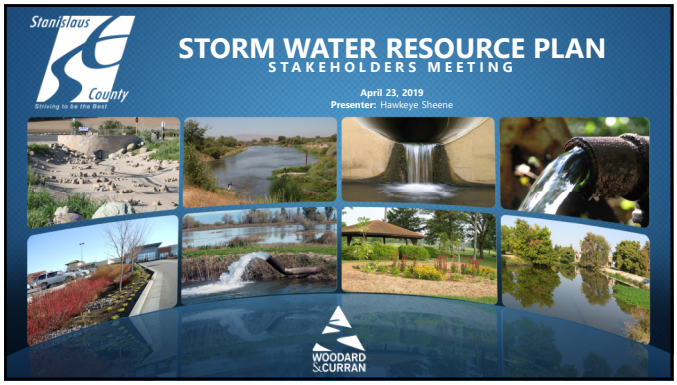
Stanislaus County
Striving to be the Best
STORM WATER RESOURCE PLAN
STAKEHOLDERS MEETING
April 23, 2019
Presenter: Hawkeye Sheene
WOODARD &CURRAN

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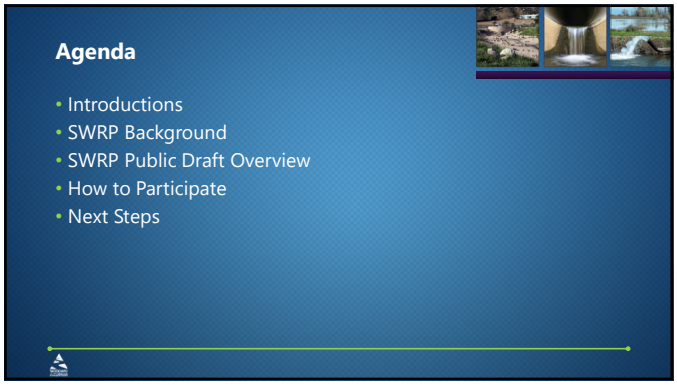
Agenda
• Introductions
• SWRP Background
• SWRP Public Draft Overview
• How to Participate
• Next Steps

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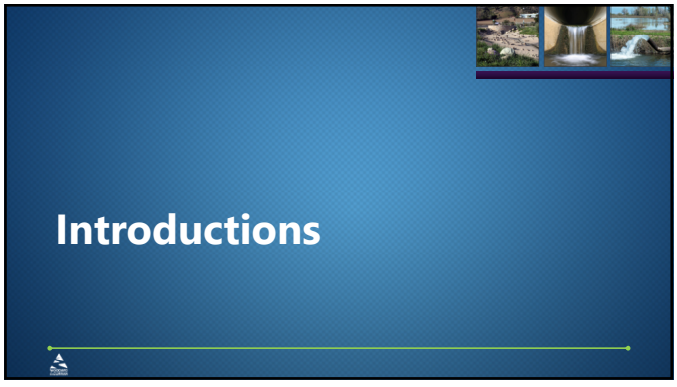
Introductions

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SWRP Developed by…

- Lead agency: Stanislaus County
- Technical Advisory Committee
  - Stanislaus County
  - City of Modesto
  - City of Waterford
  - City of Patterson
  - City of Turlock
  - Eastside Water District
  - Tuolumne River Trust
  - River Partners
  - State Water Resources Control Board

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SWRP Background

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What is a SWRP?

Integrated plan focusing on regional watershed-based stormwater priorities and developing multiple benefit projects for upcoming funding opportunities

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Stanislaus Multi-Agency Regional Storm Water Resource Plan

- Stanislaus County was awarded SWRCB Prop 1 grant funding to complete a Storm Water Resource Plan (SWRP) in time for 2019 implementation grant funding solicitation.
- This SWRP is required to receive state grant funding for stormwater and dry weather runoff capture projects

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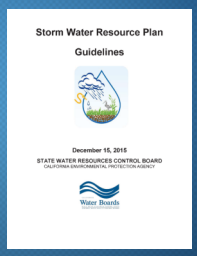
Major SWRP Requirements

- Watershed/Planning Area Identification
- Water Quality Compliance
- Organization, Coordination, Collaboration
- Quantitative Methods
- Identification and Prioritization of Projects
- Implementation Strategy and Schedule
- Education, Outreach, Public Participation



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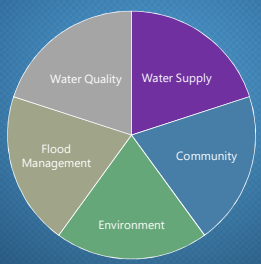
Multi-Benefit Focus



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Grant Project Tasks

- Task 1: Project Management
- Task 2: Monitoring
- Task 3: Technical Advisory Committee
- Task 4: Data Collection and Watershed Identification
- Task 5: Storm Water Resource Plan Development
- Task 6: Technical Studies to Support Development of SWRP
- Task 7: Stakeholder Outreach, Education, and Public Participation

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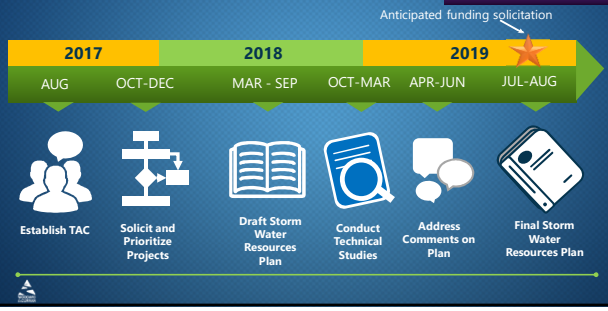
Project Timeline



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SWRP Public Draft Overview

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SWRP Sections

Chapter	Guidelines Section
1. Introduction	-
2. Planning Area Description	Section VI.A
3. Water Quality Compliance	Section V
4. Organization, Coordination, Collaboration	Section VI.B
5. Quantitative Methods	Section VI.C
6. Identification and Prioritization of Projects	Section VI.D
7. Implementation Strategy and Schedule	Section VI.E
8. Education, Outreach, Public Participation	Section VI.F

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Section 1: Introduction

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Section Summary: Introduction

- Provides context for SWRP
- Includes SWRP purpose:
  - Provide regional watershed-based planning to address challenges and opportunities for managing stormwater and dry weather runoff
  - Identify and prioritize stormwater and dry weather runoff projects that provide multiple benefits to help achieve watershed and regional planning goals

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Section 2: Planning Area Description

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Planning Area Description: Relevant Planning Documents

Data and documentation collection included:

- IRWM Plans
- Flood Management Plans
- Urban Water Management Plans
- Groundwater Management Plans
- Master Plans

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Planning Area Description Overview

- Characterizes the SWRP Planning Area (Stanislaus County), including:

Watersheds	Jurisdictional Boundaries	Surface Water	Groundwater	Water Suppliers
Wastewater	Stormwater Monitoring	Water Quality	Land Use	IRWM Regions

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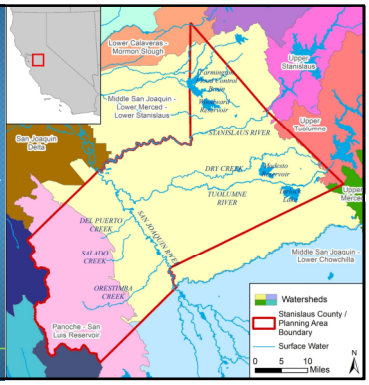
Watersheds

- 6 Watersheds
- Main Watersheds:
  1. Middle San Joaquin – Lower Merced – Lower Stanislaus
  2. Panoche – San Luis Reservoir
- Other Watersheds
  - Upper Tuolumne, Upper Stanislaus, Upper Merced, Lower Calaveras – Mormon Slough



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Groundwater Basins and IRWM Regions

- Groundwater Subbasins: Eastern San Joaquin, Delta-Mendota, Merced, Modesto, Turlock, Tracy
- IRWM Regions: East Stanislaus and Westside-San Joaquin

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Planning Area Description: Identify Watershed Priorities

- Implement water quality improvements to support TMDL goals
- Reduce pollutant discharges into 303(d) listed impaired water bodies
- Augment water supply by capturing stormwater or dry weather runoff for recharge into a groundwater basin (where feasible)
- Provide SWRP benefits to disadvantaged communities and economically distressed areas

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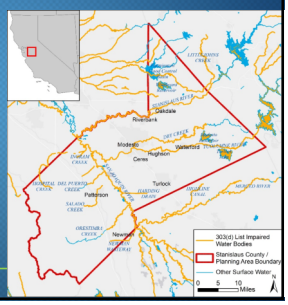
Planning Area Description: Identify Water Quality Priorities

- Specific water quality priorities were also identified:
  - Total Suspended Solids
  - Mercury / Methylmercury
  - Diazinon
  - Chlorpyrifos
  - Diuron
  - Total Nitrogen



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Section 3: Water Quality Compliance

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Water Quality Compliance: Overview

- Pollutant sources: agricultural and urban runoff
- NPDES Permits
  - Small MS4 Permit
  - Region-wide MS4 Permit
- TMDLs supported by the SWRP
  - Sacramento-San Joaquin Delta Mercury TMDL
  - Lower San Joaquin River Salt and Boron
  - Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL
  - Central Valley Pesticide TMDL

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Section 4: Organization, Coordination, Collaboration

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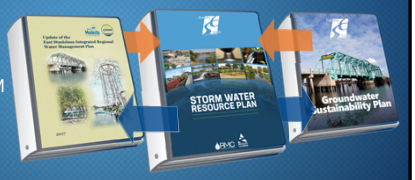
Organization, Coordination, Collaboration: Overview

Coordination and collaboration occurred through:

- MOU to prepare the SWRP
- TAC meetings
- Stakeholder meetings
- Communication with IRWM Regions and overlapping projects



Coordination between concurrent water resource planning areas facilitates effective regional water planning

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Section 5: Quantitative Methods

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Quantitative Methods: Overview

Quantitative Methods chapter describes:

- Metrics used for quantifying benefits

Benefit Category	Benefit	Quantitative Metrics
Water Quality Benefits	Increased filtration and/or treatment of runoff	• Average annual pollutant load reduction (unit varies by pollutant) • Volume of water treated (mgd) • Volume of runoff infiltrated (AFY)
Water Supply Benefits	Water supply reliability	• Increase in water supply through direct groundwater recharge (AFY) • Increase in water supply through direct use (AFY)
	Conjunctive use	• Increase in water supply through in lieu recharge/conjunctive use (AFY)
Flood Management Benefits	Decreased flood risk by reducing runoff rate and/or volume	• Reduction in peak flow discharge (cfs) • Reduction in volume of potential flood water (AFY)
Environmental Benefits	Environmental habitat protection and improvement, including wetland enhancement/creation, riparian enhancement, and/or instream flow improvement	• Size of habitat protected or improved (acres) • Amount of instream flow rate improvement (cfs)
	Increased urban green space	• Size of increase in urban green space (acres)
Community Benefits	Employment opportunities provided	• Number of employment opportunities provided
	Public education	• Number of outreach materials provided, or events conducted

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Quantitative Methods: Overview (cont.)

Quantitative Methods chapter also describes:

- Quantitative information for projects in each benefit category (number of projects providing each benefit, aggregated quantified benefits, maps of project locations)

SWRP Benefit	Benefit Type	Conceptual	Ready to Proceed	Total
Increased filtration and/or treatment of runoff	Main	29	13	42
Nonpoint source pollution control	Additional	13	5	18
Reestablished natural water drainage and treatment	Additional	9	3	12

For example:
Water Quality Benefit Projects and Quantified Water Quality Benefits

SWRP Benefit	Conceptual	Ready to Proceed	Total
Reduction in TSS loading (lbs/yr)	204,100	750	204,850
Trash removed (lbs/yr)	5,100	100	5,200
Volume of water treated (mgd)	510	10	520
Volume of runoff infiltrated (AFY)	2,582	3,042	5,624

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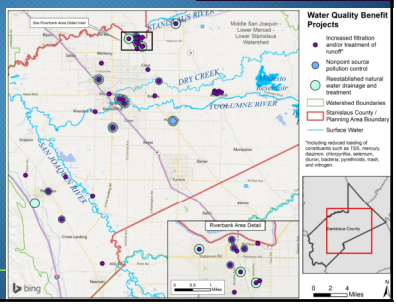
Quantitative Methods: Overview (cont.)

Quantitative Methods chapter also describes:

- Quantitative information for projects in each benefit category (number of projects providing each benefit, aggregated quantified benefits, maps of project locations)

For example:
Projects Providing SWRP Water Quality Benefits



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Quantitative Methods: Overview (cont.)

- Quantitative Methods chapter also describes:
  - Existing technical studies
  - Tools for quantitative assessment of benefits
  - Data collection (conducted by project proponents in accordance with grant agreements, if applicable; Opti can also be used for data distribution)

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Section 6: Identification and Prioritization of Projects

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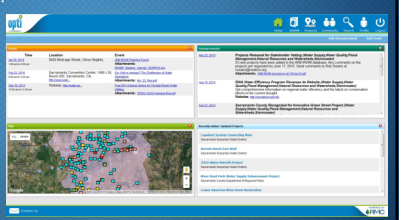
Identification and Prioritization of Projects: Project Solicitation

- Project Solicitation Period:
  Oct 23 – Dec 8, 2017
- Utilized Opti Data Management System
- Requested information such as location, cost, schedule, benefits, and quantitative benefits



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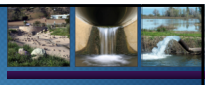
Identification and Prioritization of Projects: Main Benefits



Benefit Category	Main Benefit
Water Quality	Increased filtration and/or treatment of water
Water Supply	Water supply reliability
	Conjunctive Use
Flood Management	Decreased flood risk by reducing runoff rate and/or volume
Environmental	Environmental habitat protection and/or improvement, including: - Wetland enhancement/creation; - Riparian enhancement; and/or
	Instream flow improvement
	Increased urban green space
Community	Employment opportunities provided
	Public education

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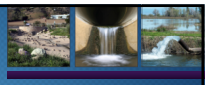
Identification and Prioritization of Projects: Additional Benefits



Benefit Category	Additional Benefit
Water Quality	Nonpoint source pollution control
	Reestablished natural water drainage and treatment
Water Supply	Water conservation
Flood Management	Reduced sanitary sewer overflows
Environmental	Reduced energy use, greenhouse gas emissions, or provides a carbon sink
	Reestablishment of natural hydrograph
	Water temperature improvements
Community	Community involvement
	Enhance and/or create recreational and public use areas

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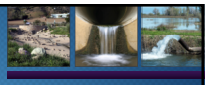
Identification and Prioritization of Projects: Project Prioritization Approach



- Eligible Projects receive credit for:
  - Providing SWRP Main Benefits and Additional Benefits
  - Addressing regional watershed priorities identified in SWRP
  - Progress towards project implementation
- Projects are prioritized based on points awarded to each project

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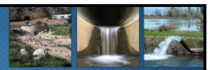
Identification and Prioritization of Projects: Project Prioritization Approach (cont.)



Points Awarded Per SWRP Main Benefit and Additional Benefit

Providing SWRP Main Benefits and Additional Benefits	Points
Providing SWRP Main Benefits	
Points per benefit provided	4
Additional points if a quantitative metric can be provided for that benefit	2
Providing SWRP Additional Benefits	
Points per benefit provided	2
Additional points if a quantitative metric can be provided for that benefit	1

Addressing Regional Watershed Priorities	Points
Implements water quality improvements to help achieve the goals of an existing TMDL?	4
Reduces pollutant discharges into a 303(d) listed Impaired Water Body?	2
Augments water supply by capturing stormwater or dry weather runoff for recharge into a groundwater basin?	4
Does the project provide a SWRP Main or Additional Benefit to a disadvantaged community or an economically distressed area?	4

Points Awarded for Addressing Regional Watershed Priorities

Points Awarded Based on Status of Project Implementation

Progress Towards Project Implementation	Points
Is the project supported by entities that have created permanent, local or regional funding?	4
Is the project located on public land? If not, is there an existing easement or right of way agreement with a local land owner?	4
Readiness of project to proceed (award points for each one completed):	
Planning Study or Feasibility Study	1
Environmental Assessment/EIR	1
Preliminary Project Design	2
Acquisition of all required environmental permits	2

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Identification and Prioritization of Projects: Project Prioritization Approach (cont.)

Projects are prioritized based on points awarded to each project

Stanislaus County Multi-Agency Regional Storm Water Resource Plan
Project Description and Scoring Summary Sheet

Project Name	Project Proponent	Project Description	Score	Project Type	Benefit Categories Met
Ready to Proceed Projects					
Tuolumne River Regional Park	Tuolumne River Regional Park JPA	Continued development of the undeveloped areas of the Tuolumne River Regional Park including the Gateway Parcel. http://www.midsjrfloodplan.org/projects/tuolumne-river-regional-park	64	Ready to Proceed	Water Quality, Water Supply, Flood Management, Environmental, Community
Modesto Area 2 Stormwater to Sanitary Sewer Cross-Connection Removal Project	City of Modesto	The proposed multi-benefit project captures, treats, and infiltrates stormwater. The project uses LID Techniques including bio-retention planters, infiltration trenches, and a underground retention basin under Roosevelt Park. The project recharges the groundwater aquifer. reduces stormwater flows to the wastewater treatment plant. the number of Sanitary Sewer Overflows, and improve water quality for Dry Creek, and the Lower Tuolumne River (303d water bodies). Located in the fully developed northwest portion of Modesto which has no positive storm drainage system, the project is a cost effective and LID Alternative to constructing detention basins in undeveloped portions of the city and constructing miles of storm drains. Fourteen failed dry wells and six sanitary sewer cross connections will be removed. The project will reduce localized flooding on Granger Avenue a heavily traveled local street.	60	Ready to Proceed	Water Quality, Water Supply, Flood Management, Environmental, Community
Mustang Creek MAR Project	Eastside Water District	The Mustang Creek MAR Project will divert Mustang Creek flows during extreme flood events at an existing Bifurcation Structure located downstream of the flood control Detention Basin. The Bifurcation Structure presently diverts flood flows into a 95-acre-foot off-channel impoundment basin covering 74 acres for flood protection. The Bifurcation Structure is estimated to allow up to 210 cfs to be diverted into the existing impoundment basin. The Mustang Creek MAR Project will include ripping the 74-acre basin site to encourage percolation, similar to an agricultural practice used prior to planting an almond orchard. coordinated. Operation of the Bifurcation Structure with and the upstream Mustang Creek Detention Basin will be coordinated to divert storm surges and maximize the potential diversion for groundwater recharge at the Mustang Creek MAR Project. The Project will enhance the primary function of the Detention Basin; flood control.	52	Ready to Proceed	Water Supply, Flood Management, Community
Rouse Lake Managed Aquifer Recharge (MAR) Project	Eastside Water District	This Rouse Lake MAR Project consists of the following three (3) components: 1) Four (4) or more floating lake intakes with a pumping capacity of each at about 1,500 gallons per minute; designed with screens and pumping schemes to comply with all BMPs for similar type facilities; 2) Pipelines to deliver Rouse Lake water to existing developed lands for irrigation purposes; varying from 8-inch to 30-inch in diameter; 3) Up to 20 vertical drains (dry-wells) within the receded Rouse Lake lakebed to accomplish direct groundwater recharge. This is an environmentally sensitive water supply project that achieves new yield from the conjunctive management of surface and groundwater sources; direct GW recharge via vertical drains; in-direct GW recharge via irrigation; and additional GW recharge via use of Rouse Lake as a regulatory reservoir. Benefits to supply are matched by benefits to DACs, SDACs, EDAs, and the local ecology.	52	Ready to Proceed	Water Supply, Flood Management, Community
Little Salado Creek Groundwater Recharge and Flood Control Basin	Stanislaus County	Construction of a stormwater detention basin to partially divert, retain and percolate up to 270 cubic feet per second (cfs) of flow from Little Salado Creek.	50	Ready to Proceed	Water Quality, Water Supply, Flood Management, Environmental, Community

Projects submitted during Solicitation Period from 10/23/2017 to 12/8/2017 Page 1 of 8

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Section 7: Implementation Strategy and Schedule

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Implementation Strategy and Schedule: Contents Overview

Implementing the SWRP consists of three main elements:

1. Completing the design, permitting and implementation of projects included in the SWRP
2. Monitoring the benefits produced by the projects included in the SWRP to ensure that project goals are being met and that SWRP objectives are being advanced
3. Evaluating the SWRP at regular intervals to assess cumulative progress toward meeting the SWRP objectives and adapting the plan as necessary to ensure that objectives continue to be met

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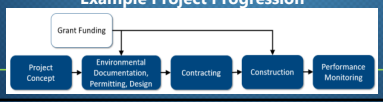
Implementation Strategy and Schedule: Contents Overview (cont.)

- SWRP is intended to be a living document
  - Project information may be viewed and updated any time via Opti
  - Use Opti to develop updated project lists to append to SWRP for future funding opportunities
- SWRP implementation occurs primarily through implementation of individual projects
  - Responsibility of project proponent to seek funding, implement and provide information to Opti as project progresses
  - Potential grant funding sources include Storm Water Grant Program, IRWM Implementation Grants, and others

Example Project Progression



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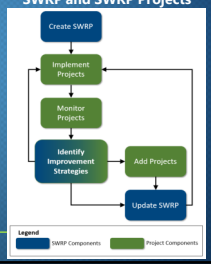
Implementation Strategy and Schedule: Contents Overview (cont.)

- SWRP will be adopted by participating agencies in order to demonstrate support for implementation of SWRP projects
- IRWMPs will incorporate SWRP by reference and ES in appendix
- Adaptive Management
  - As the SWRP is implemented and more data becomes available, regional priorities and strategies may be revised.
- Updates - County and partners responsible for updates every 5 years or as needed.

Adaptive Management of the SWRP and SWRP Projects



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Section 8: Education, Outreach, Public Participation

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Education, Outreach, Public Participation: Contents Overview

- Community participation has occurred throughout SWRP development through outreach meetings
- Public engagement may occur via stakeholder/outreach meetings, email outreach, Opti, SWRP website, public comment periods
- Outreach will also occur as part of individual project implementation under CEQA/NEPA

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Education, Outreach, Public Participation: Contents Overview

Meeting	Date	Location	Description
Stakeholder Meeting #1	October 23, 2017	Ceres, CA	This meeting provided an overview of the SWRP purpose and process and how to submit projects. This meeting also kicked off the Call for Projects.
Stakeholder Meeting #2	December 6, 2018	Conference call	This conference call provided detailed instructions on how to use the Opti system to submit projects online.
Stakeholder Meeting #3	May 30, 2018	Modesto, CA	This meeting provided additional details about the SWRP, including discussion of the SWRP goals and objectives, prioritization and solicitation of projects, and the implementation funding timeline.
Public Meeting	April 23, 2019	Ceres	This meeting will consist of an overview of the Public Draft SWRP and cover how public comments can be provided.

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Technical Studies to Support SWRP

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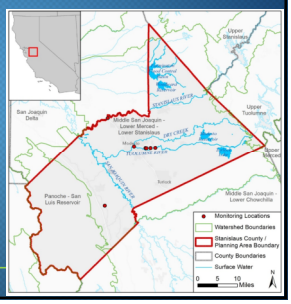
Technical Study: Stormwater Outfall Monitoring

- To date, stormwater monitoring in Stanislaus County focused on Modesto or dry weather flows.
- Identified priority seven sampling locations
- Monitored two storms during winter 2018/2019
- Data gathered will serve as a baseline for future work and inform projects



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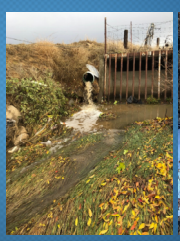
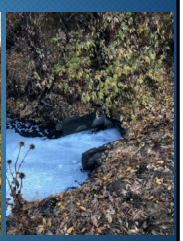
Technical Study: Stormwater Outfall Monitoring (cont.)

- Key Results:
  - Total nitrogen (as N) concentrations below MCL of 10 mg/L
  - Bacteria counts elevated at all sites
  - Diazinon and chlorpyrifos (pesticides) below detection limits
  - More storm events and locations should be monitored to establish area trends





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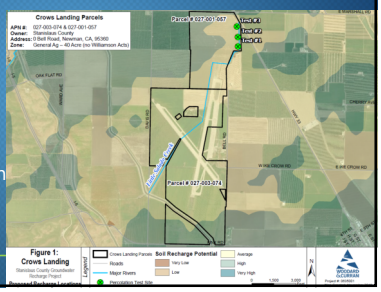
Technical Study: Stormwater Capture/Groundwater Recharge Site Assessment

- Evaluated groundwater recharge sites using spatial data
- Identified highest-priority project locations
- Field testing for percolation studies
- Sites selected for percolation testing:
  - Crows Landing
  - Tuolumne River



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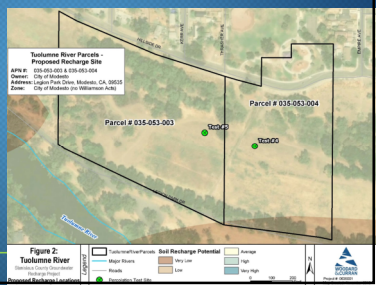
Technical Study: Stormwater Capture/Groundwater Recharge Site Assessment (cont.)

- Data on recharge potential will inform future project development
- Key results:
  - Silty sands at both locations
  - Both sites show potential for recharge projects
  - Percolation rates are extremely site-specific, so further tests needed



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Questions on SWRP Sections?

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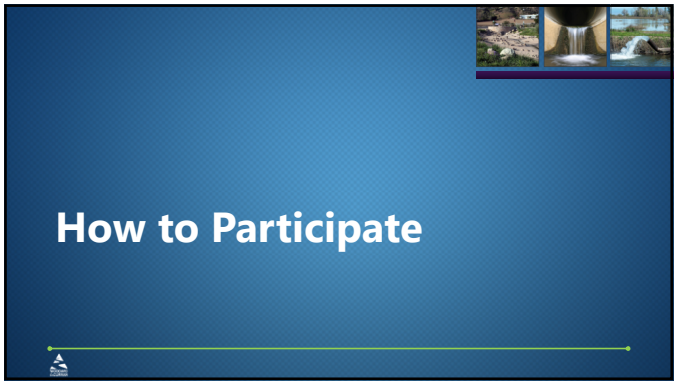
How to Participate

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Ways to Participate
• Comment on Public Draft SWRP
• Comments due by May 16, 2019
• Submit comments to Dhyan Gilton at Stanislaus County
• (209) 525-7538 or giltond@stancounty.com
• Draft available at http://www.stancounty.com/publicworks/swrp/
• Submit a project for future updates via the Opti site
• Sign up to receive SWRP announcements via email

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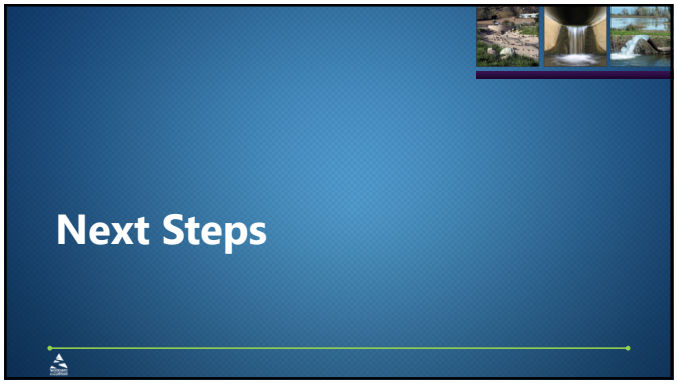
Next Steps

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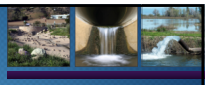
Next Steps



- Receive public comments – through Thursday, May 16, 2019
- Incorporate public comments – May and June, 2019
- Final Draft SWRP – June 2019
- Final SWRP – August 2019
- Storm Water Grant Program, Round 2 implementation grants – anticipated July 2019 opening

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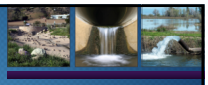
Questions/Comments?



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