

Grant Proposal
WaterSMART Cooperative Watershed Management Program 2012

Expansion of the Ventura River Watershed Council



Ojai Valley Land Conservancy

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Technical Proposal

Eligibility

The mission of the Ventura River Watershed Council is to facilitate and support efforts by individuals, agencies and organizations to maintain and improve the health and sustainability of the Ventura River watershed.

The Ojai Valley Land Conservancy (OVLC), a 25-year old non-profit organization in Ojai, California, is applying for this grant on behalf of the Ventura River Watershed Council (Watershed Council). The OVLC is a non-regulatory legal entity incorporated in the state of California.

The Watershed Council was launched in 2006, primarily as part of an effort to develop an Integrated Regional Water Management Plan (IRWMP) covering Ventura County's three primary watersheds, the Ventura River, Calleguas Creek and Santa Clara River. Having projects in an approved IRWMP qualifies them for California state bond funding, so a regional group, the Watersheds Coalition of Ventura County (WCVC), was established to prepare a regional plan for Ventura County. In the first five years of its existence, the Watershed Council was organized by the project manager for WCVC, and much of the work of the group revolved around development of the IRWMP and pursuing subsequent project funding opportunities.

Reference to the Watershed Council's origins can be found on the [Watershed's Coalition of Ventura County website](#), which hosted the Council's information before the watershed coordinator was hired.

This was a good start for the Watershed Council, but the IRWM planning process has only limited application. Because the costs to apply for and administer the bond-related grants are so high, the state grant process can only be justified by very large projects. Of the three Ventura County watersheds, the Ventura River watershed has received the lowest percent of state bond funding. In the most recent round of funding through the IRWM process, Proposition 84, the Ventura River watershed received only three percent of total funding in the county. In addition, the funding to develop the IRWMP did not allow for extensive stakeholder involvement, and as a result could only take a fairly cursory look at the water resource challenges in the Ventura River watershed.

In the fall of 2011, the Watershed Council took a step to increase the watershed's planning effectiveness and hired, with the support of the OVLC as the host organization, a watershed coordinator. A three-year grant, with matching funds from local entities, pays for the coordinator's salary and basic overhead. The coordinator serves as staff to the Watershed Council and is tasked with developing a watershed management plan.

The preliminary focus of the watershed coordinator was to help the Watershed Council build its organizational identity and give it a stronger foundation. The Watershed Council adopted a mission statement and a logo, and a preliminary website was established offering basic information about the Watershed Council and the watershed. A governing charter that outlines the consensus-based decision-making protocols of the group was also approved. The new charter established a Leadership Committee within the Watershed Council to ensure broad and balanced stakeholder representation, and in developing the Leadership Committee, key under-represented stakeholders—agriculture and business (oil extraction)—were successfully brought on board.

The Watershed Council has worked hard since 2006 to put these foundational pieces in place for establishment of a watershed group, and is now well positioned to undertake a comprehensive, stakeholder-driven process to expand the watershed group and develop a comprehensive watershed management plan to promote sustainable use of water resources in the watershed.

The final, and very important, need, however, is for funding for the outreach component of this effort, and to provide the technical and administrative support typical of a comprehensive watershed plan development process. The watershed coordinator's time is consumed largely with Watershed Council coordination; there is little time and no budget for technical consultants, map developers, brochure and outreach material development, and other needs. Funding for these final needs will leverage the significant efforts already in place, and help to catalyze the Watershed Council's potential into a useful process and product for watershed management in the Ventura River watershed.

Goals

The goals of the Watershed Council, as outlined in a recently adopted charter (as objectives), include the following:

1. Collaborate on the development of a comprehensive, integrated watershed management plan to guide watershed priorities and implementation strategies.
2. Facilitate communication between public, private, and nonprofit stakeholders.
3. Provide a forum for collecting, sharing, and analyzing information about, and creatively responding to, watershed issues.
4. Refine understanding—among Council members, decision-makers, and the general public—of the watershed's conditions, processes, interrelationships, and challenges from a variety of perspectives, including scientific, cultural, economic, regulatory, and more.
5. Identify opportunities for Council members to leverage resources and work together toward common goals.
6. Serve as a subcommittee of the Watersheds Coalition of Ventura County and a contributor to the Ventura County Integrated Regional Water Management Plan.
7. Promote the priorities and projects of the watershed management plan to local, state, and federal officials.
8. Seek funding and other support to implement priority watershed management projects.
9. Monitor the effectiveness of, and regularly update, the watershed management plan.
10. Facilitate coordination of watershed education activities.

Of primary interest to the Watershed Council currently, while the watershed coordinator is available to coordinate the effort, is the goal of developing a watershed management plan.

The Watershed Council has approved the following interim list of goals for the watershed management plan:

1. **Enough local water:** Surface water and groundwater of a sufficient quantity and rate of flow to maintain independence from imported water and reliably support ecosystem and human needs in the watershed.
2. **Clean water:** Surface water and groundwater of sufficient quality to meet regulatory requirements and support ecosystem and human needs in the watershed.
3. **Smart flood protection:** Effective flood management that integrates with natural watershed hydrology and water supply goals.
4. **Healthy ecosystems:** Healthy aquatic and terrestrial ecosystem structures, functions, and processes that support a diversity of native habitats and a more natural watershed hydrology.
5. **Nature-based refuge and recreation:** Ample opportunities for the public to enjoy nature.
6. **Smart use of land and resources:** Use of land and resources in a manner that supports human

needs and social goals, and is compatible with healthy ecosystem goals.

7. **Preparedness and adaptability:** Watershed management that looks ahead, thinks creatively, and is able to respond quickly to new information, change, and crisis.
8. **Engaged citizens:** Ample opportunities for citizens to learn about the watershed and contribute to its well-being.

Why Us?

The Ventura River watershed is remarkable. We are a relatively small coastal watershed about an hour north of Los Angeles. Unlike most all of our neighbors in southern California, we truly depend upon our watershed to “shed” water; all we get is the water that falls from the sky above us.

Half of our watershed is in relatively pristine U.S. Forest Service land and our headwaters are in a designated Wilderness Area. Development in the watershed has been constrained because our dramatic, towering coastal mountains also happen to trap smog; so air quality regulations have severely hampered rampant growth. It is a truly beautiful place, a rare gem in southern California. We certainly have significant problems, which is why we are pursuing this funding, but how often do we have the opportunity to protect an ecosystem that is still relatively intact?

The small scale of our watershed means that people know each other; it has the intimate scale at which people do not stop caring. People love this watershed; it feels like “theirs,” and they demonstrate a willingness to actively protect it.

A \$50,000 grant is not a big grant, as watershed planning efforts go, but in our watershed, that money can actually do something significant. We have an established Watershed Council with a reputation for getting along; we have an experienced watershed coordinator in place; and our agency representatives are approachable and willing to help. With a small infusion of funds for an operating budget, we can and will produce results.

As Lisa Brenneis, a local farmer with Churchill Orchard, who wrote a support letter for this grant stated in her letter, “We’re a small, self-reliant system and our tremendous efforts to maintain a healthy and useable watershed are often overshadowed by bigger neighboring watersheds, all dependent upon the massive state water project.” The collaborative conservation efforts that we implement in our precious watershed to better manage water resources and improve water quality and ecological resilience can be used as a model for other watershed groups throughout the Nation.

Approach

Consultant Support

The first goal is to obtain additional funding for technical and administrative assistance for the development of the watershed management plan. As indicated above in the *Eligibility* section, a three-year grant with matching funds is used to pay for the watershed coordinator’s salary and basic overhead. This funding covers only one paid staff member assigned to the Watershed Council. The watershed coordinator plans and facilitates the Watershed Council meetings, prepares detailed meeting summaries, writes regular e-newsletters to the Council, writes the content for the website, serves as an information clearinghouse for the watershed, and helps respond to current issues—such as scheduling special meetings to address pending water quality regulations, responding to concerns of residents, and helping stakeholders apply for project funding. Therefore, only part of her time is available for the major task of developing a watershed management plan.

The coordinator relies on limited volunteer assistance for minor tasks, which is not a suitable or sustainable method for researching and writing a major resource management document. Contractor

services are needed to assist the coordinator with website support, GIS services, research and editing, transcribing meetings, and graphic design and video editing.

Information Gathering

The watershed coordinator has begun a preliminary inventory and electronic compilation of existing reports, plans, ordinances and other data and documents relevant to the watershed for development of a watershed management plan. There are certain issue areas where existing data is lacking or where more effort is needed for accessing important data. Some of these issue areas include local, state and federal policies and regulations; biological resource assessments; watershed-specific demographic information; and data on climate change vulnerabilities (such as risks from major fires, floods and droughts).

Additionally, a significant amount of information gathering and compiling will be needed to establish baselines from which the success of watershed management objectives can be measured. These data include items such as existing baseline water quality data for various constituents, existing miles of trails and existing acres of protected open space. Finally, in order to develop maps to convey and analyze various watershed issues, spatial data needs to be obtained and compiled. These various data will be gathered and compiled.

Outreach

Students, residents, policy makers and other interested English and Spanish-speaking community members do not now have ready access to current, factual, comprehensive, and easy-to-understand information about the watershed. The existing reports that provide information about the watershed are written in very technical terms and are not geared for the general public. Without ready access to understandable information, stakeholders are unable to develop an appreciation for the need to conserve water resources, and to protect water quality and habitat.

Our approach to outreach will be to bring the technical explanations to the public in terms they can understand, using media that are relevant to the times. We will aim to inspire individual action and stewardship, and to encourage engagement in the process to plan their watershed's future. Our approach to reaching out to and educating watershed stakeholders and establishing a broader-based membership will include the following components.

Watershed Atlas: A diverse collection of 20 watershed maps will be developed in an engaging cartographic style focused on making the information interesting and understandable by non-technical viewers. Photos will be integrated with colorful maps to bring the information alive, and engaging narrative will describe the essential messages of each map. These maps will be integrated into outreach materials, including on the Watershed Council website, in brochures, and in presentations. Large-format versions of the maps will be used at stakeholder meetings. The watershed coordinator has already compiled a significant collection of resource documents that can be used for map development. Additional data layers will be compiled as well as created. In addition to creating display maps, the GIS consultant will use the various spatial analytical tools to run queries and help develop new analyses and statistics relative to the watershed. The maps in the watershed atlas will allow the community to learn about their watershed and take appropriate actions to preserve and protect it. The watershed atlas can also be used as model for mapping watershed related information for other communities.

Timing: Development of the watershed atlas will begin immediately, as maps are needed to address issues in specific stakeholder and technical meetings, and other outreach and educational venues. Twelve of the needed maps will be completed in Year 1. The final eight maps will be completed in

Year 2, and will be included in the watershed management plan. Data compilation, development and analysis will be contributed by the GIS consultant throughout the project.

Website and Video: A preliminary website has been established, but unfortunately due to lack of funding, it remains static and is not regularly updated. A redesign of the site is needed to build active participation by the community. With additional funding, the website will be expanded to include more detailed information about the watershed, its processes, and key management issues, and to increase the interactivity of the site. Given that video has become such a popular and well-used medium to convey information, we plan to provide as much educational information as possible through video clips on the website. Video will be used to provide a virtual tour of the watershed, to offer visual information about particular issues, and to offer instruction tutorials. We will use video to profile the actions of individuals and their projects that help the watershed; and post those videos online for others to learn from. Relevant video clips could also be integrated into a digital version of the watershed management plan. The website will be updated on a regular basis and will feature an up-to-date calendar of events, links to information about current watershed management plan development issues, maps, and a media library. The information in the website will also provide actions that the community can take to preserve and protect their watershed, thereby serving as an educational forum and community involvement tool.

Timing: A redesign of the existing website will occur within the first six months of Year 1 in order to fix existing problems and add more functionality and a better interface. After this is completed, the focus will be on increasing the content of the site and its usability and relevance to our target audience. Content will be added on an ongoing basis for the remaining of the project. Video clips will be created as opportunities arise in the field and as educational or instructional content is needed for technical advisory and stakeholder meetings. Existing video clips will also be compiled and posted on the site. A preliminary video library will be in place by the end of Year 1.

Watershed Brochures: A brochure will be developed that describes the Watershed Council, the Ventura River watershed and its primary management issues, and the process underway to develop a watershed management plan. Colorful illustrations, maps and photos will be used, along with clear and non-technical language, to help explain issues in simple terms. The brochure will be distributed via direct mailings, at exhibits, stakeholders meetings, and other venues. Another brochure will be developed that describes the actual watershed management plan, communicates the plan information and provides education on steps to take to implement the plan. The brochures will be used to get the community involved in their watershed and provide education on actions that they can take to protect and preserve their water.

Timing: A watershed overview brochure will be created within the first eight months of Year 1. The final watershed management plan brochure will be created in the last two months of Year 2.

Stakeholder Outreach/Meetings: There are several important sectors of the watershed that remain poorly represented on the Watershed Council. One very important sector is agriculture, which is a big user of water in the watershed, and represents an essential part of the watershed's cultural identity, not to mention its local economy. Although the Farm Bureau is a regular participant, we have not benefited from the voices and contribution of actual farmers. Other important stakeholders who need to be engaged in the watershed planning process include local businesses, landowners along the river and primary tributaries, members of a largely Spanish-speaking community, horse and livestock owners, and the elderly.

Outreach to these sectors will occur in the form of direct mail and targeted stakeholder meetings. Interested stakeholders will be added to the Watershed Council email distribution list, and will then receive the regular communications sent out by the watershed coordinator, including meeting

announcements. The ability to develop outreach materials—including materials translated into Spanish—advertise meetings, and provide refreshments will help facilitate effective and well-attended meetings. Stakeholder meetings will provide opportunities to speak directly with community members and learn from them and hear their concerns.

Timing: A stakeholder meeting for farmers and two other stakeholder meetings will be held in Year 1, and three stakeholder meetings, including the meeting for the Spanish-speaking community, will be held in Year 2.

Assessing Watershed Issues and Needs and Developing a Management Plan

Development of a watershed management plan, including priority actions and projects, is already part of the watershed coordinator’s work program, as is seeking the funding to help accomplish that task. This is an explicit priority for the Watershed Council.

A general approach is laid out here, however, these comprehensive regional stakeholder processes, dependent upon so many external factors, necessarily require some flexibility to adaptively respond as circumstances present themselves and the process unfolds. Such things as the schedules of needed technical experts, the ability to secure meeting rooms, unexpected responses from stakeholders, undesirable media attention, as well as unforeseen opportunities must be accommodated in these processes.

The general strategy to assess the watershed’s issues and needs, and then to develop a watershed management plan is expected to include the following basic steps:

1. **Define methodology.** The watershed coordinator will work with the Water Council to select a methodology that will help the group define a comprehensive vision of the watershed and determine where the Watershed Council can most effectively contribute and collaborate. A methodology will be sought that provides a relatively objective and transparent system for prioritizing threats, obstacles, objectives and proposed actions.

Timing: This step will take place within the first three months of Year 1.

2. **Use the methodology to assess and rank.** Identify, in more precise terms, the specific targets associated with each goal; identify the critical threats or obstacles; rank those threats and obstacles; developing objectives and specific actions to address the highest ranking threats and obstacles; and measuring success of the objectives. A modified version of The Nature Conservancy’s well-researched “Conservation Action Planning” methodology is being investigated. Use of a methodology such as this should help build an adaptive management framework that can guide the group’s efforts in the watershed into the future.

Timing: This step could take considerable time, as this is where the group must agree on issues where opinions are most likely to differ, and because the process of selecting precise targets, thinking through the real threats, and defining and prioritizing appropriate actions and projects simply takes time. Many meetings will be involved. This step will be completed within Year 1.

3. **Develop baseline watershed data/characterization.** A preliminary characterization of the watershed, and the issues surrounding the different watershed goals, will be developed. The characterization will include maps, charts and as much baseline data as possible to support the above-described analysis of the different watershed goals.

Timing: This step runs concurrent with the previous step, as baseline data and the watershed characterization are needed to inform the assessment process. This step will be 70 percent completed in Year 1. As our understanding of the watershed and its interdependent relationships

evolves, the characterization will become more nuanced and more maps to convey those relationships will be developed. The final 30 percent will be completed in Year 2.

4. **Hold technical advisory meetings.** Once a methodology is approved, separate, small technical advisory teams, composed of key stakeholders and technical experts, will be formed to work through the methodology for each goal. This will take multiple meetings.

Timing: This step also runs concurrent with step number 2, and will be completed in Year 1.

5. **Draft goal-specific Action Plans.** The technical advisory teams will each develop a preliminary “Action Plan,” which describes, in spreadsheet format and narrative, each goal’s key targets, threats/obstacles, objectives, specific actions, and success measures. Each Action plan will be brought back to the larger Watershed Council for input and will be revised as appropriate.

Timing: This step will be completed in the second half of Year 1.

6. **Stakeholder input.** Preliminary input will then be sought from the larger stakeholder community on the draft Action Plans, which will then be revised as appropriate.

Timing: This step will be completed in the second half of the Year 1.

7. **Develop draft Watershed Management Plan.** The individual Action Plans will be combined, along with the watershed characterization, into a draft Watershed Management Plan.

Timing: This step will be completed in the first half of Year 2.

8. **Stakeholder input.** The draft Watershed Management Plan will be circulated to stakeholders, and a special public workshop will be held to explain the contents of the plan and take public comments.

Timing: This step will be completed in the second half of Year 2.

9. **Develop final Watershed Management Plan.** The draft Watershed Management Plan will be revised based upon public comments, and a final plan produced.

Timing: This step will be completed in the second half of Year 2.

10. **Public meeting on final Watershed Management Plan.** A public meeting will be held to communicate the final Watershed Management Plan and discuss implementation of the plan. A summary brochure on the plan will be distributed.

Timing: This step will be completed in the second half of Year 2.

Final Report

The watershed coordinator will submit a final report summarizing the accomplishments of the Council.

Completion Date

This project, including the development of a watershed management plan, is expected to take approximately two years to complete, with an expected completion date of October of 2014.

Watershed Background Data

This section provides a general characterization of the watershed; the critical watershed management issues are outlined in the *Addressing Critical Watershed Needs* section.

Location and Size

The Ventura River watershed, the smallest of Ventura County’s three major watersheds, describes an 8-digit hydrological unit covering a fan-shaped area of about 229 square miles. The Ventura River watershed, like the county’s other major watersheds—Santa Clara River and Calleguas

Creek—ultimately drains to the Pacific Ocean. The figures below provide a vicinity map for the Ventura River Watershed and a detailed map of the watershed.



The Ventura River has a relatively steep gradient, ranging from 40 ft. per mile at the mouth to 90 ft. per mile at the headwaters, so when it does rain the precious water runs off fast. This is also why the watershed is known for some major historic floods. In the flood of 1992, water volumes in the river increased over 400 percent in three hours, washing recreational vehicles out to sea and necessitating many rescues by helicopter.

The watershed is characterized by a Mediterranean climate with mild, moist winters and moderately warm, generally rainless summers. Rain generally occurs between October and March with 75 percent of the runoff occurring from January through April.

Water Sources and Uses

The main Ventura River valley runs north-south from the Pacific Ocean to the Topa Topa Mountains and several side valleys drained by tributaries of the river funnel into the main basin from the east and west. Major tributaries include Matilija Creek, North Fork Matilija Creek, San

Antonio Creek, and Canada Larga. The Ventura River flows for about 16 miles from its formation at the confluence of Matilija Creek and the North Fork of Matilija Creek to the Pacific Ocean.

Unlike most watersheds in southern California, **no imported water** is used; residents rely 100 percent on local water supplies. Lake Casitas, fed by diverted Ventura River water and Coyote Creek, is the primary supply of water in the watershed. Built by the U.S. Bureau of Reclamation (Bureau) in 1959 to improve water supply reliability in the region, this reservoir represents the third and last of three large-scale federal water projects in the region. These “seacoast projects” were intended to capture seasonal floodwaters that would otherwise “waste to the sea.” In the initial sizing of the reservoir, the Bureau aimed for an adequate water supply based upon the longest period of drought on record. The reservoir has a surface water storage volume of 250,000 acre-feet, and took approximately 20 years to initially fill to maximum capacity.

Casitas Municipal Water District supplies irrigation water to approximately 5,613 irrigable acres of land, and municipal and industrial water to approximately 68,560 users both within the watershed and to areas of the city of Ventura outside of the watershed. The city of Ventura also diverts surface and subsurface water directly from the Ventura River.

The watershed has a second water reservoir, the Matilija Reservoir, built on Matilija Creek by the U.S. Army Corps of Engineers (USACE) in 1947 to help with water supply for agriculture, and to provide limited flood control. However, sediment from the highly erosive mountains above the dam filled the reservoir, and it no longer functions as an important source of water supply. The original storage capacity of the dam and reservoir was 7,020 acre feet, but siltation, as well as some structural modifications to address concrete deterioration, have reduced the water storage capacity to less than 500 acre feet at present—less than 10 percent of its original capacity. There is now public support for removal of the dam. The dam has also altered the flow of sediment downstream, thereby diminishing the amount of sand replenishing local beaches.

Groundwater, provided by individual wells or small water companies, is another important water source in the watershed, especially for farmers. Many farmers and small water districts rely on groundwater until supplies run dry and then use Lake Casitas water as their backup. The watershed has five groundwater basins. The Upper Ventura River basin, which runs along the Ventura River, is another important groundwater basin. This is a shallow basin made up of alluvial material that is quickly recharged and depleted and is highly interconnected with surface flows in the river. Water levels in this basin decline and rise fairly readily in response to dry and wet periods. The primary source of recharge is direct infiltration of precipitation. Because of the shallow nature of these basins, and the quickness with which they drain without regular rainfall, arrangements are in place between Casitas MWD and smaller water districts and local pumpers which allow these smaller users to switch from groundwater to Lake Casitas water when their wells run dry.

There is no use of reclaimed water in the watershed. One wastewater treatment plant serves the watershed, and its effluent is discharged to the Ventura River. This water provides year-round flows supportive for the endangered southern California steelhead. The city of Ventura owns rights to the treated effluent.

Agriculture, one of watershed’s major industries, is a significant user of water. Coarse estimates indicate agriculture may represent 35 percent of demand, and municipal and industrial 65 percent. An accurate understanding of water use by sector, or of the watershed’s safe or sustainable yield, does not exist because of important data gaps, especially data about groundwater withdrawals. This is discussed in more detail in the *Addressing Critical Watershed Needs* section.

Precipitation varies widely in the watershed. Most occurs as rainfall during just a few storms, between November and March. Summer and fall months are typically dry. Mean annual precipitation near the mouth of the Ventura River is about 15.5 inches. The higher mountains receive about 40 inches and the average amount for the watershed is about 22 inches.

As the U.S. Bureau of Reclamation stated in its 1953 feasibility study of the area, prior to construction of the Casitas Reservoir, “Runoff from stream in the Ventura River Basin is derived almost entirely from rainfall, consequently exhibits the same monthly and seasonal variations as the rainfall. Since there is no accumulation of snow in the watershed, all streams diminish fairly rapidly in flow at the conclusion of the rainfall season. Small summer flows are maintained in the upper reaches of the larger watersheds by springs.”

The Ventura River is a highly fluctuating, intermittent stream, running usually only in the wet winter months, except for below the wastewater treatment plant, which runs year-round due to discharges of treated effluent. The annual unimpaired runoff for the Ventura River watershed, as measured between 1930 and 2005, varied from a low of 1,602 acre feet in water year 1961 to a high of 277,300 acre feet in water year 1995. The mean, or average, annual unimpaired runoff is 47,596 acre-feet, but this in no way represents a typical rain year. This “average” number is skewed because of a few extremely larger runoff years. The median, or middle value, annual unimpaired runoff is 18,116 acre-feet, a number more closely approaching “typical” in our atypical system.

Development

Much of the land in the Ventura River watershed is relatively undeveloped, offering an exceedingly rare opportunity to protect a relatively intact system. The northern half of the watershed lies within the Los Padres National Forest, with much of the Matilija Creek subwatershed (the actual beginnings of Ventura River) protected in a legislatively-designated wilderness area; and development in the southern half of the watershed has been tempered by air quality and land use regulations, and by a scarcity of water.

Urban areas in the watershed include the city of Ojai; the communities of Meiners Oaks, Mira Monte, Oak View, Live Oak Acres, Casitas Springs, and Matilija Canyon; part of Upper Ojai; and part of the city of Ventura. The watershed’s most densely urbanized area is in the city of Ventura near the coast, an area known locally as “the Avenue.” The greatest development pressure comes from the areas of land within the city of Ventura, and in the sphere of influence of the city. The current estimate of population in the watershed is 43,000.

A large area of land in the lower watershed, straddling the Ventura River and surrounding foothills and very visible from the watershed’s key highway, is covered with drilling pads, drilling rigs, and a dense network of dirt roads that serve oil extraction operations.

The Ventura River watershed is also blessed with considerable open space in the form of agricultural orchards and fields. This agriculture, such an important part of our cultural heritage, balances precariously on the watershed’s fragile water supply system. And, like communities across the nation, the watershed is faced with compliance with water quality regulations, the price tag of which, especially relative to the threat, is astronomical.

Water Quality

The most egregious surface water quality problem in the watershed is that of nutrient pollution. Mean nitrate and phosphate levels often exceed the limits recommended by the U.S. Environmental Protection Agency at many sampling sites. With nitrate, the most serious problems are seen in two distinct zones of the watershed: the lower river and the San Antonio Creek tributary. High nitrate levels on the lower river are probably the result of treated sewage effluent that enters the river. On

San Antonio Creek, which drains much of the Ojai area, high nitrate levels likely come from multiple sources, including animal waste from horse and cattle facilities, faulty septic systems, general urban nuisance flows, and fertilization and irrigation of golf courses, parks and landscaping. Phosphate presents a more complicated picture, as elevated phosphate levels are due somewhat to natural geologic conditions in the watershed and cannot necessarily be attributed to contamination.

The waters of the watershed are also impaired for pollutants as indicated in the table below.

Water Body Name & Location Description	Estimated Length/Size	Pollutant	Estimated/Actual TMDL Adoption Date
Matilija Reservoir	121 acres	Fish barriers (fish passage)	2019
Matilija Creek Reach 1 & 2	15.6 miles (combined)	Fish barriers (fish passage)	2019
San Antonio Creek	9.79 miles	Bacteria Nitrogen Total Dissolved Solids	2021 2019 2023
Casitas Lake	2,069 acres	Mercury	2021
Ventura River Reach 4	19.22 miles	Pumping Water Diversion	2019* 2019*
Ventura River Reach 3	2.82 miles	Indicator Bacteria Pumping Water Diversion	2021 2019* 2019*
Ventura River Reaches 1 & 2	4.49 miles	Algae	2019*
Canada Larga	8.01 miles	Fecal Coliform Low Dissolved Oxygen Total Dissolved Solids	2019 2019 2021
Ventura River Estuary	0.20 miles	Algae Eutrophic Total Coliform Trash	2019* 2019 2019 2/27/08

* On the LA Consent Decree requiring state adoption of TMDL and EPA approval by 3/24/2013

Estuary

The Ventura River estuary lies directly west of the city of Ventura. The estuary is approximately 30 acres and includes a main lagoon separated by the ocean by a sand/cobble bar during the dry season. The estuary supports a wide diversity of wildlife: several mammals and more than 230 species of birds are found there. The estuary offers one of the few remaining examples in southern California of an intact transition from estuarine to riparian wetlands. Eight acres of open water habitats contain a mixture of river and seawater and support diverse habitats.

Habitats and Sensitive Species

The Mediterranean ecosystem, exemplified by the Ventura River watershed, while found on only two percent of the world’s surface, it houses 20 percent of the world’s total floristic richness. The ecosystems of the Ventura River watershed are thus amongst the most biodiverse habitats on earth. Protecting these reservoirs of diversity is not only important locally, but also globally.

The Ventura River watershed falls entirely within the California Floristic Province, which is recognized as the region containing the highest diversity of plant species in North America. The California Floristic Province contains 4426 plant species of which 2124 species are endemic. Much of the native vegetation within the California Floristic Province has been lost and the remaining native vegetation continues to decline. The original extent of native vegetation unaltered by development in the California Floristic Province was 324,000 square kilometers. The present extent of native vegetation unaltered by development in the California Floristic Province is 80,000 square

kilometers, which is less than 25 percent of its original extent. The remaining native vegetation within the Province continues to decline due to conversion to anthropogenic uses.

The many different physical habitats of the Ventura River watershed support at least 17 native vegetation types, including the following habitats considered sensitive by the California Department of Fish and Game (CDFG): native perennial grassland, coastal sage scrub, red-shank chaparral, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, oak riparian forest, coastal salt marsh, and freshwater marsh. Over 400 species of birds, 35 species of reptiles and amphibians, and more than 40 species of mammals have been documented in this diverse ecosystem. Twenty-six sensitive species of plants and animals (listed, proposed for listing, or species of concern) are known to occur or have the potential to occur within the Ventura River watershed, including the southern California steelhead, California red-legged frog, Western snowy plover and California condor.

The Ventura River watershed historically provided abundant habitat for the now federally endangered southern California steelhead. The CDFG has identified the Ventura River watershed as a high-priority watershed having important ecological effects on the health of the remaining southern California steelhead population. In the National Marine Fisheries Service's (NMFS) January 2012 *Southern California Steelhead Recovery Plan*, the Ventura River watershed population of steelhead was designated as a "core 1" population. Core 1 populations are those most likely to contribute to the long-term persistence of the species.

Stewardship

The watershed benefits from an exceptionally high level of citizen stewardship. We have an active, volunteer water quality monitoring group, Santa Barbara Channelkeeper's Stream Team, which has been collecting water samples throughout the Ventura River watershed since 2005, and now has an important and much-referenced water quality data set. The vocal and persistent advocacy of two local non-profit groups, Matilija Coalition and Surfrider Foundation, is largely responsible for bringing attention to the problems caused by Matilija Dam (beach erosion, streambank erosion and habitat degradation), which helped launch efforts, now underway, to remove the dam. The Ojai Valley Green Coalition, a very effective organization that has been advocating for and educating on all things green for many years, is heading up the restoration of the Ojai Creek which runs through the city of Ojai. The Ojai Valley Land Conservancy and the Ventura Hillside Conservancy, supported directly with dollars from local residents, are buying and restoring key streamside parcels; these properties also provide rare access for residents to enjoy these beautiful places. And there are exceptional examples of watershed stewardship by private landowners, from owners of single-family properties who replace impervious hardscapes with water-harvesting landscapes, to farmers using state-of-the-art technologies for maximum water-use efficiency, to a major landholder of river bottom property personally funding the removal of invasive giant reed on nearly 50 acres of property. This is just a sampling of the citizen stewardship in our watershed.

Evaluation Criteria

A: Watershed Group Diversity and Geographic Scope

WATERSHED GROUP DIVERSITY

The Watershed Council has been meeting since 2006 and has had consistent participation by a core group of entities. Because the initial focus of the Council was on qualifying for state bond funding, the group tended to have stronger participation by larger agencies and water districts, though nonprofit organizations and the Farm Bureau were at the table.

In the fall of 2011, the Watershed Council took a step to increase the watershed’s planning effectiveness and hired a watershed coordinator. The watershed coordinator helped the Council establish a more accessible public “face” in preparation for greater stakeholder outreach. A mission statement, a logo and a websites were created. A governing charter outlining the consensus-based decision-making protocols of the group was also approved. The new charter established a Leadership Committee within the Watershed Council to ensure broad and balanced stakeholder representation, and in developing the Leadership Committee, key under-represented stakeholders—agriculture and business (oil extraction)—were successfully brought on board.

Another strategy to broaden stakeholder engagement was to add two evening meetings to the Watershed Council’s meeting schedule to accommodate those who are unable to attend daytime meetings. Additionally, for the convenience of residents, the place for the evening meetings was chosen at a more central location in the watershed than the daytime meeting location.

The watershed coordinator began with a Watershed Council distribution list of 165 people, and in nine months 50 additional people have requested to have their names added to that list. Council meeting attendance has increased from numbers in the teens and twenties, to numbers in the thirties and forties. This demonstrates that outreach strategies have been working.

Below is the membership of the Watershed Council’s Leadership Committee:

Government

Ventura County Board of Supervisors, Steve Offerman
Ventura County Watershed Protection District, Gerhardt Hubner
City of Ventura, Ventura Water, Karen Waln
City of Ojai, Greg Grant
California Coastal Conservancy, Sam Jenniches

Water and Sanitary

Casitas Water District, Ron Merckling
Ventura River County Water District, Bert Rapp
Ojai Valley Sanitary District, Jeff Palmer
Meiners Oaks Water District, Mike Hollebrands
Ojai Basin Groundwater Management Agency, CeCe Vandermeer

Land Management/Recreation

Ventura County Resource Conservation District, Marty Melvin
Ojai Valley Land Conservancy, Greg Gamble
Ventura Hillside Conservancy, Derek Poultney

Non-profit Organizations

Surfrider Foundation, Paul Jenkin
Santa Barbara Channelkeeper, Ben Pitterle
Ojai Valley Green Coalition, Watershed Council, Renee Roth
Friends of the Ventura River, Diane Underhill

Business/Landowner

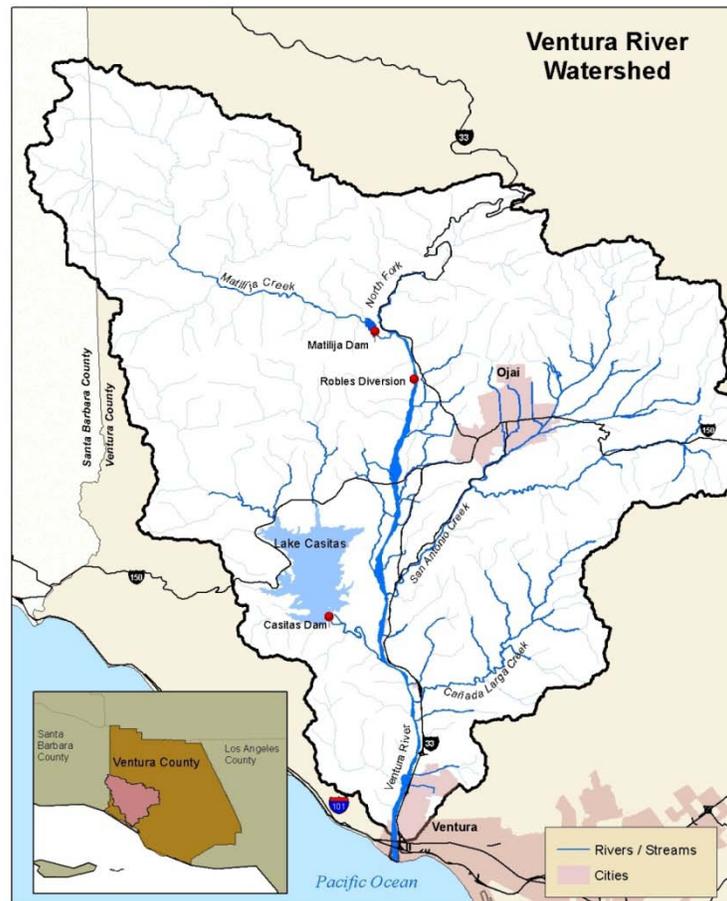
Ventura County Farm Bureau, Dale Zurawski
Growers, Upper Watershed – Friends Ranch, Emily Ayala
Oil Extraction – Aera Energy, Louise Lampara

The Leadership Committee represents the “voting members,” and was established to ensure balanced representation. The Watershed Council is open to anyone however, and the list of participating individuals, agencies and organizations is much larger than this list. Participants also

include state and federal government representatives, environmental consultants, engineering firms, attorneys, universities, and water, land and wildlife protection groups.

GEOGRAPHIC SCOPE

The Ventura River watershed, as defined by the Watershed Council and this proposed project, includes the full extent of an 8-digit hydrologic unit (18070101), an area of approximately 279 square miles. All stakeholders and project concepts within these boundaries are included in this project proposal.



INCREASING DIVERSITY OR GEOGRAPHIC SCOPE

There are several important sectors of the watershed that remain poorly represented on the Watershed Council. One very important sector is agriculture, which is a large user of water in the watershed, and represents an essential part of the watershed’s cultural identity, not to mention its local economy. Although the Farm Bureau is a regular participant, we have not benefited from the voices and contribution of actual farmers. Other important stakeholders who need to be engaged in the watershed planning process include local businesses, landowners along the river and tributaries, members of a largely Spanish-speaking community, horse and livestock owners, and the elderly.

Outreach to these sectors will occur in the form of direct mail and targeted stakeholder meetings. Interested stakeholders will be added to the Watershed Council email distribution list, and will then receive the regular communications sent out by the watershed coordinator, including meeting announcements. The updated website will offer new stakeholders the process background materials and resources.

B: Addressing Critical Watershed Needs

This section describes the watershed's most pressing critical issues and needs. Many individual efforts, and some collaborative efforts, are underway in the watershed to address these various needs. Coming up with a plan as to how the Watershed Council will address these specific needs is precisely the purpose of this grant request. We have outlined in detail how we will do this in the *Approach* section of this proposal. We will continue to meet regularly, collaborate, share information, leverage resources, and involve and educate stakeholders in the process. As discussed in the *Assessing Watershed Issues and Needs and Developing a Management Plan* section, the framework for our approach involves a process of identifying, in more precise terms, the specific targets associated with each goal; identifying the critical threats or obstacles; ranking those threats and obstacles; developing objectives and specific actions to address the highest ranking threats and obstacles; and measuring success in achieving the objectives. Detailed actions and projects to address critical issues will result from this process and will be the subject of the watershed management plan.

LIMITED AND VULNERABLE LOCAL WATER SUPPLIES

The Ventura River watershed is a fragile system. Unlike most all of our neighbors in southern California, we depend strictly on local water sources in this watershed. No water is imported here.

The highly variable and limited nature of local supplies, which was described in detail in the *Background* section, presents obvious concerns with regard to water supply reliability in the face of increases demands, catastrophic events, and the unknown impacts likely from climate change.

As discussed below, the watershed is home to the federally endangered southern California steelhead, and the in-stream flows needed for the steelhead have put additional strain on water supplies. Although development pressures are relatively low in the watershed, new development is occurring, and our local governments must comply with a state policy mandating that they plan to meet the projected housing needs of all economic segments of the community.

Agriculture in the watershed, which comprises largely citrus, is facing very real threats from the Asian Citrus Psyllid, a lethal pest that is entrenched just one county to the south. Because real estate in our watershed is so expensive, farmers here can only afford to grow very high value crops. If the citrus, which uses about three acre-feet per acre per year of water, gets wiped out in our watershed, we could see growers turning to higher-water-use crops; or seeking to convert their agricultural land to housing or other development, which also uses considerably more water than citrus. This would be unfortunate from a water supply point of view, but also because agricultural has been such an important part of the watershed's cultural heritage.

Several active fault zones pass through Ventura County and recent earthquakes have caused extensive damage. Studies indicate that the likelihood of a major quake in California of magnitude 7.5 or greater in the next 30 years is 46 percent, and such a quake is most likely to occur in the southern half of the state. Although a dam failure is unlikely, such a quake could cause serious interruptions to the local water delivery system. Upgrading equipment in response to this risk is a priority for the Casitas MWD and an action that will be addressed in our watershed management plan.

Drought periods have been a regular part of the long-term cycles in the watershed, but climate change poses the threat of major extended droughts. Because we already get so little rain, the storm patterns would only have to change modestly to result in significant impacts to our water supplies.

For all of these reasons, water supply reliability is considered a critical issue in the watershed.

GROUNDWATER AND SAFE YIELD UNKNOWNNS

A groundwater management agency, the Ojai Basin Groundwater Management Agency, is in place to manage one of the watershed's groundwater basins, the Ojai Valley basin, and mandatory extraction reporting is in place for this basin. Because this basin has been studied and modeled, it's underground geology and rates of recharge are fairly well understood. However, other important groundwater basins in the watershed, including the Upper and Lower Ventura River basins, which run under and adjacent to the Ventura River, remain unmanaged. Rates of extraction from these basins are unknown; estimates based upon crop type provide our only guess at extractions from these basins. An accurate water budget for the watershed remains elusive because this important part of the equation is unknown.

Because the Upper and Lower Ventura River basins are shallow and run with the river, there is a dynamic relationship between water levels above ground and below ground. This relationship, however, is not understood. There are times in the year when the water level in certain pools in the river will drop over a foot a day. Sometimes the level stays down; sometimes it rises again the next day. The exact mechanisms at play are unknown. Some correlation with groundwater pumping is likely, but to what extent, and what other factors are involved, remains unstudied.

Because of these unknowns, no assessments of safe or sustainable yield for the entire watershed have been prepared and a meaningful estimate cannot currently be prepared without improved data. Identification of those limitations and recommendations to address them could facilitate development of an estimate of the safe, or sustainable yield. Development of this critical information is among the goals of the Watershed Council.

PUMPING/DIVERSION IMPAIRMENT

Two reaches (22 miles) of the Ventura River that lie over the Upper Ventura River groundwater basin are on the Clean Water Act's 303(d) list as impaired for pumping and diversion. Because of a backlog in 303(d) impairments in our region, staff at the Regional Water Quality Control Board (RWQCB), Los Angeles has just begun to address this impairment in the last couple of months; however the issue must be resolved with the U.S. Environmental Protection Agency (EPA) by March of 2013 due to a legal settlement. The current resolution being investigated by the RWQCB could involve all of the affected stakeholders entering into a memorandum of agreement to cooperatively address the "impairment" and to lay out a timeline for establishment of a groundwater management entity. This represents a huge challenge, given how controversial water rights are to water providers, groundwater well owners and landowners, because of potential infringements on their water rights. Addressing this regulatory impairment is a critical issue in the watershed.

ENDANGERED SOUTHERN CALIFORNIA STEELHEAD

As described in the *Background* section, the Ventura River watershed historically provided abundant habitat for the now federally endangered southern California steelhead. The endangered steelhead habitat presents challenges to watershed management on several fronts. One challenge is the need to balance the use of our limited and highly variable surface water between consumptive needs and in-stream flows. The endangered species listing means that any project or action that may affect steelhead or their habitats requires consultation with NMFS to obtain an incidental take permit. The challenge this presents is illustrated by a recent project aimed at increasing the reliability of groundwater. Grant funding was recently secured construct a groundwater recharge project off of one of the watershed's main tributaries, the San Antonio Creek. The project was designed and justified based upon an expected amount of water available for diversion to the spreading grounds. However, because of CDFG and NMFS requirements, the potential amount of water had to be reduced by 50 percent in order to increase the amount of bypass flows available for

the steelhead. The redesigned project now has the potential for an average diversion of only 126 acre feet of water a year. Furthermore, the extensive permit commitments for ongoing steelhead monitoring for that project have added additional costs. These factors have now put the value of the project into question.

Another challenge is in providing appropriate passage for the migratory steelhead. Over half of the historical steelhead spawning and rearing habitat in the Ventura River watershed was found in headwater tributaries in the Matilija Creek drainage. Access to this important habitat was blocked in the 1940s by Matilija Dam. In addition, much of the spawning and rearing habitat presently accessible below Casitas MWD's Robles Diversion Dam has been degraded due to urban development, road crossings and other impacts.

MATILIJIA DAM

As described in the *Background* section, the Matilija Reservoir has filled with sediment and no longer provides a water storage function. Removal of this dam has been the focus of vocal environmental groups in the watershed for decades because the dam impedes migratory steelhead from reaching important spawning areas, and because the dam alters the flow of sediment, thereby diminishing the amount of sand replenishing local beaches. In more recent years, local and federal agencies have joined in efforts to remove the dam, and have spent millions of dollars studying options and impacts associated with the project.

In July 2004, the Ventura County Watershed Protection District and the USACE completed the public draft of *The Matilija Dam Ecosystem Restoration Feasibility Study*, a study of the feasibility of removing Matilija Dam and restoring the ecosystem above and below the dam location. The report presents the findings of the alternatives analysis and the selection of a recommended preferred alternative. The study focuses on ecosystem restoration in the Ventura River watershed to benefit native fish and wildlife of the Ventura River and Matilija Creek in the vicinity of dam, and improvement to the natural hydrologic and sediment transport regime to support coastal beach sand replenishment from the Ventura River. In September 2004, the final Environmental Impact Report/Environmental Impact Statement for this project was completed.

The major challenge of the dam's removal is how and where to transport the huge quantity of sediment that now fills the reservoir. This task is estimated to cost hundreds of millions of dollars. In 2005, a project management plan was developed specifically for the preconstruction engineering and design phase of the restoration project. Grant applications and congressional funding are currently being sought to fund project components outlined in the feasibility study.

ALGAE IMPAIRMENT

In addition to the pumping/diversion impairment discussed above, the most pressing water quality issue in the watershed at the moment is the state regulations that are due out soon to address the river's algae and nitrogen impairments.

The listing of algae as an impairment is highly contentious. Algae is on the impairment list because it is an aesthetic nuisance. Yet algae appears to be a natural component of dry southern California coastal watersheds; our headwaters in the national forest, for example, are known to commonly have large amounts of algae. Algae has been a known part of our watershed's wet and dry cycles throughout history and has not been known to cause significant problems. So it is a low-risk water quality issue, but one that is going to cost us dearly.

For years now local scientists have been studying the many variables that can describe how algae behaves here—when it grows excessively and when it doesn't, when it causes problems with dissolved oxygen and when it doesn't, and so on—and the more they study, the more nuanced their

understanding becomes of the very complex relationships that are associated with algae. Variables include how much rain falls in a given year; whether the storms were minor, big or really big; whether the storms came early or late in the season; whether the storms were like the year before or not, or two years before or not; whether the groundwater is new or old; and whether the aquatic plants are well established or not. Given what they know about algae, stakeholders in the watershed have great concern over whether we will never be able to “delist” the river for algae.

And yet, although algae may not be a real problem in itself, algae is a *symptom* of a real problem, and that is excess nutrients. Water quality tests do regularly indicate high levels of nutrients, however the exact sources are not known. Preliminary studies point to horse and livestock operations, runoff from golf courses and agriculture, and faulty septic systems.

The algae impairment is being addressed by the RWQCB with a nutrient TMDL (Total Maximum Daily Load), which will set targets and allocations for nutrients in the watershed. The scheduled for state adoption and U.S. EPA approval of the TMDL is March, 2013. Based upon past experience from other areas, it is expected that this regulation is likely going to be exceedingly expensive to comply with. For example, the watershed’s wastewater treatment plant may need to clean wastewater to such high standards that a \$75 million dollar reverse osmosis facility may be needed. And the estimated cost of one algae sample of the type we expect to be required to use for monitoring, just one sample, is \$1,800.

Addressing the underlying nutrient water quality problem, and paying for compliance with the pending TMDL, are critical issues for this watershed.

FLOODS

The Ventura River watershed is a steep watershed, ranging from 40 feet per mile at the mouth (at sea level) to 90 feet per mile at the headwaters (approximately 6,000 feet elevation). This steepness, combined with the orientation of the mountain ranges and prevailing storm patterns, can produce extremely high-intensity rainfall that runs off fast.

This is why the watershed is known for some major historic floods. Since 1992, there have been five Presidential disaster declarations for flooding in Ventura County. In the flood of 1992, water volumes in the river increased over 400 percent—from 100 cubic feet per second (cfs) to 46,700 cfs—in just three hours, washing recreational vehicles out to sea and necessitating several rescues by helicopter. This flood marked the peak historic rainfall intensity recorded by a Ventura County rain gage: 4.04 inches per hour was observed during a 15-minute period at the Wheeler Gorge gage approximately three miles northeast of Matilija Dam.

In addition to these major flood events, our watershed also tends to suffer a high level of damage from higher-frequency, less severe floods. The nature of the area’s geology is such that unstable slopes and landslides are fairly common; our watershed includes neighborhoods of houses built on alluvial fans where flood waters tend to sheet flow and do not stay in confined channels; and we have houses and structures built in low lying areas and areas quite close to stream channels. Every five years or so our watershed experiences flood damage, because of these factors.

Much flood control facility maintenance and improvement is needed in the watershed. Many culverts and channels need improvement or replacement, being undersized or worn out. Debris basins need regular cleaning because of the high sediment loads in our streams. New debris basins are needed. And the watershed’s main levee—which lies between the river highway 33, running from the estuary inland for 2.65 miles—does not currently meet FEMA standards. The funding needed to address these flood control infrastructure needs is huge. However, in the Ventura River watershed the amount of existing and new development is low, which means the amount of property

taxes and development fees received by the Watershed Protection District is low. Therefore in our watershed there is limited revenue for needed flood management work.

Funding needed flood control improvements, and implementing alternative strategies that take advantage of natural ecosystem services for flood attenuation and control, are critical issues in the watershed.

INVASIVE PLANTS

Much of the decline of native riparian habitat in the watershed is due to the spread of giant reed or Arundo (*Arundo donax*), an invasive bamboo-like weed, which in the past 30 to 50 years has displaced many of the dense riparian stands that were once present. Arundo grows extremely fast; up to two inches a day, reaching 25 feet or more. It forms massive thickets of vegetation that can cover many acres, nearly eliminating all other plant species along with the biodiversity, structural diversity and wildlife habitat of riparian ecosystems. In recent years these dense thickets of vegetation have been transformed into large networks of rooms, hallways and living spaces for trespassing campers in the river bottom.

Arundo consumes large quantities of water, exacerbates flooding when root clumps off during storms, and is very flammable—making rivers that historically acted as fire breaks now act as fire bridges. Arundo has a thick, persistent underground stem system, much like Bermuda grass. It spreads when pieces of rhizome break off, travel downstream and take root in moist soils. Because it grows in waterways, Arundo removal requires extensive and costly permit approvals. Removal without herbicides has not been found to be effective. And because of the insidiousness of the vegetation, all removal efforts require ongoing monitoring and retreatment.

Managing Arundo is a critical issue for the successful restoration of functioning ecosystems in the watershed.

HOMELESS

The lower Ventura River is home an estimated 100 or more chronically homeless individuals, living in the river bottom just above the estuary without any sanitation services. In recent years these individuals have made use of the invasive Arundo vegetation, which has been taking over the river bottom, for making shelters. Many people have lived in the river for years; the population includes multi-generation families, elderly people, children, and a high Veteran population. Mental health problems and alcohol and drug use are common. Major trash clean-ups in the river bottom occur at least annually, only to have the encampments and trash quickly return. The Ventura County Fire Department recently reported that fires, started in these encampments, have become a weekly, sometimes daily, occurrence.

The issue of homeless individuals trespassing and living in the river bottom is of critical concern for sanitary and safety reasons. Housing programs in the area are very limited, and many of the individuals prefer camping in the river to the housing options offered.

VENTURA RIVER ACCESS

Although the mouth of the Ventura River lies just a short walk from downtown Ventura, some residents and visitors are scarcely aware that the river exists. A 2.65-mile levee was built along the lower stretch of the Ventura River in 1949 to offer protection to the city of Ventura. This levee, and a four-lane highway that runs along its length, form a physical and visual barrier between the river and the community. “No Trespassing” signs discourage public approaches to the river.

Many rivers in the state now include river parkways, which provide access for the community to enjoy these waters. In 2009, a group of Cal Poly Pomona landscape architect students developed a "vision plan" for a Ventura River parkway on the lower stretch of the river. That attractive student

project, full of drawings of what such a parkway could look like, has provided a starting point for discussions about the potential for a Ventura River parkway.

The watershed is fortunate to have two land conservancies, one serving the upper watershed and one serving the lower. These conservancies are willing to own and protect land in perpetuity, and they provide the public with very important access to the river and its habitats.

Increasing opportunities for access to the river is an important issue to stakeholders in the watershed.

CLIMATE CHANGE

The Ventura River watershed is already at risk for major fires, large floods and droughts; climate change, which promises extreme weather events, makes the watershed vulnerable to more intense versions of these threats.

We are lucky in that our headwaters are in protected forestlands, yet these same forestlands are increasingly vulnerable, because of climate change, to major fire events. The April 2012 draft California Climate Change Adaptation Policy Guide from the California Department of Water states that “the most significant climate change risk facing California is associated with an increase in wildfire activity.” Rains that follow major fires can result in mudslides, huge sediment loads, and flooding because of lack of vegetation to absorb and attenuate flood flows and hold hillsides in place. Local water supplies are at risk from these events.

Planning and preparing for this enormous threat is a critical issue in the watershed.

FIRES

The Ventura River watershed is subject to the threat of fires which are a common occurrence in the hills and mountainous regions of the watershed. Moderate fires associated with floods have occurred every 10 years, while extreme fires associated with major floods have occurred every 20 years in the watershed. One-half of the watershed is in forest land where the potential for wildland fires is high. When major fires occur in forest land, they can cover a very large area. An extreme fire in 1985 (Wheeler #2 fire) burned 122 acres and 54 percent of the watershed.

C: Implementation and Results

PROJECT PLANNING

This project will involve development of a watershed management plan for the Ventura River Watershed.

Below are two relevant state programs that the Watershed Council and the development of a watershed management plan are in compliance with.

Integrated Regional Water Management Plan Conformance. The Watershed Council was launched in 2006, primarily as part of an effort to develop an Integrated Regional Water Management Plan (IRWMP) covering Ventura County’s three primary watersheds, the Ventura River, Calleguas Creek and Santa Clara River. Having projects in an approved IRWMP qualifies them for California state bond funding, so a regional group, the Watersheds Coalition of Ventura County (WCVC), was established to prepare a regional plan for Ventura County. In the first five years of its existence, the Watershed Council was organized by the project manager for WCVC, and much of the work of the group revolved around development of the IRWMP and pursuing subsequent project funding opportunities.

Ventura County’s IRWMP complies with the California Department of Water Resources guidelines for an Integrated Regional Water Management Plan, and provides for an integration of project and program implementation strategies that best address the needs and objectives of the region.

The Watershed Council continues to serve as a subcommittee of the WCVC, and two of the Watershed Council’s representatives are elected to serve on the WCVC’s Steering Committee. The Watershed Council also continues to contribute to updates of the IRWMP, and as the Watershed Council develops its own, more comprehensive watershed management plan, the intension is to make that plan complementary to the IRWMP.

State and Regional Water Resources/Quality Control Board Watershed Management Initiative Conformance. Water resource protection efforts of the California State Water Resources Control Board and the Regional Water Quality Control Boards are guided by a five year Strategic Plan. A key component of the Strategic Plan is to utilize a watershed management approach for water resources protection, called the Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science.

The WMI uses a strategy to draw solutions from all interested parties within a watershed, and to more effectively coordinate and implement measures to control both point and nonpoint sources.

Previously, the Regional Board regulated dischargers of waste waters throughout the area without regard to geographic location. Now the Regional Board plans for issuance of discharge permits, National Pollutant Discharge Elimination System (NPDES) permits and the Waste Discharge Requirements, by watershed. In addition, nonpoint source pollution, or pollution from diffuse sources such as urban runoff, aerial deposition, animal stables, and construction sites, will be considered as components of a watershed.

Regional Board staff are active participants in the Watershed Council and the Council serves as a venue for the stakeholder coordination and communication that is the foundation of their WMI approach.

READINESS TO PROCEED

The implementation strategy and schedule is well document in the *Technical Proposal* section of this proposal. Below is a table which summaries the milestone timing as described there.

Major Tasks		Milestones		Year 1		Year 2	
				Months		Months	
		1-6	7-12	1-6	7-12		
Website & Video	Website redesign						
Watershed Mgmt. Plan	Define methodology						
Watershed Atlas	12 maps produced						
Website & Video	Video library						
Watershed Brochures	Watershed/Watershed Council brochure						
Stakeholder Meetings	3 stakeholder meetings (incl. farmers)						
Watershed Mgmt. Plan	Use methodology/technical meetings						
Watershed Mgmt. Plan	Baseline info/characterization - 70%						
Watershed Mgmt. Plan	Technical advisory meetings						
Watershed Mgmt. Plan	Draft goal-specific Action Plans/Projects						
Watershed Mgmt. Plan	Stakeholder input						

Major Tasks	Milestones	Year 1	Year 2
Watershed Mgmt. Plan	Draft watershed management plan		
Website & Video	Content & functionality expansion		
Watershed Mgmt. Plan	Baseline info/characterization - 30%		
Stakeholder Meetings	3 stakeholder meetings (incl. Spanish)		
Watershed Atlas	8 maps produced		
Watershed Mgmt. Plan	Stakeholder input		
Watershed Mgmt. Plan	Final watershed management plan		
Watershed Brochures	Watershed management plan brochure		
Watershed Mgmt. Plan	Public meeting		

The previous work that supports the expansion of the Ventura River Watershed Council is well documented in the *Eligibility* section as well as in the *Watershed Group Diversity and Geographic Scope* section of this proposal.

The capability and readiness of the project team is also of note. The watershed coordinator comes to the project with over 20 years of experience in local government, largely in land use planning, grant writing and administration, and development of sustainable resource projects and public outreach campaigns. She has developed award-winning publications, including [Guide to Native and Invasive Streamside Plants](#) and [Wetland Project Permitting Guide](#); developed comprehensive public education websites ([Build it Smart! Ventura County](#)); written updates to the Ventura County Zoning Ordinance and developed associated guidelines ([Parking and Loading Design Guidelines](#)); and written and administered many local, state and federal grants.

Additionally, the Ojai Valley Land Conservancy (OVLC), the host agency for the watershed coordinator position, is a strongly-positioned and well-respected organization in the watershed. They are involved in land acquisition and restoration projects on multiple properties and current own close to 2,000 acres in the watershed. The ability of land trusts to purchase key streamside properties is viewed by many on the Watershed Council as a very important and cost-effective restoration strategy; one which makes use of the ecological services naturally provided by healthy ecosystems. Finally, the project team includes a high level of habitat restoration expertise. Brian Stark, the watershed coordinator’s direct supervisor at the OVLC, is a well-respected restoration specialist, with many years of field experience and project leadership, who wrote a popular, hands-on restoration publication, entitled [Restoration Field Guide](#).

Further, we will draw upon the significant expertise and diversity of the members of the Watershed Council which includes engineers, environmental scientists, biologists, chemists, geologists, hydrogeologists, attorneys, planners and graduate students. The Council includes members from local and state government agencies, water districts, wastewater treatment facilities, land management and recreation groups, non-profit organizations, landowners, businesses and private citizens. The joint expertise of the Council covers diverse technical and management areas including water regulations, water conservation, fresh water and ocean waters protection, wetlands protection, surface water and groundwater sampling and characterization, wastewater treatment, habitat restoration, sustainability, greenhouse gases and climate change, oil fields, agriculture and livestock. The wide diversity and technical and management expertise of the Council will ensure that the watershed management plan is collaborative, robust and scientifically based.

D: Watershed Group/Landscape Conservation Cooperatives (LLC) Nexus

The goals of the Ventura River Watershed are complementary to LCC goals and activities.

The Ventura River Watershed is located in the geographical jurisdiction of the California Landscape Conservation Cooperative (LLC), and the watershed coordinator recently joined the California LLC Alliance to become better informed about LLC goals and activities. The purpose of the California LLC is to inform and promote integrated science, natural resource management and conservation to address impacts of climate change and other stressors within and across ecosystems. This purpose is complementary to the purpose of the Watershed Council and planned watershed management plan, which is to inform and promote a scientific approach to effective management of water resources and stressors within the watershed.

The following section highlights the goals of the California LLC and provides examples of the Watershed Council’s support and adoption of those goals in its own program.

- **Fosters collaboration and integration of science and management**

The essence of the Watershed Council is to foster collaboration and to leverage the capabilities of the local agencies, organizations and stakeholders. One of the values explicitly enumerated by the Council for guiding the development of its watershed management plan states, “We hold high expectations for the technical understanding that underlies our watershed management plan. Whether in the area of science, policy, civic engagement, economics, infrastructure management, or education, we expect to rely upon analyses that are sophisticated, thorough, and endure scrutiny.”

- **Supports development of technical products for natural resource management**

In keeping with the value described above, the watershed coordinator is investigating using The Nature Conservancy’s well-researched “Conservation Action Planning” (CAP) methodology to help build an adaptive management framework that can guide the group’s efforts in the watershed into the future. The CAP methodology insists upon the use of indicators, such as landscape scale indicators, in the assessment process to evaluate possible conservation actions for the most effective adaptive management strategies.

- **Facilitates information acquisition, interpretation, translation, exchange and availability**

The Watershed Council is facilitating the compilation of records and information on the entire watershed that will be a comprehensive resource for use by parties within and outside the watershed. Our preliminary inventory and electronic compilation of reports, plans, ordinances and other data and documents relevant to the watershed is essential for the development of a watershed management plan. We will continue to acquire, interpret and exchange available and needed information for development of an effective plan. Further, we will use scientific information and decision support tools such as the CAP methodology for water resource management planning. Our goal is to have a watershed that is resilient to climate change and other major stressors such as drought, fire and floods.

- **Communicates information within and outside the community**

The watershed coordinator regularly communicates relevant information, activities and opportunities to watershed stakeholders and the community. For example, the watershed coordinator sends out newsletter-style emails typically several times a month to more than 200 members of the Watershed Council. The newsletter includes announcements about community events, meetings, workshops and other activities in the watershed and provides information on new studies or articles on water quality, best management practices and other watershed-related data. The Watershed Council, as a subcommittee of the Watersheds Coalition of Ventura County, has recently helped communicate information on climate change by promoting a

regional climate change workshop and hosting a Council discussion on the topic. We also maintain a website (www.VenturaWatershed.org) containing information on the watershed, including Council meeting agendas and summaries.

Further, another value explicitly enumerated about our watershed management plan is that it will be accessible to the general public. This value reads: “We will strive to produce a watershed management plan, and other associated written materials, in a manner that conveys technical information in an interesting and easy to understand format so that it is readily accessible to members of the general public.”

Environmental and Regulatory Compliance

1) Will the proposed activities impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

The work of the Watershed Council involves public outreach and development of a non-binding watershed management plan. Any project proposed in the watershed management plan would be subject to environmental and regulatory compliance at such time as that project moved forward for implementation. The Watershed Council is not, and has no intention of being, directly involved in any ground-disturbing activities that impact the surrounding environment or other actions that would trigger the need for environmental or regulatory compliance. Implementation of such projects would be pursued by members of the Watershed Council as separate entities.

2) Are you aware of any endangered or threatened species in the work area? If so, would they be affected by any activities associated with the proposed work?

See answer to question #1. The watershed is home to endangered and threatened species, as described in the Background section. However no projects will be implemented directly by the Watershed Council that impact the surrounding area.

3) Are there wetlands inside the project boundaries? If so, please estimate how many acres of wetlands there are and describe any impact the proposed activities will have on the wetlands.

See answer to question #1. The watershed is home to approximately 4,844 acres of wetlands. However, no projects will be implemented directly by the Watershed Council that impact the surrounding area.

4) Are there any known archeological sites in the proposed work area?

See answer to question #1. The watershed is home to known archeological sites, including Chumash Native American sites. However no projects will be implemented directly by the Watershed Council that impact the surrounding area.

5) Will the proposed activities result in any modification of, or effects to, individual features of a water delivery system (e.g., headgates, canals)?

No. See answer to question #1. The watershed plan may propose modifications to water delivery systems, however no projects will be implemented directly by the Watershed Council that impact the surrounding area.

Required Permits or Approvals

Again, the work of the Watershed Council involves public outreach and development of a non-binding watershed management plan. Any project proposed in the watershed management plan

would be subject to permits or approvals at such time as that project moved forward for implementation.

Budget

The budget table is included as an attachment.

Budget Narrative

Attachments

The following documents are attached to this proposal:

Budget Form

Budget form SF 424A

Detailed project budget table

Support Resolution

A resolution of support from the sponsoring nonprofit organization, the Ojai Valley Land Conservancy.

Letters of Support

Letters of support from the following entities are included with this proposal:

Ann Rosecrance, citizen
California Coastal Conservancy
Churchill Orchard
Ojai Valley Sanitary District

Regional Water Quality Control Board, LA
Ann and Sid White, property owners
Ventura County Board of Supervisors
Ventura County Watershed Protection District