

DRAFT Memorandum

To:	Salinas River Long-Term Management Plan Planning Group
From:	Consultant Team Monterey County Water Resources Agency
CC:	Resource Conservation District of Monterey County Salinas River Stream Maintenance Program River Management Unit Association
Date:	September 7, 2018
Re:	Salinas River Stream Maintenance Program Background and Context for Potential Salinas River Long-Term Management Plan Integration

Monterey County Water Resources Agency (MCWRA) is leading development of a long-term management plan (LTMP) for the Salinas River. The LTMP will include a comprehensive set of management objectives and actions for the Salinas River system, including the management of vegetation and channel stability. The purpose of this memorandum is to provide background on the Salinas River Stream Maintenance Program (SMP), summarize on-going implementation issues, and to propose a series of objectives and actions that will inform future iterations of the SMP in the context of a system-wide management approach.

The summary information in this memorandum is compiled based SMP documentation, MCWRA input, and review by the Salinas River Management Unit Association and the Resource Conservation District of Monterey County (RCDMC). The potential management objectives and actions were drafted based on the summary information and based on a Working Group meeting held on August 22, 2018. The two key purposes of the Working Group were to:

- Consider if the Salinas River LTMP should be designed to support the Salinas River SMP going forward; and
- If so, what elements of the SMP should feed into the LTMP, including if there are there specific management objectives or actions that should be considered in the LTMP.

The Working Group meeting was held on August 22, 2018, and was attended by the following.

- Shaunna Murray, MCWRA
- Elizabeth Krafft, MCWRA



- Paul Robins, Resource Conservation District of Monterey County
- Emily Zefferman, Resource Conservation District of Monterey County
- Abby Taylor Silva, Grower Shipper Association of Monterey County
- River Management Unit Association Members¹
 - Donna Meyers
 - Christopher Bunn
 - David Costa
 - Joanne Nissen
- Kathryn Gaffney, ICF
- Paul Frank, FlowWest

Background

In 2010, the Monterey County Water Resources Agency (MCWRA) developed the Salinas River Stream Maintenance Program (SMP) in collaboration with the Resource Conservation District of Monterey County (RCDMC), the Salinas River Channel Coalition, the Grower-Shipper Association of Central California, The Nature Conservancy, Conservation Collaborative, and other local entities and contractors. The SMP is intended to help protect landowners and farms along the Salinas River against flooding during and after moderate storm events while enhancing the habitat value of the Salinas River.

The SMP, an adaptation from the prior Salinas River Channel Maintenance Program which ran from 1996-2008, facilitates vegetation and sediment management activities conducted voluntarily by individual property owners, growers, and municipalities. Participants in the SMP are members of a nonprofit organization, the Salinas River Stream Maintenance Program River Management Unit Association. The River Management Unit Association administers program participation with private property owners including maintenance enrollment with the Association and the MCWRA and RCDMC. The River Management Association also assists landowners in assessing channel conditions throughout the year and helps landowners and operators understand permitted work areas and maintenance activities of the SMP.

Stream maintenance is focused along the main stem—although primarily outside the low-flow channel—of the Salinas River (river miles 2 to 94) and three select tributaries: Gonzales Slough, Bryant Canyon Channel, and San Lorenzo Creek (known as the Program Area). The Program Area is further broken down into seven River Management Units (RMUs) which were developed based on similar characteristics that are critical to the management of the resources. Designated Maintenance Areas within each RMU have been identified and permitted based on available data such as topography, flood flows and vegetation communities, and are the location where the work is concentrated.

¹ Melissa Duflock and Allan Clark of the RMU Association were invited but did not attend.

The MCWRA, RCDMC, and River Management Unit Association collectively help administer the SMP. The RCDMC also holds the Routine Maintenance Agreement permit from the California Department of Fish and Wildlife (CDFW) (under the Lake or Streambed Alteration Program and valid for a 10-year period) and oversees the required biological monitoring for the program. The MCWRA holds a Regional General Permit from the U.S. Army Corps of Engineers (Corps), which is valid for 5 years and will expire on November 15, 2021. In addition, the MCWRA has a Section 7 Biological Opinion from the U.S. Fish and Wildlife Service (USFWS), a Letter of Concurrence from the National Marine Fisheries Service, and a Water Quality Certification from the Central Coast Regional Water Quality Control Board, all valid for 10 years expiring at the end of 2025. A review of the effectiveness of the program will occur in 2021, to determine if any of these authorizations need to be modified.

Below is a summary of the SMP goals, objectives, measures, and lessons learned to date as well as information on future needs and how implementation of a habitat conservation plan may help alleviate current constraints within the Program Area.

SMP Objectives

The SMP Objectives (2014), are:

- Improve flood protection and channel capacity on the Salinas River mainstem and select tributaries (San Lorenzo Creek, Bryant Canyon Channel, and Gonzales Slough) under MCWRA authority to minimize the potential for flood damages to adjacent lands and infrastructure.
- Implement stream maintenance activities on the Salinas River mainstem and select tributaries in a timely, cost-effective and environmentally-sensitive manner.
- Develop an adaptable and sustainable program that can respond to changing environmental, maintenance, and regulatory conditions.
- Incorporate resource protection and mitigation measures.
- Reduce flood frequency to maintain agricultural viability and protect prime agricultural land that is important to the economy and food supply of Monterey County and the nation.

The objective of the SMP is not to restore the Salinas River to its historical condition, but to enhance key ecological and functional attributes through stream maintenance for flood risk reduction. Proposed maintenance activities recognize that the hydrology of the system has been impacted by dams, levees, and other encroachments, and that the ecology of the system has been modified from a large river and floodplain system supporting a mosaic of habitat types to a river confined by levees and farmlands and restricted to a small fraction of its historical floodplain.

SMP Implementation and Considerations for LTMP Integration

It is a goal of the LTMP to identify long-term solutions for management of the Salinas River that include flood reduction, water resource management, stream maintenance, and habitat management

for threatened and endangered species. As such, the LTMP will identify stream maintenance objectives and actions. With the intent that these objectives and actions be informed by experiences gained in developing and implementing the SMP, it is important to consider the effectiveness of SMP implementation to date, lessons learned, and if there are maintenance needs that are not currently supported by the SMP. The following sections provide a summary of this information.

Long-Term Effectiveness Assessment Reporting

A condition of the current SMP permits is to evaluate the effectiveness of the SMP in meeting its objectives related to vegetation and channel management goals. While the first Long-Term Effectiveness Assessment Report is not due until Spring 2021 (prior to permit re-authorization), MCWRA, RCDMC, and the River Management Unit Association have begun efforts to conduct the effectiveness assessment. The assessment will include the following categories.

- **Effectiveness:** pre- and post-maintenance topographic surveys of 10% of all secondary channels in all river management units, and shall use the survey data to determine how the Maintenance Areas are functioning and assess the sediment transport characteristics of the Maintenance Areas.
- **Design Verification:** analyze all flow events equal to or exceeding 25,450 cfs (5-year event), at Spreckels, to answer questions regarding Maintenance Area function, activation, and channel complexity.
- **Flood Reduction:** analyze all flow events equal to or exceeding 42,800 cfs, at Spreckels, to determine whether the Project achieves the anticipated flood reduction benefits.
- **Biological Functions:** collect and analyze information indicative of the Project's overall effect on beneficial uses and habitat function. Such as native plant recruitment, increased diversity of riparian habitat conditions, and wildlife movement.
- **Watershed Assessment:** collect and analyze information to assess the Project and its effects within the larger context of the Salinas River watershed in Monterey County, with the long-term goal of identifying implementation actions that optimize watershed health and function while also achieving MCWRA river management objectives.

Lessons Learned During Implementation

Through implementation, MCWRA, RCDMC, and the River Management Unit Association have identified a number of lessons learned. These are summarized below.

- Conducting stream maintenance activities as a program permittee comes with certain liabilities that should be considered.
- Landowner and participant coordination through the RMU Association was a great mechanism and should be carried forward in future revisions to the SMP.
- Channel conditions should be reviewed in the field with landowners and operators prior to each maintenance season,

- Project champions are a must to both see projects through to completion and to provide reminders of program successes.
- Because vegetation and sediment management activities within Maintenance Areas may cross multiple property lines or have implications for how flows affect adjacent parcels, coordination with neighbors is important.
- While it is good to have a longer-term permit (10 years vs. 5 year) that can be amended (multiple revisions already received, Amendments 1-3), the CDFW Routine Maintenance Agreement (RMA) is difficult to work under due to extensive pre- and post-project monitoring requirements that are costly and challenging for landowners to implement.
- Program implementation costs are very high for landowners and operators; primarily related to permit conditions and requirements, which can affect participation levels.

Program Implementation Challenges

The SMP includes activities that project proponents have generally not been able to implement due to various logistic and feasibility issues, including high costs for monitoring. These activities, together with the reasons for infeasibility (sub-bullets), are summarized below.

- Sediment management
 - expensive monitoring requirements/surveys before, during, and after work
 - limited stockpile locations due to the greater channel designation and restriction to remove sediment from neighboring parcels
- Relocating Maintenance Areas / adaptive management
 - CDFW permit restricts changes based on changing geomorphic conditions
 - Technical & Design Committee review/approval and regulatory re-authorizations if substantial change could be a long and expensive process
 - Timelines for approvals and communications with agencies limit changes on an annual basis
- Arundo removal beyond mitigation requirements
 - RWQCB monitoring requirements are onerous and may continue on for many years after the maintenance activities end
 - RCDMC's Salinas Watershed Invasive Non-Native Plant Control and Restoration Program is more user friendly and an option for most of the participants
 - Annual Work Plan approvals can be unpredictable and expensive
- Grading for new access to Maintenance Areas
 - archaeological surveys are required
 - CDFW prohibits any grading related to access into the river channel
 - RWQCB requires the abandonment of the access and restoration at end of permit
- Crossing low-flow channel

- Conservation releases/Flow Prescription for SVWP mean that the majority of the work seasons will have significant river flows at the sites and access near the low-flow channel is limited
- no temporary stream crossings allowed under permits making some sites inaccessible for many years
- Off-site mitigation banking
 - There are no existing banks or fee programs set up in the area that could be utilized for the impacts of the SMP
- Necessary abandonment of Maintenance Areas or mitigation without reaching performance criteria
- Required wildlife buffers for state species of concern reduce the ability to access or maintain certain areas

Activities Considered but Not Addressed in the Current SMP

During development of the SMP, certain activities or issues were considered but not addressed in the SMP due to various reasons. These activities and issues, summarized below, provide insight into Salinas River management needs and can inform the LMTP objectives and actions.

Other Maintenance Activities

- Off-channel detention/Overbank Flow Areas to achieve greater level of flood protection
- New Maintenance Areas (beyond the 129 identified areas)
- Streambank restoration/stabilization
- Work in low-flow channel (constricted channel areas) except for two Maintenance Areas
- Expanding the program area upstream of San Ardo and downstream of Highway 1, and into other tributaries (e.g., Arroyo Seco, Nacimiento, and San Antonio Rivers)
- Establishment of new infiltration areas for groundwater recharge
- Trash removal with heavy equipment

Implementation Needs and Approach

- Evapotranspiration studies to update water balance of river
- Better quality and updated vegetation maps to determine habitat value vs. so much field work for biologists
- Updated assessment of the ecological conditions of the system
- Establishment of a maintenance district that landowners could be assessed based on benefit

General Considerations

- How to deal with Corps jurisdiction at the renewal time (2021)?
 - Enbridge Decision will narrow Corps nexus for Section 7 consultations, potentially kicking out coverage for upland species and affects tied only to vegetation management
- Flood reduction benefits area very localized due to a patchwork of participating sites; how do we achieve a system benefit?

Potential Management Objectives and Actions for the LTMP to Address Stream Maintenance Needs

The following potential objectives and actions were drafted as an outcome of a Working Group meeting for the Salinas River SMP.

Objectives are targets that will be sought to achieve a given goal. Objectives are typically quantitative or at least measurable. Objectives describe a specific desired outcome.

Actions are specific activities that will be carried out to meet the associated objectives. Actions describe how objectives can be achieved.

Objective SMP-1. Establish an equitable funding mechanism for implementing stream maintenance activities that allocates cost of maintenance and associated mitigation across all beneficiaries.

Action SMP-1. Collaborate with the Salinas Valley Basin Sustainable Groundwater Agency (GSA) in development of the Salinas Valley Basin Groundwater Sustainability Plan (GSP) to ensure stream maintenance needs are incorporated in the GSP Measurable Objectives.

Objective SMP-2. Establish a geographic framework for the LTMP within which all river management planning and implementation will be considered, including—but not limited to—groundwater management, stream maintenance, conservation actions.

Action SMP-2. Expand the current SMP RMU designations to include the Lagoon, Arroyo Seco, and reaches of the Salinas River south (upstream) of the existing RMUs, including San Antonio and Nacimiento Rivers.

Objective SMP-3. Develop a practical and implementable (i.e., able to be permitted by the regulatory agencies) vegetation management program for the entire Salinas River main stem and select tributaries within the LTMP management area.

Action SMP-3. Work with the regulatory agencies to confirm information required to develop a vegetation management program that meets regulatory requirements. Once confirmed, identify funding opportunities to develop identified information.

Action SMP-4. Conduct a site visit with members of each regulatory agency, discussing the key vegetation management needs, identifying differences between each RMU, and how the conditions of the river have changed since reservoir construction.

Action SMP-5. Collaborate with organizations and agencies conducting vegetation management throughout the Salinas River watershed (including in San Luis Obispo County) on a cohesive approach to vegetation management, focused on invasive plant management.

Action SMP-6. Compile and organize information on vegetation management into a program document. Include an analysis of how the vegetation management program will affect regulated natural resources and water quality.

Action SMP-7. Develop a mitigation strategy that minimizes the short-term adverse impacts of a management action and takes into account the long-term benefits of those actions on regulated resources, ecological processes, and flood risk reduction.

Action SMP-8. Conduct research to inform what is the “natural” state of the Salinas River, particularly after removal of extensive stands of invasive vegetation, including how sandbars shift during high flows. Use the results of the research to inform adaptive management under the vegetation management program.

Action SMP-9. Conduct outreach to landowners along the Salinas River mainstem and select tributaries to educate them on the benefits of the vegetation management program and increase participation.

Objective SMP-4. Develop a floodwater management program focused on reducing erosion and flooding.

Action SMP-10. Investigate the potential for flow attenuation by retaining floodflows upstream of the Lagoon during storm events greater than a 5-year return interval. Investigation should consider establishment or enhancement of on- or off-channel groundwater percolation zones for percolation of floodwater into the groundwater basin. For off-channel sites, investigation should also consider the potential adverse effects of retaining surface flows, such as introduction of weed seed to new sites, degradation or loss of topsoil, restrictions on producing food crops following flooding, and changing the chemistry of flooded soils.

Action SMP-11. Include guidance on managing debris, both natural (e.g., fallen trees) and man-made (e.g., shopping carts, telephone poles, tires), to enhance in-channel habitat conditions and improve flow capacity.

Action SMP-12. Develop a suite of voluntary bioengineered bank stabilization designs and accompanying guidance on the appropriate use of each design that considers site conditions and constraints. Guidance will include information if hydraulic analysis is necessary for each design. Designs will be applicable to a range of conditions encountered within the management area.