

WA APPROACH WORK PLAN
SONOMA COUNTY SALMONID COALITION
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Watershed Approach Work Plan Sonoma County Salmonid Coalition Streams

Background:

The Sonoma County Salmonid Coalition was formed to protect and restore salmonids and their habitat in the Alexander, Dry Creek and Knights Valleys of the Russian River Watershed, and to create sustainable partnerships that allow property owners, public agencies and conservation groups the ability to contribute to these efforts while balancing the need to provide for regional economic viability and regulatory certainty.

Watershed Approach:

The central goal is to develop a Watershed approach projects to restore ecological flows for salmonids and provide increased water security for rural agriculture.

Attributes of a Watershed Approach

The Watershed Approach is a collaborative process that allows water users to effectively manage the water resources of a watershed by maximizing the beneficial use of water while protecting the environment and public trust resources. The purpose of the Salmonid Coalition plan is to establish water management solutions to improve water supply reliability and maintain instream flows for fish.

Traditionally, water policies in California have offered little flexibility or opportunity to share costs or benefits of appropriations among water users. Given the opportunity to coordinate their water management, water users could develop physical and management oriented solutions to stream flow problems and take joint actions to improve habitat where beneficial in the watershed. The Watershed Approach provides this opportunity.

The proposed Salmonid Coalition Watershed Approach would include, but is not limited to:

- Landowner leadership and collaboration in water use management (e.g., construction of storage and coordination of diversion schedules to maintain instream flows through the drainage network).
- Collaborative development of watershed specific language to establish targeted new measurements and stream flow objectives that incorporates best available science.
- Providing water users a cost effective and reliable way to meet their needs.
- Providing protection for aquatic species dependent upon instream flows.
- Providing conservation actions and management practices that are watershed and stream specific.
- Identifying data gaps and establishing a framework for securing additional data.
- Developing the process for permitting the Watershed Approach and its elements (e.g., off-stream reservoirs and water rights).
- Recognition of the need to develop a plan that meets inter-agency requirements and landowner needs for regulatory certainty and permitting, including measures to

mitigate, minimize or avoid impacts to biotic resources, consistent with the California Environmental Quality Act (CEQA), the California Endangered Species Act (CESA), and the Endangered Species Act (ESA).

The Watershed Approach builds on existing research, analysis, and experience of stakeholders in a collaborative fashion to seek credible, legitimate, and durable outcomes. A subcommittee is assembling existing data on the Salmonid Coalition streams to identify and begin analysis for pilot projects based on several criteria, including (1) feasibility of salmonid restoration, using NMFS and CDFG documents,¹ (2) degree of stream and estuary habitat impairment by diminishing flows, and (3) the extent of landowner interest in collaboration.

Work Plan

The Salmonid Coalition, and AB 2121 water group stakeholders and water users and landowners within Alexander, Dry Creek and Knights Valleys will engage in a three-part work plan: (1) perform a regional analysis to identify particular watersheds where the Watershed Approach will be most beneficial for meeting instream and agricultural water needs; (2) share analyses with water users to discuss most beneficial locations for action; and (3) develop a Project Charter to specifically identify the means through which water will be managed in the watershed to meet agricultural needs and maintain instream flows.

Task I: Regional-scale analysis to identify locations where a Watershed Approach would most benefit instream flows and fish

Perform regional-scale analyses described below using a spatially explicit GIS (Geographic Information System) model developed by Dr. Adina Merenlender's research and extension group. The GIS integrates spatial information across broad regions, and most of the tools for these analyses have been developed to address water management in Alexander, Knights, and Dry Creek Valleys in the Russian River Watershed.

- Identify the specific watersheds within the three valleys in which the regional-scale analyses will be conducted. Stream attributes for the analysis will include: water quality, water quantity, substrate quality, access to historic salmon habitat, channel complexity, and riparian quality.
- Use NMFS and DFG data, including NMFS *Draft Habitat Restoration and Conservation Plan for Anadromous Salmonid Habitat in Selected Tributaries of the Russian River Basin* to determine the historical distribution and current habitat status for salmonids throughout the study area, and build these into the GIS. Consult with NMFS and/or DFG and landowners about habitat conditions and streamflow to complement data.
- Use other data sources (e.g., CalFish Passage Assessment Database) to determine the extent of other protection measures necessary for restoring salmonids, such as screening of diversions and removal of migration barriers.

¹ California Department of Fish and Game Stream Inventory Reports, National Marine Fisheries Service Habitat Restoration and Conservation Plan for Anadromous Salmonid Habitat in Selected Tributaries of the Russian River Basin

- Use GIS tools to calculate the cumulative agricultural demand for water during the growing season. This will be implemented in consultation with private landowners.
- Identify and quantify the methods that growers use to obtain water across the growing season, and map these into the GIS. This will include using GIS to map cumulative impacts of water rights (diversions and storage) and cumulative impacts of reservoirs through streams in the region; and to identify locations of wells in the region.
- Use GIS tools to estimate unimpaired daily-scale streamflow and annual discharge through the entire study area drainage network by scaling streamflow from the nearest USGS gauge with more than 10 years record by catchment area and precipitation (as per §A.5.2.1). These analyses will incorporate streamflow data from a median-discharge year (a normal-type year), and a lower-quartile discharge year (a dry-type year).
- Calculate values to unimpaired flow rate, duration, and depth for important salmonid life history stages using GIS for key points along the streams in the region.

Task 2: Participation

Present results of preliminary regional analyses to water users in the area and invite participation from a coalition of water users in streams most likely to benefit from a Watershed Approach to maximize beneficial uses and instream flows.

- Identify water users within candidate watersheds and consult with them to (a) determine their needs and their level and type of interest, and (b) familiarize them with the Watershed Approach and GIS model.

Task 3: Watershed-specific analysis to develop Watershed Management Plan/Project Charter

The development of a Management Plan/Project Charter will require time intensive, on-the-ground planning and studies to describe specific ecosystem and grower needs, scenarios of actions necessary to maintain these needs, and the specific management measures that will achieve all objectives. These on-the-ground data will inform more detailed GIS analyses for the selected project watersheds.

- Select watersheds for Task 3 based upon results of Task 1 and Task 2.
- Conduct on-the-ground studies to determine the extent of habitat and instream flow needs for salmonids and salmonid habitat (including but not limited to the flow required for salmonids to migrate upstream) in many reaches in the watershed. The site-specific studies shall be conducted by a qualified fisheries biologist (as per §12.3.1)
- Install streamflow gauges (using stage-monitoring devices and regular streamflow measurements) at several points in the drainage network to determine (1) the flow regime at different points in the watershed, and (2) the frequencies and durations of instream flows at each location. These data will be incorporated into the GIS to better inform streamflow scaling relationships through the drainage network (to inform management as per §12.3.2).

- Create improved GIS model depictions of cumulative water demand and impacts of reservoirs through the drainage network, incorporating specific needs associated with viticulture for each grower (e.g., actual irrigation need per acre and frost protection needs) and actual reservoir volumes.
- Work with growers to propose possible locations where water management actions may be taken to meet watershed needs (e.g., possible locations for reservoirs, locations for diversion), and place proposed locations into the GIS.
- Re-run the cumulative water demand model to determine how proposed actions would mitigate cumulative water demand during the growing season (thus alleviating pressures placed on instream flows in spring and summer).
- Re-run the GIS model to determine how proposed reservoirs and diversions affect streamflow through the drainage network (at daily and annual scales for a normal- and dry-type year, as described above, as per §A.5.11)
- Evaluate these impacts to hydrology relative to:
 - effects on senior right holders (as per §§ A.5.4 - A.5.6)
 - effects on instream flows, with particular attention to regional criteria and watershed-specific needs (§§A5.7, A.5.8)
- Evaluate additional actions that might be taken to increase stream habitat value, such as removing barriers and increasing riparian shading.

Proposed staffing/assistance: Coordination by the Salmon Coalition (Marc Kelley and Carolyn Wasem, staff) in a collaborative effort with NOAA Fisheries Contractor (Bob Pagliuco), DFG (Eric Larson and Scott Wilson), CEMAR (Dr. Matt Deitch, Gordon Becker), some watershed match will likely be required, UC Berkeley/UC Cooperative Extension(Dr. Adina Merenlender), Regional Water Quality Control Board (Bob Klamt), TU (Brian Johnson and Mary Ann King), Sonoma County Farm Bureau (Lex McCorvey), Sonoma County Winegrape Commission (Nick Frey), Santa Rosa Board of Public Utilities (David Smith), water rights attorney (Peter Kiel) United Winegrowers (Bob Anderson) and a water rights engineer.

The BMPs to be recommended by NOAA Fisheries and DFG may serve as the foundation for the land use and water management measures. These measures should be developed in consideration of the specific opportunities and constraints available in each watershed and for the applicable regulatory requirements described below.

The Plan will also state how the proposed management measures are designed to accomplish specific regulatory permitting needs, particularly for the Endangered Species Act, California Fish and Game requirements including CESA and Fish and Game Code 1600, Regional Water Quality Control Board water quality requirements, and possibly others. Obtaining regulatory assurances and certainty are appropriate goals to include in the Management Plan.

Task 4: Develop Watershed Management Plan

The Salmonid Coalition will develop a coordinated Water Resources Watershed Management Plan that details a process for operation, maintenance, and monitoring water use, as well as detailing the monitoring, reporting, activities (such as BMPs, habitat improvements) and implementation schedule for achieving project objectives. It will also include management

practices developed in consultation with private landowners that protect fisheries needs and are land use specific (NOAA Fisheries is developing practices for the group at this time).

Task 5: Draft Regulatory Approvals and Assurances Process

The Salmonid Coalition will continue to work with regulatory agencies, including NOAA Fisheries, US Army Corps of Engineers, Department of Fish and Game, California Water Resource Control Board, and the North Coast Regional Water Quality Control Board to obtain regulatory approvals, assurances and/or permits under the ESA and CESA and state and federal water quality laws and regulations, including an incidental take statement and consistency determination, and to obtain funding for watershed improvement activities.