring data that could alter priorities or needs of the watershed. Member agencies that participated on the SWRP TAC committee meet monthly for stormwater coordination meetings. These monthly meetings may include SWRP discussion as needed for potential SWRP and project updates, and to share funding opportunities for projects.

6.2 Project Implementation Resources

Projects included in this SWRP satisfy requirements of SWRP inclusion for Proposition 1 Stormwater Grant Program (SWGP) funding. Agencies that own projects submitted under this SWRP are responsible for all funding related activities including grant application, funding acquisition, project management and implementation, and any monitoring and reporting requirements of the grant.

Funding to implement projects in this SWRP may come from a variety of sources including grants, bond measures, local capital improvement program budgets, or local utility fees or rates. Current potential sources of funding for projects in this plan include:

- Round 2 Proposition 1 Stormwater implementation grant funding (solicitation March 2020)
- Round 2 Proposition 1 IRWM implementation grant funding (solicitation TBD)
- Coastal Conservancy Proposition 1 grants (solicitation 2020)
- USEPA Urban Waters Small Grants Program (solicitation every two years)
- Proposition 68 bond funds for state and local parks, environmental protection and restoration, water infrastructure, and flood protection projects (rolling pre-proposal solicitations)

Numerous guidance documents on green stormwater infrastructure exist that may be used to assist agencies with project implementation such as:

- *Green Stormwater Infrastructure Handbook* - Developed by SCVURPPP that includes design guidelines and specifications for GSI projects.
- *Model Green Infrastructure Language for Incorporation into Municipal Plans* - Document developed by SCVURPPP that provides language to support and incorporate GSI in existing municipal plans.
- *Green Stormwater Operations and Maintenance Manual* - Developed by Seattle Public Utilities for routine maintenance of rain gardens, vegetated swales, and permeable pavement.
- *Operation and Maintenance of Green Infrastructure Receiving Runoff from Roads and Parking Lots* - Technical memorandum developed by USEPA Region 5 including design tips for effective maintenance, guidance on monitoring for performance, and schedules for maintenance activities.

Data showing results of the parcel, ROW, and project scoring are available as an online map for stakeholder reference to plan for current and future project implementation. [4]

6.3 Implementation Schedule

Table 10 describes a tentative summary of the implementation schedule for this SWRP and the Proposition 1 Stormwater Grant Program. All Proposition 1 Stormwater Grant Program dates should be verified on the State's website. [5]

Table 10: Tentative SWRP and SWGP Implementation Schedule

Task	Date
State Water Board adoption of Proposition 1 Stormwater Grant Program Guidelines-amended for round 2	October 15, 2019
Revise South County SWRP Draft	November 2019
Final draft South County SWRP and submission to Pajaro IRWMP	January 2020
State Water Board Prop 1 grant application solicitation period	March 2020
State Water Board Prop 1 grant application due date	June 2020
State Water Board implementation Round 2 Grant Awards	July 2020
Deadline to obtain CEQA/permits/access for awarded projects	January 2021
Construction Complete	December 2022
Final Invoice	April 2023

[4] http://valleywater.maps.arcgis.com/apps/webappviewer/index.html?id=d0e1aca9d49042809f31c07feba72b87
[5] https://www.waterboards.ca.gov/water_issues/programs/grants_loans/swgp/prop1/

Chapter 7: Education, Outreach, and Public Participation

Valley Water staff provided an informational and educational presentation about the South County SWRP development at the Pajaro River Watershed Integrated Regional Water Management stakeholder workshop on February 11, 2019. Attendees included stakeholders and public agencies of the Pajaro River Watershed and were encouraged to contact Valley Water staff if interested in participating in the SWRP development as a stakeholder.

Outreach materials for the general public included a fact sheet that described the goals and development process for the South County SWRP (Appendix 1). The fact sheet was posted to public agency websites including Valley Water and Santa Clara County and was viewed 32 times between March and August of 2019. Copies of the fact sheet were made available for the County and Cities to hand out to the public during outreach events. A summary of outreach events used as opportunities for public education and engagement of the SWRP are listed in Table 11.

Table 11: SWRP Outreach Events

Date	Event	Agency	# of SWRP Factsheets Distributed
4/22/2019	Park Place Earth Day Presentation	City of Morgan Hill	42
4/27/2019	Art A La Carte		51
5/14/2019	Amgen Bike Tour		44
6/27/2019	Summer Fun in the Park		107
7/25/2019	Summer Fun in the Park		73
8/6/2019	National Night Out		247
		Total	564
4/27/2019	Health Day	City of Gilroy	60
7/1/2019	Girl Scouts Badge Activity		12
		Total	72
4/18/2019	Earth Day	Joint Morgan Hill/ Gilroy	78
		Total	**714**

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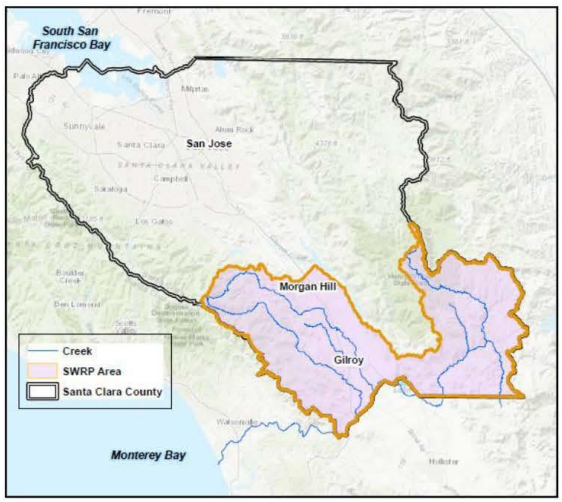
Appendix 1: South County SWRP Factsheet

Storm Water Resource Plan for South Santa Clara County

Based on the successful completion and approval of the Santa Clara Basin Storm Water Resource Plan in North Santa Clara County, Valley Water will begin development of a Storm Water Resource Plan for South Santa Clara County in collaboration with the Cities of Gilroy, Morgan Hill, and the County of Santa Clara. The goal of the Storm Water Resource Plan is to identify and prioritize Green Storm Water Infrastructure project opportunities in the Uvas, Llagas, and Pacheco sub-watersheds that may be eligible for grant funding under Proposition 1 (Assembly Bill 1471).

What is a Storm Water Resource Plan?

A Storm Water Resource Plan (SWRP) is a planning document that describes the local watershed, identifies water quality issues, and potential local and regional Green Stormwater Infrastructure (GSI) projects that can be constructed to improve local surface water quality.



Traditional approaches to storm water management include implementing best management practices to reduce urban runoff pollutants and provide measures to treat runoff from private and public development projects before it enters the storm drain system such as storm drain inlet protection barriers and filters, vegetated filter strips, and street sweeping. A new way to approach storm water management is to recognize storm water as a resource and construct multi-benefit GSI systems, which use a combination of vegetation, soils, and natural infiltration to capture stormwater runoff. This benefits the community and the environment by reducing pollutants that would otherwise enter the storm drain system, recharging ground water, and assisting with flood prevention.

Geographical Boundaries

The SWRP will address portions of the Pajaro River Watershed within South Santa Clara County. This area drains to the Monterey Bay and includes two local cities and three major sub-watersheds, including Uvas, Llagas, and Pacheco.

Storm Water Resource Plan Products

The main products of the SWRP will include:

- A map showing areas of opportunity for runoff capture and use throughout South Santa Clara County; and
- An initial prioritized list of potential multi-benefit GSI projects.

Projects identified in the SWRP may be able to receive future grant funding.

Development Budget

Development of the SWRP is funded through the Safe, Clean Water B-2 pollution prevention program.

Development Team

The SWRP will be developed by staff from Valley Water with input from subject matter experts and stakeholders. A Technical Advisory Committee (TAC) will consist of participants from Valley Water and storm water permittee agencies.

Stakeholder Involvement

Stakeholders will be solicited from diverse local organizations, including not-for-profits, open space districts, and water supply/quality agencies. The draft SWRP will be posted on Valleywater.org for public review.

Development Process

The development process will focus on the following key tasks:

- Collect existing information, related plans, hydrologic and hydrogeologic data, design criteria, and available GIS data to evaluate watersheds and identify/prioritize potential projects and project areas.
- Develop a methodology or process for identifying and prioritizing potential project opportunities.
- Apply the methodology to the list of potential projects to quantify runoff capture (water supply benefit) and pollutant removal effectiveness (water quality benefit) to prioritize a list of multi-benefit GSI projects. Analyze the list of potential projects further for additional benefits, such as: creating/restoring wetlands and/or riparian habitat; providing instream flows; increasing park and recreation lands and recreation opportunities; providing urban green space; increasing tree canopy; reducing heat island effect; improving air quality; and maximizing flood management.

The final SWRP document will be incorporated into the Pajaro River Watershed Integrated Regional Water Management Plan (IRWMP) in **Summer 2019**.

The SWRP is being developed by Valley Water in collaboration with the following public agencies:

THE COUNTY OF SANTA CLARA 1850 · CITY OF MORGAN HILL · CITY OF GILROY INCORPORATED MARCH 12, 1870

Valley Water

This fact sheet was developed from the Santa Clara Basin SWRP factsheet made by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP).

Appendix 2: Creeks and Subwatersheds within the SWRP Area