



Overview of West Slope Stormwater Resource Plan

March 2018

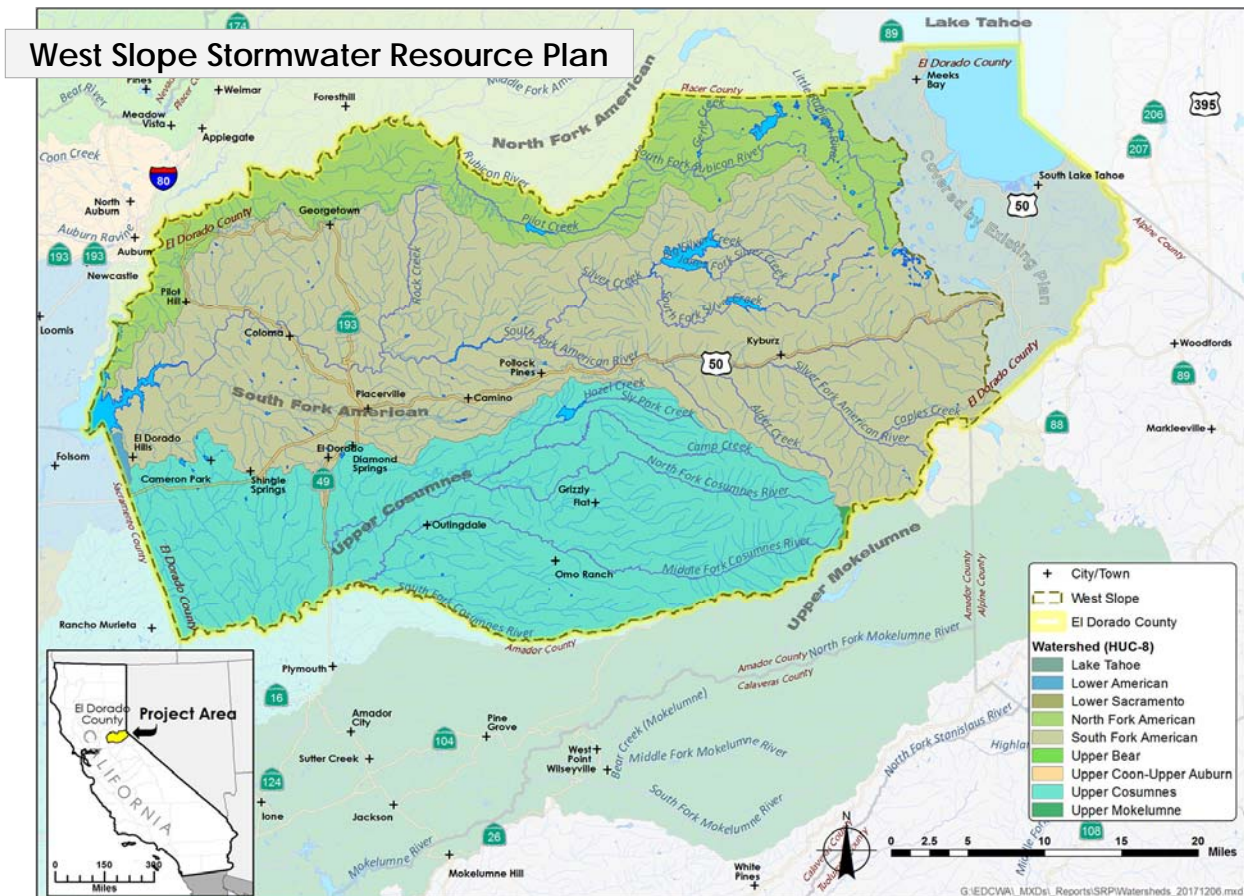


What is a Stormwater Resource Plan?

Stormwater management in the 21st Century is conceptually changed to recognize it as a potential resource to supplement water supply and benefit environmental protection, reducing long-term water conflict. Prior regulatory efforts focused on best management practices for flood hazard prevention and pollutant control. The current statewide water policy on integrated water management and regulatory framework put a watershed and multi-benefit approach to focus in considering stormwater management. A stormwater resource plan (SWRP) is a product and requirement for a watershed-based approach to incorporating stormwater management as a resource for overall water management for regional sustainability and active aquatic resource protection.

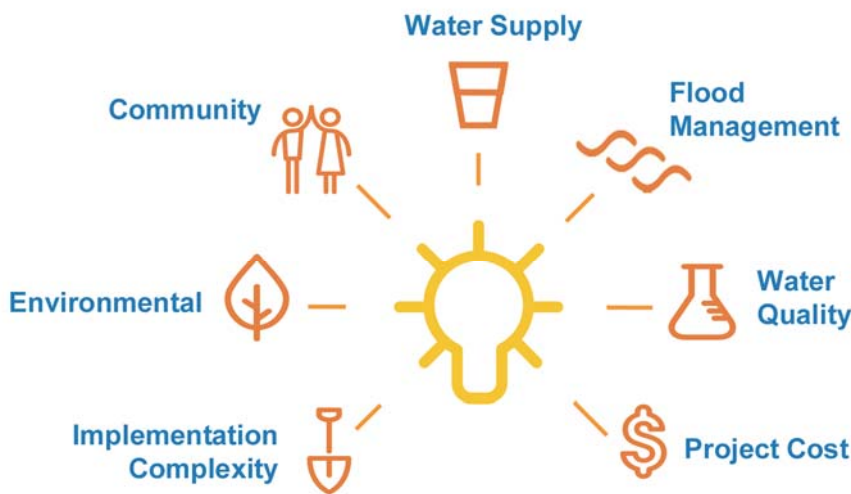
West Slope Stormwater Resource Plan

The West Slope SWRP was collaboratively developed by the **El Dorado County Water Agency (EDCWA)**, **County of El Dorado** and the **City of Placerville** (termed “SWRP Partners”) with extensive communication and outreach to local entities and the public. It is intended to be a comprehensive strategy to manage stormwater as a resource in the West Slope area of El Dorado County, which has unique constraints given its foothill location, and urban, rural, and agricultural land uses. To adequately address stormwater resource planning in this diverse and large setting, the West Slope SWRP covers three components: (1) **Surface Water Storage**, (2) **Watershed Management**, and (3) **Stormwater Management**.



The West Slope SWRP incorporates prioritized actions, affordability considerations, and the nexus with other related resource planning and implementation efforts to support efficient and responsible implementation.

This West Slope SWRP serves as a foundation for efforts outlined in existing local Stormwater Management Plans; it is not intended to replace existing plans or plans that are under development. The plan meets the standards and requirements of the California Water Code Section 10560 et. seq., and was prepared in consistence with the guidance provided by the State Water Resources Control Board. After its completion, SWRP Partners become eligible for stormwater and dry weather runoff capture implementation funding from California voter-approved bonds (e.g., Proposition 1, which includes \$200 million for multi-benefit stormwater projects).



Multi-Benefit Management Actions and Projects

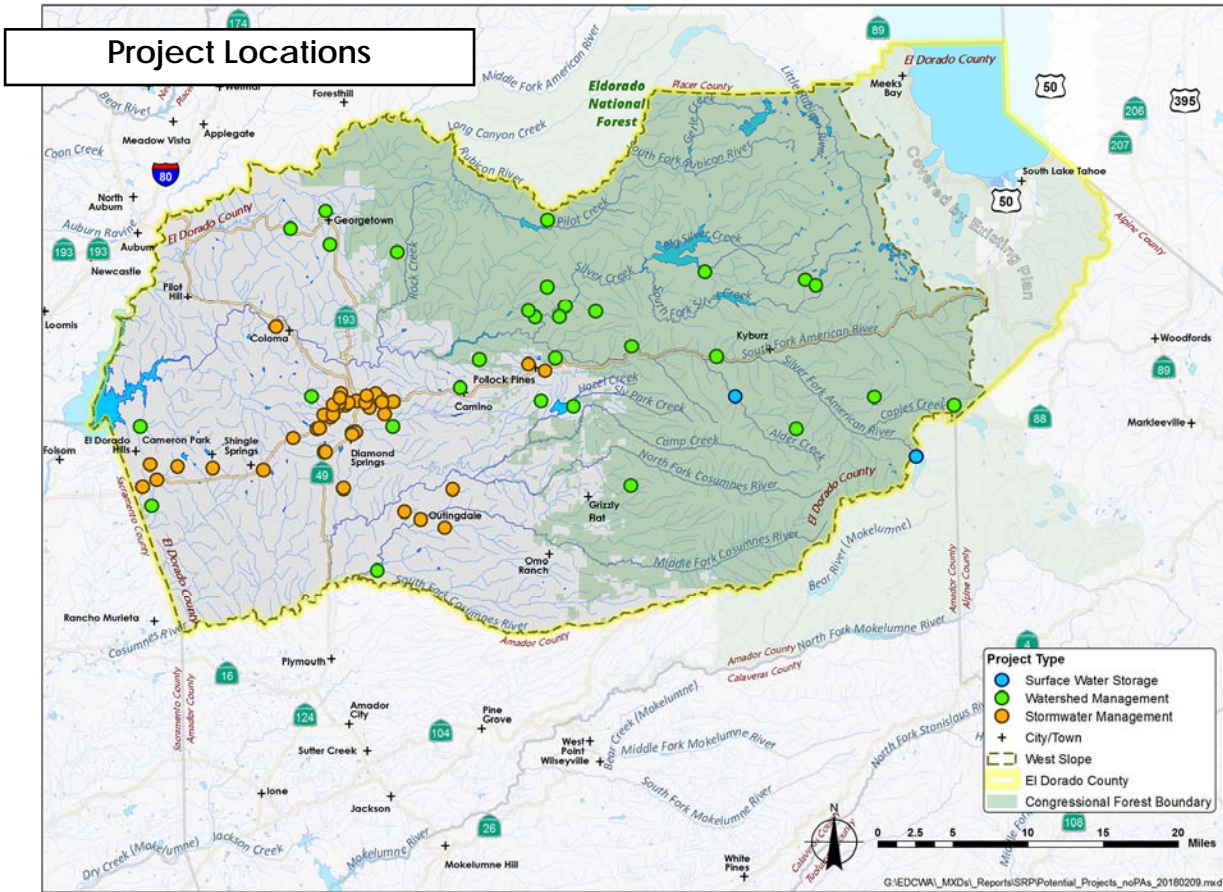
When stormwater is considered as a resource, rather than a hazard, it is important to consider management actions and formulate projects that provide multi-benefits to improve the efficiency of investments and address the interconnection among different objectives in resource management. With the heightened awareness of needs for integrated water management for long-term sustainability, multi-benefit management actions and projects are often required or preferred by state and federal grants and funding opportunities.

For the West Slope SWRP, all projects are individually evaluated (quantitatively and/or qualitatively) based on the criteria of benefit categories, shown above, for prioritization.

The SWRP reflects a collaboration of El Dorado County Water Agency, County of El Dorado, and the City of Placerville to advance the integrated planning to manage stormwater as a resource and improve county-wide consistency in resource management strategy.

The SWRP Partners also engaged other management agencies for input to additional robustness and completeness of the plan, including:

- ◆ California Department of Transportation
- ◆ El Dorado County and Georgetown Divide Resource Conservation Districts
- ◆ El Dorado Irrigation District
- ◆ American River Conservancy
- ◆ U.S. Department of Agriculture, Forest Service



A large portion of the West Slope SWRP focuses on identifying and evaluating projects for integrated multi-beneficial uses that manage stormwater as a resource. In total the contributing agencies identified 90 multi-benefit projects throughout the West Slope: 2 surface water storage projects, 35 watershed management projects, and 53 stormwater management projects. All 90 projects contribute to at least two of the benefit categories. The SWRP Partners collaborated in evaluation criterion development and determination of relative importance of each criterion to reflect management priority. Evaluated projects were then organized into A, B, and C groupings based on their weighted scores. Projects assigned to Group A displayed the highest potential for providing the most benefits and addressing more benefit categories. Group B projects had moderate potential, and Group C projects had less potential.



Summary of Identified Projects by Component and Project Type

Project Type	Number of Projects	Preliminary Cost (\$million)	Description
Surface Water Storage Component			
Reservoir Creation	1	\$909	New reservoirs support regional water supply reliability, decrease flood risk, improve river water temperatures, and provide community benefits.
Reservoir Upgrade	1	\$10	Reservoir upgrades support regional water supply reliability, decrease flood risk, improve river water temperatures, and provide community benefits.
Watershed Management Component			
Post-Fire Restoration	2	\$2.5- \$3	Post-fire restoration improves the environmental health of local watersheds through removal of dead trees, thereby reducing carbon emissions and pollutants into local water bodies.
Renewable Energy	5	\$60-\$65	New biomass and compost facilities provide community benefits by creating local energy generation and reducing the amount of waste in landfills.
Forest Management	21	\$75-\$85	Forest management practices improve the environmental health of local watersheds through control of noxious weeds, and reduce the risk of wildfires through preventative actions (e.g., creating fuel breaks, reducing fire fuel, tree thinning, timber sales).
Water Quality Management	4	No costs available	These practices identify existing problems or potential future issues, then support decision making related to pollution prevention and management strategies that improve the health of the environment.
Creek Restoration	3	\$2-\$2.5	Creek restoration (e.g., sediment load removal, culvert cleanout, bank stabilization, and invasive weed removal) improves the environmental health of local water bodies and aims to restore the natural state of the river system in support of water quality and flood management.
Stormwater Management Component			
Structural			
Water Capture	8	\$40-\$90	Water capture systems (e.g., retention and detention ponds) collect stormwater runoff and divert flows for infiltration and retention to improve water quality by reducing runoff into local water bodies, enhance the community, and facilitate habitat restoration.
Water Quality Improvement	10	\$25-\$30	Water quality improvements (e.g., facility maintenance and updates to roadway, sewer, and water infrastructure) directly improve the health of the local watershed.
Non-Point Source Pollution Control Management	8	\$5-\$20	Non-point source pollution control management (e.g., street sweeper and vector truck programs, enclosing facilities with known sources of pollution) help reduce pollution sources into local water bodies and directly improve water quality.
Flood Damage Reduction	16	\$50-\$70	Drainage improvements (replacement and addition of culverts and sewers) reduce the amount of stormwater runoff and decrease the occurrence and risk of flooding.
Non-Structural			
Outreach Project	5	\$0.5-\$0.75	Outreach projects allow for community engagement related to stormwater management, littering, contamination, hydrology, watershed management, and may indirectly affect local ecosystem health.
Management Programs	6	\$4-\$6	Management of local watersheds water quality and environmental health are affected by road and drainage system data management in the West Slope area; best management practice manuals and internal protocols to manage stormwater projects; and development of urban, rural, and agricultural pollution generation studies.

Prioritized Projects

The SWRP Partners identified the following 15 projects with greater interest and priority for implementation consideration. Their corresponding lead project implementation agencies are identified in parentheses.

Surface Water Storage Component


- Alder Reservoir (EDCWA)
- Silver Lake Dam Remediation (El Dorado Irrigation District)

Watershed Management Component

- Fire Adaptive along Highway 50-Fuels Reduction (U.S. Forest Service)
- Caples Watershed Improvement (U.S. Forest Service)

Organization of West Slope SWRP

CONTENT



Section 1: Introduction – Provides background information, guiding principles, relevant efforts, and consistency with applicable laws.

Section 2: Description of Watershed – Provides a description of the watersheds and planning areas addressed in the West Slope SWRP.

Section 3: Organization, Coordination, Collaboration – Identifies the local agencies, non-governmental organizations, and State and Federal agencies that play important roles in developing and implementing the West Slope SWRP.

Section 4: Quantitative Methods for Identification and Prioritization of Stormwater and Dry Weather Runoff Capture Projects – Describes the methodology for identifying and prioritizing the multi-benefit stormwater projects, and subsequent results.

Section 5: Plan Implementation Strategy and Scheduling of Projects – Describes how the West Slope SWRP will be implemented and adapted.

Section 6: Education, Outreach, and Public Participation – Describes the public outreach performed through the development of the West Slope SWRP and outlines the future public outreach plan for long-term participation in plan implementation.

Section 7: References – Lists references used to prepare the West Slope SWRP.

APPENDICES

Appendix A: Stormwater Resource Plan Checklist and Self-Certification:

Contains the self-certification of compliance for the West Slope SWRP with the California Water Code requirements and State Water Resource Control Board guidance for SWRPs.

Appendix B: Project Description Forms:

Contains the project description forms for each of the multi-beneficial use projects submitted for the West Slope SWRP.

Appendix C: Project Evaluation and Prioritization Method:

Contains an overview of the project evaluation metrics and scoring, in addition to background on how project benefits were weighted in the evaluation.

Appendix D: Quantitative Analysis and Project Evaluation Summary Sheets:

Contains a description of the quantitative analysis completed for projects submitted for the West Slope SWRP. Additionally, it also includes the evaluation results for each project.

Appendix E: Project Evaluation Summary Table:

Contains a summary table of the evaluation outcomes obtained for each submitted project for the West Slope SWRP.

Stormwater Management Component

- Town of El Dorado Drainage Improvements (County of El Dorado)
- Cedar Ravine Road Drainage Improvement (City of Placerville)
- Town of El Dorado Green Street Project (County of El Dorado)
- Splash in the Class-Outreach Program (County of El Dorado)
- Union Mine Landfill Retention Pond (County of El Dorado)
- BMP Countywide Demonstration Projects (County of El Dorado)
- Cameron Park Drainage Improvements (County of El Dorado)
- Headington Yard Wash Rack (County of El Dorado)
- Upper Main Ditch Stormwater Improvements (El Dorado Irrigation District)
- Stormwater Detention Basin-Hangtown Creek Flood Damage Reduction Project (City of Placerville)
- Diamond Springs Parkway-Roadway and Drainage Improvement Project (County of El Dorado)

Implementation Considerations

To further enhance the regional collaboration, EDCWA has been coordinating with Cosumnes, American, Bear, Yuba Integrated Regional Water Management Group to include the 90 identified projects as part of their Integrated Regional Water Management Plan. Continued public education and stakeholder engagement are also critical for awareness and long-term success in managing stormwater as a resource.

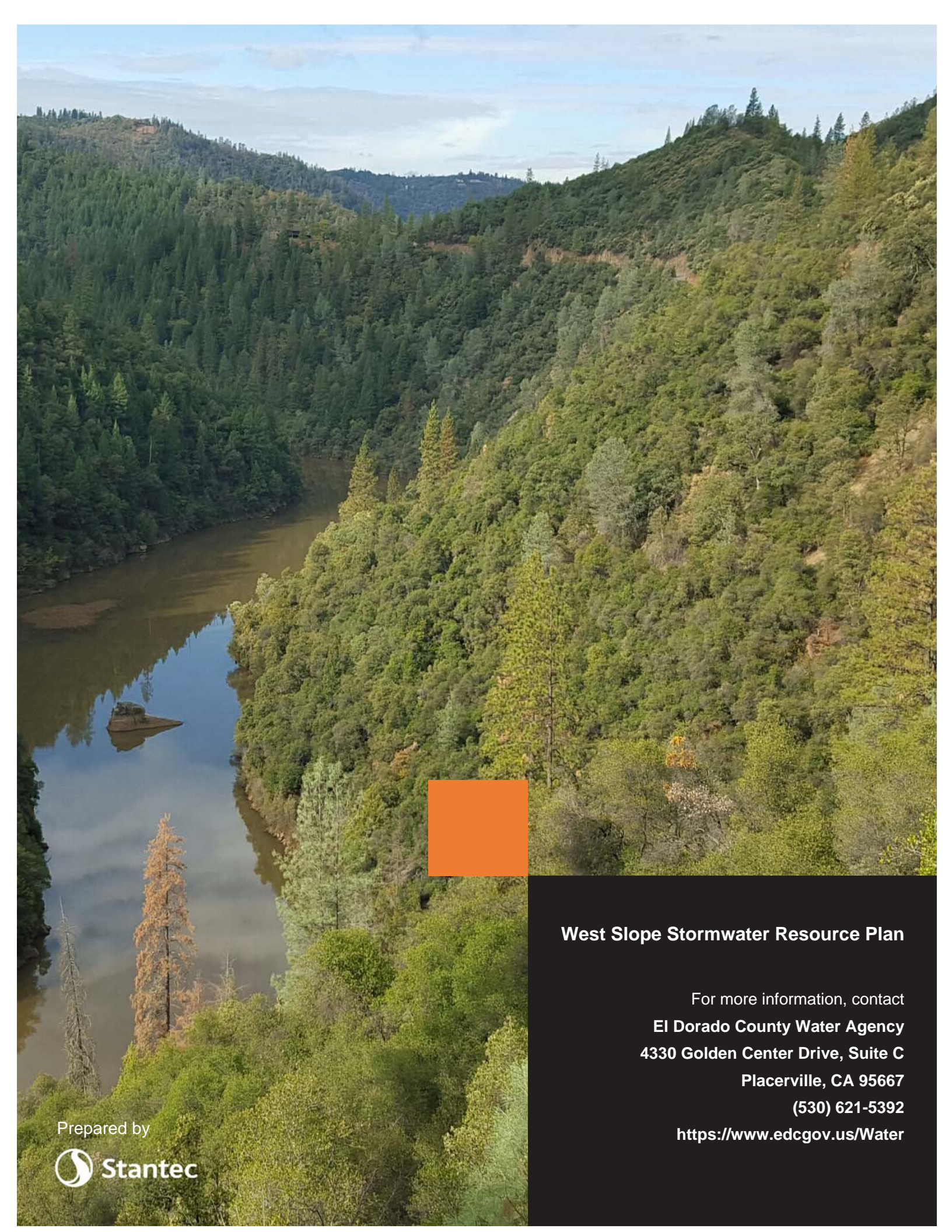
The SWRP Partners will develop a financing strategy for plan implementation. A major component of the strategy is to leverage available state and federal financial and technical assistance. For example, Proposition 1 SWRP implementation grant funding (anticipated in late 2018/early 2019) is for projects identified in stormwater management component and possibly, in watershed management component. SWRP Partners are advancing project planning for grant application and other forms of financial assistance. Similarly, EDCWA is currently collaborating with federal agencies (e.g., U.S. Department of the Interior, Bureau of Reclamation, and U.S. Department of Agriculture) for implementing surface water storage and watershed management components.

The strategy in leveraging state and federal financial and technical assistance cannot be complete without local financial support. The majority of state and federal assistance programs require local cost share. The West Slope SWRP provides the foundational information and collaborative forum among governments in El Dorado County for budgetary recommendations to streamline the implementation and policy considerations for long-term sustainable water management.

The West Slope SWRP is a living document for advancing Countywide effort in managing stormwater as a resource. With the support of other SWRP Partners, EDCWA will lead the coordinated implementation of the West Slope SWRP and subsequent updates every 5 years (in years ending with 8 and 2), or as deemed necessary by the SWRP Partners. The SWRP Partners also committed to perform regular monitoring of project development and implementation, and an annual review to assess progress of and accomplishment from project implementation.



Backyard swale at County of El Dorado Facility



West Slope Stormwater Resource Plan

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Prepared by

