



# Ventura River Watershed Council

## Meeting Summary

Wednesday, May 9, 2012

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

### Water Quality Subcommittee

#### 1. Algae TMDL update

Los Angeles Regional Water Quality Control Board (RWQCB) staff Jenny Newman and Becky Viega Nascimento provided an update on the development of the algae TMDL (Total Maximum Daily Load) regulation, which is aimed at addressing water quality impairments of the Ventura River. The river is on the Clean Water Act Section 303d list of impaired water bodies; Reach 1 (estuary to Main St.) and Reach 2 (Main St. to Weldon Canyon) and the estuary are impaired for algae, Canada Larga is impaired for low dissolved oxygen, and San Antonio Creek is impaired for nitrogen.

The development of the TMDL has been delayed a couple of times due to resource and staffing issues, but Becky and Jenny (staff) are now working on it in earnest in order to meet several deadlines. The EPA needs to approve this TMDL by March of 2013 in order to meet a court-ordered consent decree deadline for TMDL establishment in the region. This means that Jenny needs to bring the TMDL to the RWQCB for consideration and approval by October of 2012, and therefore the document needs to be circulated to the public this July. Jenny will try, to the extent possible, to get their draft work product to the Ventura River Watershed Council for comment before the public review period, but they are under some pretty tight deadlines.

Staff has been compiling existing watershed information to ensure that they have a good understanding of how the river works. One of the next steps is to set numeric targets for the TMDL, which are the numbers that need to be achieved in order to attain water quality standards so the impaired reaches can be removed from the Section 303d list.

The approach being taken to meet the numeric targets, for both the freshwater river as well as the estuary, is the California Numeric Nutrient Endpoint (NNE) framework. Developed by EPA for California, the State Water Resources Control Board (SWRCB) is considering adopting the framework for freshwater nutrient criteria. The framework relies upon relationships between nutrient concentrations and response indicators, which are parameters such as algal biomass, temperature, pH, and dissolved oxygen. The framework also recognizes the importance of cofactors, such as flow, shading, and light availability, as these factors have a strong impact on the growth of algae in response to nutrient loading. (Becky is on the technical committee for NNE for California.)

One of the tools in the NNE framework is the Qual2K model, an EPA model based upon the relationship between nutrient concentration and algal biomass response. Staff has settled on an algal biomass target of 150 mg/liter/m<sup>2</sup> of chlorophyll a, and that number has been put into the model. Based upon all the other variables and cofactors, the model predicts the nutrient concentration required to meet the algal biomass target. (Staff is also looking at the Spreadsheet model, to compare its findings with the Qual2K model.) Different numeric

targets may be set for different reaches to account for the site-specific chemical and physical characteristics and the changing cofactors between reaches to give more flexibility in implementation.

At the state level, technical work is underway to support the development of an estuarine NNE, following the same conceptual approach laid out in the freshwater approach, i.e., it is not just the nutrient concentrations that affect the impairment and the overall water body condition, it is also how that water body responds biologically or ecologically to that nutrient loading. The Southern California Coastal Water Research Project (SCCWRP) is leading this technical work for the state. SCCWRP is developing the body of literature and information that staff will use for the estuary model. Less work has been completed by staff on the estuary, but since the estuary is at the base of the watershed, it will drive the implementation efforts and allocations upstream. So, it is important to wait and see what the numeric targets are for the estuary before issuing final numeric targets upstream.

For the estuary, staff is contemplating using BATHTUB, which is a modeling tool under NNE that predicts the required nutrient concentration in order to meet the estuary algal biomass target. Model input parameters include items like depth of the estuary, area, volume, mixing depth, input concentrations, and existing inputs. Staff is collecting the needed input data. EPA contracted with Tetra Tech, Inc., to do estuary loading estimates of existing nutrients. Staff will use this and other information collected by groups in the watershed, such as the data that Al Leydecker has compiled.

A note about BATHTUB: As part of SCCWRP's recent bight survey, they collected a huge amount of nutrient and biological data related to estuary eutrophication. SCCWRP has been studying how BATHTUB performs on the intermittently closed river mouth estuaries that were part of the bight study and for which a wealth of data exists. Even though the empirical relationships in BATHTUB were generated in freshwater systems, those closed river mouth estuaries can become dominated by freshwater; and because they close, they begin to act like a typical bathtub that the model was designed for. SCCWRP has had some success in getting that model to perform well in other estuaries, so that has given staff confidence that it would be applicable to the Ventura River estuary and its closed condition. For volume, depth, and area information, staff is relying on data collected by Ojai Valley Sanitary District several years ago on the opening and closing of the estuary. Remote sensing data collected by NOAA may also be used to calculate a more precise estimate of estuary volume and depth.

Staff should have some working numbers soon after the data input is completed. Then they begin the task of assigning the allocations to different sources in the watershed. Again, they will be considering site-specific loading when determining the allocation.

The next public input opportunity will be a CEQA (California Environmental Quality Act) scoping meeting, which is required to analyze the potential impacts of implementing the TMDL. That meeting will be held on May 30, 2012, at 10:00 am in Ventura City Hall's Community Room. Staff will send out notice of the meeting this week.

Dale Zurawski, of the Farm Bureau and VCAILG, commented that she hopes the state is looking for the most cost-effective solution, so that we can get the most environmental benefit for the least economic cost. We're looking for environmental improvement, and not something loaded up with extremely expensive monitoring requirements that lead to no improvement. Becky responded that one of the great things about the NNE approach is that it allows the influence of cofactors (e.g., shading, flow, light, and temperature) to be considered, and the ability to bring in those site-specific conditions, can hopefully produce some different scenarios for the nutrient loading output. This allows some flexibility and creativity that will hopefully result in a real positive ecological response, without just having a strict approach of driving down the nutrient concentration.

With that said though, Becky also stated that it would be reasonable for us to assume that some nutrient load reduction would be warranted, and that some algae monitoring will be required. And the algae benthic biomass monitoring is more labor intensive. The analysis of the samples is not necessarily expensive, but the monitoring

is more labor intensive. The monitoring is for benthic algal biomass, which is not just a water sample monitoring for chlorophyll a (which is very, very low in Ventura River and most rivers, except for really deep, wide, rivers like the Mississippi River). SWAMP (Surface Water Ambient Monitoring Program) protocols would need to be followed, which involve actually collecting the algal biomass. That could mean scraping it from the rocks and collecting floating mats; there are different methods depending upon how the algae are growing in the river.

Ray Olson, of the city of Ventura, asked how nutrients are attenuated over distance. For example, are nutrients released up in Ojai attenuated before they reach the estuary? Becky said that stream ecologists use the concept of “nutrient spiraling” to address that question. If nitrogen were dumped in the top of the river, it would be taken up into algal biomass or other biota, and cycled through the food web, and then that nitrogen is eventually recycled in the river so that it is again in a form that is biologically available. So somewhere down the river some organism takes it up, it is recycled again, and it continues to spiral in that uptake-recycle fashion all the way out to the ocean. Tetra Tech was asked in their report to address nutrient spiraling in the river. The number they came up with indicated a fairly long spiral length. The longer the spiraling length, the greater the amount of nutrients that are available; the nutrients are not in high competition, they are readily available, and lots of things can be taking them up. If the spiraling length is very short, that generally implies that as soon as something dies or is recycled, it is immediately taken up by some other biota desperate for that nutrient. So in terms of regulatory allocations, this means that upstream sources are having an impact on downstream responses in the Ventura River.

Bert Rapp, of the Ventura River County Water District, mentioned that there is a large equestrian facility upstream of their wells and about 2,000 feet from the flowing river. He asked if staff was able to tell the potential impact from the urine and nutrients that would go through the soil to the groundwater, the wells and the river. Jenny responded that they have estimated the contribution from the horse facilities based on the estimated number of horses and the waste produced by the horses. It is an estimate, but they have correlated that with the in-stream concentrations and measured loads, and so feel reasonably sure of their estimates. Staff will be assigning allocations to horse facilities and to grazing and ranching operations, and will be developing a regulatory tool to implement those allocations.

Mike Hollebrand, of the Meiners Oaks Water District, asked if staff had done the same thing for septic tanks. Jenny said they did, and based their source assessment on an assumed amount of nitrogen that makes it past the leach fields and gets into the groundwater and river. Again, these are estimates. Septic system failure rates in the Malibu Creek watershed were used in developing the estimates. The communities of Malibu and Ojai are of similar age, and they both have high water tables.

Sid White, a Ventura River property owner, asked when property owners get to see the research, if there is a report that will be available, and when it will be published. Jenny said she will publish a staff report in July of this year, which will include a draft of their report for public comment. Staff then updates the draft report and takes it to their board (LA RWQCB), after which the public would have a second opportunity to comment. Sid asked whether property owners next to the river would be notified. Jenny said they notice the meetings on their website, in the newspaper, and through an email list that people previously signed up for.

Ron Merckling, of the Casitas Municipal Water District, asked if sediment handling associated with the Matilija Dam removal has been looked at as part of this process, since that sediment contains a significant amount of biomass. Jenny said they looked at the hydrological effects of the dam removal, but not the increased nutrient loading from any biomass in the sediment. But, they have built time into the TMDL, and the opportunity for reconsideration before any major load reduction projects are undertaken, so that the TMDL can be updated with the most recent data. Becky reiterated that staff is under a huge time constraint to complete this TMDL to meet a legal consent decree, and they realize that there may still be some outstanding issues that they do not have time

to adequately address, but that they are hoping, through the TMDL implementation schedule, to provide some flexibility. Even though the TMDL regulation will be completed, there could still be opportunity for revision through the time frame. Becky said it would be helpful to get an update on the current Matilija Dam removal schedule, and when that nutrient load may be expected. Ron said the proposed notching of the dam, which would happen much sooner than the dam removal, could also have some nutrient load impact, at least temporarily.

Dale asked what information would be released at the CEQA scoping meeting for public comment. Jenny said they would probably have the numeric targets by then. For the freshwater portion of the river, they're looking at targets around 1 mg/liter for nitrogen and around 0.1 mg/liter for phosphorus. Based on these numbers, they can adequately discuss reasonably foreseeable means of compliance and potential impacts of those means of compliance. But the CEQA scoping meeting will be more focused on implementation and the types of projects that are contemplated for compliance. They probably won't have allocation scenarios done by then.

Steve Offerman, with Supervisor Bennett's office, asked whether there are other creeks and rivers in the region with algae TMDLs and inquired about their biomass plans. Jenny said they have a nutrient TMDL for Malibu Creek, and the nitrogen and phosphorus targets are 1 mg/liter and 0.1 mg/liter, and Becky said she thought the algal biomass target is 150 mg/liter/m<sup>2</sup> of chlorophyll a and a percent cover number (maybe 30-40 percent?). There are also algae TMDLs on the Santa Clara River, Calleguas Creek, and the Los Angeles River. These are older TMDLs, developed before the state began using the NNE approach. The nitrogen targets are based on the Basin Plan objectives for drinking water, and the RWQCB may be amending those TMDLs.

Renee Roth, of the Ojai Valley Green Coalition, asked whether staff were able to pinpoint the source of the nutrients. Jenny said yes, that is the purpose of the TMDL, to identify the source and give each specific reduction requirements. Renee asked whether there would be funding available to facilitate the reductions. Jenny said yes, that besides the regulatory guidance on specifically what must be done, there are grants and other funding sources available to assist with implementation.

Lynn Rodriguez, Watersheds Coalition of Ventura County (WCVC) project manager, mentioned that there may be funding opportunities through Proposition 84. A water quality project might not qualify by itself, but if it is integrated with other projects that meet the funding objectives, it may. Jenny agreed, and said that the fact that we have a regional water plan and an active watershed group, helps our chances for funding under other grant programs, like the 319 program.

Marty Melvin, of the Resource Conservation District (RCD), announced that his organization is coordinating a free Horse Keeping for Clean Water workshop on May 29, 2012 in the evening in Oak View. Look for information on the Watershed Council's website. His organization is seeking funding to bring the Livestock and Lands program to our area. This is a program developed by the SWRCB and RCDs in northern California, and which offers a lot of information on best management practices for horse and cattle operations.

Paul Jenkin, of the Surfrider Foundation, asked whether the Supplemental Environmental Project program is still a potential source of funding. Jenny confirmed that it is.

## **2. Integrated water quality monitoring**

Dr. Brock Bernstein reported on regional efforts to fine tune and integrate different water quality monitoring programs. There has been lots of interest in recent years, at many levels—the state, EPA, RWQCBs, watershed groups—in developing the capacity to look at watersheds as a whole without losing the ability to also see what is happening with individual sources. Brock has been involved in developing those kinds of integrated watershed programs for the Los Angeles River, San Gabriel River, Santa Clara River, San Diego River, coastal

estuaries of the San Diego region, San Francisco Bay Delta, and the San Joaquin River. Even though the difference in scale is huge between some of these systems and the Ventura River, the same issues come up.

Brock said that several issues are common to these integrated approaches. First, there are typically a number of separate monitoring efforts that are not linked together and often one monitoring group doesn't know what other monitoring groups are doing or what other sets of data are available. Second, it is often difficult to obtain those data and combine them—they are in different databases, sometimes they aren't in databases at all, they use different data formats, and different QA/QC levels. Third, where there has been long-term compliance monitoring, a lot of times those programs have accumulated a lot of deadwood—questions have been asked and answered already, but the monitoring requirements don't go away.

With Michael Lyons from the RWQCB, they found that in the Los Angeles and San Gabriel River watersheds \$400,000 a year of compliance monitoring that was no longer needed. Those resources were reprogrammed to look at questions that hadn't been answered before. For example, people wanted to know if popular swimming holes were safe to swim in, but nobody was collecting bacterial information. They also created a common assessment framework to combine data so that they could communicate information about the watershed as a whole.

In the San Diego River watershed, the San Diego RWQCB made an aggressive effort to include resource agencies like Fish and Game, US Fish and Wildlife Service (USFS), and USGS in developing a regional watershed program. In the process, they learned that the USFS has a highly structured, fairly thorough assessment program called the Watershed Condition Framework. It looks very similar to the SWRCB's Healthy Streams Initiative. The USFS uses slightly different indicators, and they have a different set of scoring metrics for turning their indicators into watershed scores, but it is so similar that they are making a concerted effort to figure out how to combine the USFS assessment with the Stormwater Monitoring Coalition's (SMC) bioassessment program that SWRCB uses. This is important because the traditional SWRCB tools tend to focus on those parts of the watershed that are more urban, and the USFS tends to focus on the other end of the spectrum; so if those tools are put together, it is possible get a much more comprehensive picture of the watershed.

In addition, because so many groups were brought together in the process, productive synergies resulted. For example, the San Diego Stream Team is really interested in uses of the river's main stem (e.g., where are people fishing? what are they catching?) because they have an interest in developing more parkland along the main stem. Fish and Game staff met the Stream Team staff at the meetings, and are now together promoting and designing utilization studies of the main stem of the river.

Brock said the RWQCB has, in the past, been willing to adjust permit conditions to enable these bigger-picture, more comprehensive assessments to be conducted. As the Watershed Council moves forward in trying to understand the watershed as an integrated whole, Brock encouraged us to take advantage of these models and templates that are already available.

Lynn Rodriguez commented that at next month's Watershed Council meeting we will be discussing the requirement, per the IRWM Plan update, to do a better job of compiling and making data about the watershed more easily available to the general public.

Brock noted that the SWRCB and the RWQCBs are working hard, with the help of folks at SCCWRP, to make CEDEN (California Environmental Data Exchange Network) the place that data goes to live, and not to die. Becky said that CEDEN is really good, it works, and she urged people to put their data into CEDEN. CEDEN has different hubs around the state; the southern California hub is at SCCWRP.

Brock also emphasized the importance of being clear on what we want the data to tell us, what questions we want the data to answer, and how we want to present the data. The model assessment programs, like those from the USFS, are great examples of putting the questions up front, and first defining what the data products ought to be. The My Water Quality website, of the California Water Quality Monitoring Council (CWQMC), offers a good example of trying to do this at the state level. It is a great example of putting the questions and the assessment framework first, and then the data just follow along. CWQMC's mandate is to try to fix water quality and aquatic habitat monitoring data and assessment for the state. They are doing a healthy streams portal, piggybacking on the state's Healthy Streams Initiative, and are also trying to launch an estuaries portal. As those things get developed, they'll be spinning off lots of tools that the Watershed Council can utilize.

### **My data/group discussion**

Lorraine, with the help of volunteer (chemist!) Ann Rosecrance, put together a preliminary spreadsheet summarizing the water quality monitoring efforts in the Ventura River watershed, including who is doing the monitoring, where, how often, and what constituents are being monitored. The draft spreadsheet was distributed and preliminary corrections noted. A draft narrative summary of the water quality monitoring efforts was also distributed. These summaries are missing city of Ventura data, as the contact for the city was unreachable in time. (Dale noted that the agricultural monitoring is now four times per year, though in the past it was two times; two wet, two dry – storm and irrigation)

Lorraine plans to also create a map that will denote the current monitoring locations. Lynn commented that the mapped locations would be part of the data portal she is working on.

Shirley Birosik, of the RWQCB, said the state's My Water Quality website is also attempting to provide maps of monitoring sites. The maps allow the user to click on a monitoring site and have data pop up. The data is downloadable in Excel, or displays as a graph that compares the data to whatever water quality objectives are relevant. The site doesn't have all the data yet, but putting data into CEDEN helps feed these kinds of maps. Right now the SWAMP data is in there, as well as the beach water quality data. Brock noted that the My Water Quality website only has maps for those questions that they've had resources to develop an assessment framework and tools for. So, there is a lot of data in CEDEN that they haven't been able to put into My Water Quality yet. For example, the healthy streams portal doesn't exist yet even though there is lots of stream data.

Paul noted that it is difficult to know which beach water quality monitoring stations might pick up contaminants from the Ventura River, versus being more influenced by urban runoff from the city of Ventura, but it might be appropriate to include more sites than the three noted.

Jeff Palmer, General Manager with Ojai Valley Sanitary District (OVSD), shared with the group a spreadsheet he recently compiled of historic water quality data. Having just started working for OVSD last September, Jeff wanted to get an idea of where OVSD fit in the watershed and its water quality history. He did some research into past NPDES permits, water quality data, and treatment plant designs. The water quality data he found went back to the 1960s, and was in lots of different formats, much of it not electronic. The first plant was built in 1964, and there have been a total of three plants built over the years. OVSD is just starting its fourth generation of operations technology for plant optimization.

Jeff also provided a spreadsheet showing nutrient data from the Stream Team from 2008 to 2011. He found it interesting how similar the data were for the different areas tested; whether it was Canada Larga or San Antonio Creek, the data is not all over the map.

Jeff's handout had four charts that showed OVSD's monitoring data over the years, using the months of January and June. (The exact location of testing sites has moved over time, because of changes in requirements, or access limitations, etc.) In 1979, the effluent coming out of the plant had a high nitrate of 36 mg/liter, included

free ammonia, and had higher levels of BOD than they have today. Jeff was impressed with how much improvement has been made in the watershed over the years. That is due to many factors. Local growers told Jeff that in the 1970s they used to broadcast fertilizer on the soil surface and let the rain soak it into the ground. But today many growers don't fertilize during the rainy season because of the waste of having the nutrients lost to infiltration.

The lower left graph shows data from all the stations over time. In the lower right graph, the blue line indicates the sites above the plant and the red the sites below the plant, and shows how the lines converge and interact over time. The upper right graph shows the station above the river and the significant reductions that have occurred since 1979, just from individual's changing their practices. Jeff hopes to expand the data summary to include all the months of the year, so this historic data can provide a useful bank of knowledge for looking at trends and making decisions in the watershed.

Dale asked when the river was listed as impaired for algae. Jenny said 1998. Jeff said OVSD upgraded the plant in 1997, and that the design of that plant was based upon studies and reports from the early 1990s. At that time, the Basin Plan numbers for nitrogen and phosphate were 10 and 2 (mg/liter), and the plant was designed for 8 and 2. The plant is now running at 4 to 5 for nitrogen and about 0.6 for phosphate. New treatment technology is under development that will be very helpful in the near future, but unfortunately is not ready now.

Paul said he took the tour of the treatment plant recently and found it very interesting, and highly recommends that others take the tour. Jeff said they are happy to provide tours to individuals, groups, and students.

Arne Anselm, with Ventura County Watershed Protection District (WPD), echoed what Brock said about the importance of asking focused questions of the data, so we know what data you need to answer those questions. The WPD's water quality monitoring program is countywide, so their data is comparable. Arne is working with SMC to improve the comparability of stormwater quality monitoring data throughout southern California – how it is collected, reported, managed, how storm events are defined, etc.

Rene asked whether rainwater and concentrations would affect what is tested for and whether that is accounted for in the testing. Jeff said a big issue in our watershed is the high level of hydrologic variability. You get a different answer when you test during a big storm versus in the middle of July. He doesn't know of a way to wipe out the differences in the data created by the difference in volume. The data may be useful in terms of comparing, such as the data in June in a dry year versus the data in June during a wet year. The range from low to high in any one of the bubbles on the Stream Team data graph is the same as in OVSD's data; it is good data, but you can get a low number or a high number based on the time of year and the amount of rain.

Arne echoed the fact that the data is extremely variable. No two storms are the same in terms of the amount of runoff you get or how quickly it runs off. Over the last 10 years, the data show that the antecedent dry period, or the length of time since the last rain, is really insignificant compared to the size of the storm.

Lynn mentioned that this issue is also relevant to our response to climate change; that our monitoring programs may need to somehow adapt to this even greater level of variability.

Bill O'Brien said that he hopes this discussion will help us understand each other's objectives for water quality monitoring. We are all focused on different parts of the puzzle, but some of this really needs to be pulled together. You can understand the estuary numbers once you understand some of the upstream stuff. He suggested that it would help the discussion to convey the big picture target of each monitoring program.

Arne said they do two wet weather samples, one dry and take one set of grab samples. One of their stations is at OVSD. One of the purposes of their monitoring is to measure flow and loading, not just the mg/liter of constituents. Their station at OVSD is the lowest in the watershed that they can accurately measure flow. Upstream they have two sites, one below Meiners Oaks and one at the Fox Canyon Barranca in Ojai. They

measure flow at both of those sites also, and take the samples at the same time, so they can compare the results from the river to these urban outfall areas. They always see bacteria in the water in big storm events. In dry weather the river comes out clean in their samples for bacteria. He doesn't think nutrients in wet weather have been an issue.

Dale mentioned that the WPD's water quality graphs that are in the Government Center lobby right now show interesting toxicity results from sampling high up in the Santa Clara River watershed. (Toxicity is measured by the survival rate of the sacrificial macroinvertebrates placed in water samples.) The data showed higher toxicity further up in the watershed. Brock said they found the same thing in the Los Angeles and San Gabriel River watersheds. This resulted in staff at the RWQCB becoming less concerned about toxicity they were seeing lower in the watershed because it was comparable or less, so didn't seem to be from urban runoff. Arne said they aren't sure of the cause of these results.

Arne described the bioassessment sampling that is done in the watershed at randomized sites. Sampling is done at six random sites in the Ventura River watershed. They are looking at macroinvertebrate biology, looking for the diversity of life in the stream: the more diversity, the healthier the stream. They also look at physical habitat; how much shading, what is the canopy like, etc.

The SMC wanted to establish a baseline for stream health in southern California. The goal is to understand what the biology is like in southern California. SCCWRP took the lead on the study, and in Ventura County the monitoring is all done by the Watershed Protection District.

Ben Pitterle, of Channelkeeper's Stream Team, said they just started the fourth season of pre-dawn monitoring in April. They do two shifts a day; one before dawn to detect what the effect of algae is on dissolved oxygen. And they go back in the afternoon. Ben also mentioned that he recently learned that the sensors available to monitor for dissolved oxygen continuously have come down in price significantly (roughly 20 percent of the price of previous sensors). Stream Team is hoping to get some funding together to purchase some of those sensors.

Dale said that the VCAILG sites aim to collect runoff only from farmlands, and the vast majority of farmland in our watershed is orchards and they don't have irrigation runoff. So their samples are basically stormwater samples. For the last five years of monitoring, they are above 1 but less than 5 mg/liter for nitrogen. They aren't seeing any pesticides, except one minor hit of DDT, and have met all of their conditional waiver requirements.

## Council Meeting

### 2. Announcements

Bill O'Brien announced that the Ojai Valley Green Coalition is holding their quarterly member's meeting on May 11, 2012 in the evening at the Chaparral Auditorium and the focus of the program is responding to drought.

Paul Jenkin announced that the Surfrider Foundation's Ocean Friendly Gardens (OFG) program, in partnership with the city of Ventura, has been putting on a series of OFG workshops, and their workday is on Saturday May 12, 2012. They'll be doing a makeover of a grass lawn landscape. More information is online at Surfrider's website.

### Watershed Council

### 3. Governance Charter and Leadership Committee Members

The edits that were made to the original governance charter, proposed at the February 2012 Council meeting and subsequently edited by an ad hoc committee, were reviewed and discussed. Everyone present was requested to



vote on the draft charter using the thumb voting method (thumbs up/sideways/down). All who voted supported the charter except for Dale Zurawski, of the Farm Bureau and VCAILG. She felt the Council was becoming more exclusive and elitist, and was opposed to having subcommittees, like the water quality subcommittee that met prior to this meeting. Lorraine noted that the subcommittee meeting was open to anyone interested in the focused water quality monitoring topic. Paul Jenkin and Lynn Rodriguez commented that in their experience with other groups that have gone through this process (Matilija Dam and Watersheds Coalition), the adoption of a charter has some controversy in the beginning, but afterwards, the groups proceeded to operate as smoothly as they had before. Shirley Birosik, of the Regional Water Quality Control Board, suggested that having a charter in place might be useful when the group is pursuing funding to be able to point to a decision-making structure for recommending projects, that ours is not just a willy-nilly process. She also agreed that having a structure can change the feel of a group, that it adds to the sense of responsibility, but said that the group is going to change over time regardless. Greg Gamble, of the Ojai Valley Land Conservancy, said that the charter seems about right. He said that with the development of the watershed management plan, which is new for the group, there will be issues of substance that may call for some decision-making structure. There are 20 people on the voting Leadership Committee, and that is more people than have showed up at the meetings in the past. So it is pretty inclusive, but offers some structure.

Based on the level of support, the charter was approved. DeDe Vandermeer, of the Ojai Basin Groundwater Management Agency, opted to not vote as this was her first meeting and the issue had not been discussed by her board yet.

#### **4. Watershed Management Plan: Purpose, Overarching Goals, and Guiding Values**

Lorraine asked the group to review and comment on draft language that will serve as the framework for the watershed management plan (WMP): the plan's purpose, the overarching goals, and the guiding values.

Purpose. Lorraine described the purpose as not just what we are aiming at, but why we are aiming; why are we getting together to write a plan that has no regulatory teeth? The proposed purpose included four points:

1. To tell the story of the watershed and its many interdependencies.
2. To identify and prioritize water-related concerns in the watershed.
3. To outline a strategy to collectively solve our shared watershed problems and collectively manage our shared resources.
4. To better position ourselves for funding; some grant programs give preference to projects identified in regional plans.

Renee Roth, of the Ojai Valley Green Coalition, asked to add something about making information about the watershed readily available to the community. Lorraine said maybe this could be integrated into the first item on the list. [*However, upon further reflection, the "purpose" here is only meant to refer to the purpose of the plan, a document. Outreach is more appropriately addressed in the goals section, which it is in #8.*]

Zia Hosseinipour, of the Watershed Protection District (WPD), mentioned that WPD's website for the watershed is intended to provide detailed information on the watershed, and they are trying to enhance the site so it is easier for people to find information.

Lynn Rodriguez, of the Watersheds Coalition of Ventura County (WCVC), suggested we mention building on what is already there. Lorraine said this could be added to the guiding values section.

Goals. In the past, as part of the process of developing the countywide Integrated Regional Water Management Plan (IRWMP), the Watershed Council had developed a list of five goals for the watershed. In that list, access, recreation, and education were combined as one goal. Lorraine's proposed list comprises eight goals, with education now pulled out as a separate goal (because the nature of the associated implementation projects would

be distinct and separate from those for recreation or access). A new goal for preparedness and adaptability has been added. Lorraine said this was meant to address our ability to adapt and change to current circumstances: how we will work together to respond to climate change, a major flood, a major drought, a major fire, etc. Smart use of land and resources was also added as a goal, as this was not exactly captured in the other categories. The eight proposed goals include:

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.

Greg Gamble asked for more background on the “smart use of land and resources” goal. Lorraine mentioned that she comes from a land use planning background, and thus sees considerable potential for watershed protection through designing our urban areas better to address water needs, and for land use policies such as stream setback ordinances. Land use is often left out of watershed management plans, and instead the focus is on fixing things that are already broken, on restoring habitat that is already damaged. Land use planning offers an opportunity to look ahead, to preventing damage in the first place. This category would also address other use of resources, such as agriculture or oil drilling. We can acknowledge that we need these activities and try to make sure they are done in ways that protects the watershed.

Derek Poultney, of the Hillside Conservancy, asked if there were any city or county planners in the room. (There weren't.) He strongly believes they should be part of this process. Lorraine said she believes that when we are ready to talk specifically about land use planning issues, that we will be able to get planners to attend.

Paul Jenkin, of Surfrider Foundation, asked if we actually anticipate recommending local land use planning regulations. Lorraine said it would be a shame if we did not, but that it would be a recommendation, such as “General Plan policy X should be amended as follows.” She said many WMPs will hint at this; they'll include non-specific, far-reaching goals such as “update your general plan to be sustainable.” Lorraine is hoping we can offer something more useful such as specific code change recommendations. For example, we could ask that the general plan be updated to include the Ventura River Parkway as a proposed parkway, in the same way that a proposed bike path would be incorporated into a general plan. Lorraine said that land use planning and air pollution policy can take considerable credit for why the Ventura River watershed is as pristine and protected as it is today, so we should continue to use these powerful tools. Lynn said that the group has contributed to land use planning efforts in the past, such as the city of Ventura's Westside plan update.

Greg said he might slightly modify some of the wording and concepts, but generally the eight goals capture what he is concerned about in the watershed. Lorraine noted that the wording is not meant to be final, that we will end up fine-tuning the language as we go forward. Lorraine welcomed suggestions to the wording now or later.

Values. The idea with outlining our values is to describe the kind of plan that we want. The five proposed values include:

1. **Our watershed management plan will be pragmatic and “actionable.”** While striving toward the larger watershed goals, our watershed management plan shall nonetheless have a highly pragmatic and financially realistic orientation. Recommendations shall be feasible so that we can celebrate success. We will use common sense, creatively leverage existing resources and data, look for low-hanging fruit, and consider how to get the most “bang for the buck.”
2. **Our watershed management plan will be accessible to the general public.** 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.
3. **Our watershed management plan will be unique.** Our watershed management strategies shall acknowledge the unique circumstances of our particular watershed. We will not mimic language or strategies that do not make sense here. We will encourage innovative ideas and solutions.
4. **Our watershed management plan will address prevention.** Damaged habitats need restoration, but equally important is prevention of further damage. This applies not only to habitats, but also to water supply, water quality, and flood management. We will give due attention to long-term, proactive strategies, such as land use planning policies, that may be more difficult to implement in the short-term, but have the potential for significantly greater and longer-lasting benefit.
5. **Our watershed management plan will be technically strong.** 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.

Will Reed, resident of Ojai and landscape architect/stream restoration specialist, suggested that we add that it should be a living document, that it will go through an annual revision or update so that it continues to be relevant. He also suggested that we explicitly state that it will include recommendations for actions by regulatory agencies, to improve upon existing regulations.

Paul seconded what Will said, because it seems contradictory that our document has no actual regulatory teeth of its own, but we are going to recommend regulatory changes. So he thinks it needs to be made explicit, and offered that that Local Government Commission report on land use planning that came out a few years ago (*Water Resources and Land Use Planning; Watershed-based Strategies for Ventura County*) would be a good place to start. It highlighted where regulations were hindering or helping low impact development. Lynn mentioned that it would be a great part of our planning effort to take a look at that report, which the group never actually did. Mike Hollebrand, of Meiners Oaks Water District, had a concern about how much weight our recommendations would have with the regulatory agencies. His experience with the Matilija Dam process was that the agencies were a little narrow-minded. Lorraine suggested that maybe this speaks to the value of bringing forth policy recommendations from the entire council; maybe the recommendations would have more weight and authority this way. Glen Hawks, consultant with the city of Ojai, mentioned that the city of Ojai is a big part of this effort, and asked that we coordinate with their planning staff as part of this process.

It was agreed that this framework, with the changes suggested, would serve as the working draft for the WMP.

## **Watersheds Coalition of Ventura County**

### **5. Propositions 50 & 84**

#### **6. IRWM Plan**

Lynn explained that the development of the Ventura County Integrated Regional Water Management Plan (IRWMP) was funded by Prop 50. The original plan was adopted in 2006, and that plan now needs to be updated. The updated plan is our key to getting grant funding under Prop 84. Lynn is working on that update with funding from Prop 84, following a new set of guidelines. Lynn will work closely with Lorraine so that the IRWMP update and the more comprehensive WMP are coordinated. The IRWMP tends to focus on projects, and does not drill down to the level of detail required in the WMP. The IRWMP update needs to be done two years from now, but grant funding for the update expires two years from last October. So the aim is to finish by October of 2013. Lynn will be requesting input on the IRWMP update as she moves forward.

The county has been very successful in the grant process thus far. Between Prop 50 and 84, the IRWM program has been able to bring into the county almost \$44 million dollars. Lynn emphasized that in Ventura County we have been so successful in part because of the good collaboration we have, and because we are relatively small. The county's competition in this process is only with four IRWM regions, which include Greater Los Angeles, the upper Santa Clara Region, and the Gateway region down in south bay.

There will be two more rounds of funding under Prop 84. The next one will be in March of 2013. Lynn thinks the state will be releasing about \$33 million next year for the four regions. This time it will be more competitive, as the Gateway region is new. Gateway did not apply in the first round, and they have huge water quality project needs. The remaining funds would be available in the round of funding after that, likely to be in 2015.

Renee asked what needs to be done to be ready for the March 2013 deadline. Lynn said there are other sources of funding, and we should be looking at which projects are most appropriate for which sources of funding. A call for projects by WCVC will probably happen in the summer of 2012. All projects need to be in the IRWMP, but since the update will not be done by then, Lynn will have to do an addendum to the current plan. We'll need to look at what projects are most needed and in alignment with the grant criteria. Each watershed's project recommendations would need to go to the WCVC Steering Committee and then to the full WCVC membership by December 2012 to give enough time for the application to be prepared. Lynn reminded the group that the last application cost about \$200,000 to prepare because of the many requirements.

Renee asked whether the criteria for the grant have been defined. Lynn said they will come out with a new PSP (Proposal Solicitation Package), but she does not expect that to change much from the last time, so we already know the basic criteria. Lorraine will send the old PSP out to the group.

#### **7. Santa Clara River and Calleguas Creek Watershed Committees**

Lynn reported that the Santa Clara River Watershed Committee held a big event at Faulkner Farm in Santa Paula last weekend to celebrate that watershed as part of Watershed Awareness Month. The event included the Los Angeles County side of the watershed. There were speakers, posters, and it proved to be a great celebration of the work being done in the watershed. The posters created for that event are now on display in the lobby at the Ventura County Government Center. Several free watershed tours are also planned, including one by the Nature Conservancy on their river property; the agriculture museum in Santa Paula is offering free admission on May 12; and on May 19 there will be two tours, one of a restoration effort on a creek in Santa Clarita, and one of La Verne Nursery in Piru, a very large nursery (about 150 acres) that grows fruit stock trees for the retail market, and which uses a recycled water system. The Santa Clara River had a Watershed University in 2005, so

this was sort of a follow-up from that. They are going to be looking for support to fund at least a part-time watershed coordinator.

## Updates/Discussion

### 8. Local Groundwater Assistance Grant

Bert Rapp, General Manager of Ventura River County Water District (VRCWD), reported that the guidelines for the state's Local Groundwater Assistance Grant just came out. Proposals are due July 13, 2012. The grant amount is \$250,000, and public agencies are eligible to apply. The city of Ventura, Meiners Oaks Water District (MOWD), and VRCWD are planning to submit a joint application to study the surface water-groundwater interactions in the Ventura River from the Foster Park area up to the mouth of Matilija Canyon. They are interested in knowing if water district pumping of groundwater has an influence on flow in the river, and if so, how much. To understand this, the groundwater-surface water interaction needs to be monitored over many years. They hope to use existing wells. This grant would enable them to do the first year or two of monitoring and begin to understand this relationship. MOWD has started some initial monitoring work on this issue using the services of Kear and Associates, focusing just on the effects of MOWD's pumping on the river, and just over a few month period. This information will be available on MOWD's website when they receive it from the consultant.

Zia noted that as part of the V1 project (Prop 84 funded studies), WPD did a groundwater management assessment of the whole Ojai basin, so they have good information on the older wells in that basin.

Shirley asked whether this kind of study would feed into a groundwater management plan for the Ventura River basins. Bert said yes, that they need this kind of information to guide a groundwater management plan. Bert imagines that five to seven years of data collection are needed.

The question was asked why they couldn't proceed now with a groundwater management plan. Bert said because of money and resources. They felt the highest priority was to gather data on the groundwater-surface water interaction. If they wrote a plan, it would say that the highest priority would be to gather that information. If there were unlimited resources, they would do everything at once. Shirley asked how much he thought a groundwater management plan would cost. Bert said they did not cost that out. The grant's \$250,000 may only provide one year of monitoring, and they'd like five to seven years. Shirley suggested that it would be a good idea to have a budget for that, so it is ready and on the shelf should a source of money become available. Zia said he thought it was a good strategy for them to begin the process by identifying the sites and instrumenting the wells and gathering a couple years of data, then they will be in a better position to know what it is going to cost. Zia said to develop a groundwater management plan you need data for one hydrological period, in this case five to seven years; once they have that data they can begin putting that plan together. Mike said this is also dependent on how soon agencies want to regulate their pumping.

Shirley offered to have the RWQCB write a letter of support for the groundwater grant proposal.

### 9. Bren School Project

Austin Love, a student in UCSB's Bren School, studying water resources management, provided a presentation on a group project they are beginning on the Ventura River watershed. Jake Sahl, on the project team, was also present. All the students on the team are first year graduate students. Over the course of one year, the team will develop a comprehensive and dynamic water budget for the watershed, and then based on that budget, examine a series of potential watershed-level scenarios. They will be integrating existing water data into one place. They will be using a software tool called WEAP (Water Evaluation and Planning System). The model has been used by the California Department of Water Resources, the EPA, and the Army Corps of Engineers. It has been used to answer lots of different questions, such as on climate change, agricultural demand, and Steelhead recovery.

The model input data includes things like surface water data, reservoir data, diversions, demand-side data, temperature, evapotranspiration, land use change. The model also allows you to enter economic, climatic, and ecologic data, into that same system. It allows you to make watershed-level decisions, and to zoom in and out to different scales.

After the water budget is developed, WEAP can be used to look at different scenarios of interest in the watershed. For example, we might look at urban greywater use; how would increased use of urban greywater affect groundwater? Could greywater use extend the season before local water districts have to start using Casitas water? And you could also ask what the energy savings from a scenario like that would be.

Another scenario might ask whether installing decentralized wastewater treatment in Ojai could be used to augment groundwater supply? Another issue the WEAP model can analyze is climate change. You can enter expected scenarios of temperature rise and precipitation or evapotranspiration and it will model how groundwater and surface water supplies might be affected.

When their project is done the goal is to pass the model and data on to the Watershed Council so it can continue to be used for analysis at the watershed scale.

Austin sought direction from the Council on the project to make it maximally useful. Bert asked how many rain years they will be basing the model on. Austin asked for Bert's suggestion. Bert said 20 to 30 years should be the minimum. Jake said that a great thing about the model is that it is fairly simple to use, so we could update the data in the future as more information becomes available.

Dale offered a scenario suggestion. Orchards make up about 90 percent of agricultural land in the watershed and strawberries and row crops make up the other 10 percent; what if the tables were turned, and high-water using strawberries and row crops made up 90 percent of the watershed?

Greg asked what the biggest data gaps are that are going to hinder use of the model. Austin said the groundwater-surface water interaction that was discussed today is one important gap. He said that the data gaps that they've identified are from the Carndo-Entrix study that came out in February. Another data gap relates to how much groundwater is pumped by agriculture. So they'll need to make some estimates based on crop type and typical water use rates.

Zia said in most of these types of models, water use is the biggest data gap: who has used the water, how much, and when. Zia said the WEAP website has a compendium of all the purposes the model has been used for across the world, and that the papers and reports on that site may be useful to the team. They may want to develop a table that shows the different scenarios the model has been used for and what the result has been. Many of those papers also list the limitations of the model, and almost all of them are related to data. Austin said the team has been looking at the reports on WEAP's website.

The students will have their project proposal complete by mid-June. By the end of the summer they hope to have the model loaded with data; and after that they will start looking at their scenarios.

Ron Merckling said that groundwater is more typically seen as the backup source of water, but in our watershed the surface water is the backup source. So in drought periods, you see a significant increase in demand on the surface water. With regard to climate change, it is very difficult in this watershed to determine what the changes are going to be long term. We've seen in the last 10 years higher variability than normal in drought and rainfall, but it is too little data to ascertain any actual pattern. So the long time span baseline needed to address the variability in our watershed is made even more difficult when we see that variability increasing. This makes coming up with a budget presents real challenges.

Mike said it sounds like the team is going to put out some good work and he looks forward to reading it. He said when the phrase “water budget” is mentioned, you get the attention of pumpers like MOWD and VRCWD. He thinks they are onto some good stuff with the greywater also, and he offered the team his support.

Ron echoed Mike’s comments, and said that even though we have existing reports and water budgets, it is always good to have fresh eye looking at the situation and potentially offering a new perspective.

Lynn asked about the entitlement to state water, and whether the team will be looking at that as a possibility. Austin said their plan was to just focus on local water supplies, though that issue could come up in the economic analysis, for example looking at the cost of new water from greywater and the like versus importing state water.

Bert asked whether, on the concept of capturing wastewater before it moves down the valley, they would be looking at water quality issues, like the buildup of chlorides that may be associated with that. Chlorides can make their way into drinking water, and then people soften their water more, causing even more buildup. This can be a major concern. Austin said they would like to look at this, and are still learning what the model is capable of in that regard.

Paul and Lorraine suggested that we help the team get the best possible start on this project by holding a subcommittee meeting with them soon. Lorraine will organize that soon.

#### **10. New Watershed Documents Inventory**

Lorraine has compiled an Excel spreadsheet of watershed-related documents, reports, and ordinances. This document is on the website, and continues to be regularly added to. She circulated part of the spreadsheet showing the list of documents currently in the spreadsheet and indicated who they were prepared for or by, and asked for the names of any documents that are missing from the list. This spreadsheet includes links to the documents on the web. It is a rich resource to have, and has already proven very useful. The emphasis for the compilation is documents that may be useful for development of the watershed management plan, and not all historical documents. Lorraine noted that the Friends of Ventura River have also been compiling a document inventory on their website, including important historical documents they have scanned.

#### **11. Water Awareness Month**

Lorraine distributed the Ventura River Watershed Awareness Month calendar of events, which was developed by Cinnamon McIntosh, Water Conservation Specialist with the Casitas MWD, and a small team of partners from the watershed. Help promoting the events was requested.

#### **12. Next Meeting**

So far on the agenda for next meeting are two items related to the IRWMP update: climate change and a data portal, as well as the upcoming Prop 84 grant process. No other items were requested for the agenda by the group.

#### **Next Watershed Council meeting:**

**June 13, 2012**

**Ventura County Government Center, 800 S. Victoria Avenue, Ventura**

**8:30 a.m. – 9:50 a.m. (Water Quality Subcommittee), Atlantic Conference Room**

**10:00 a.m. – 12:00 p.m. (regular meeting), Multipurpose Room**

#### **Acronyms**

CEDEN..... California Environmental Data Exchange Network

CEQA ..... California Environmental Quality Act

CWQMC.. California Water Quality Monitoring Council  
EPA ..... United States Environmental Protection Agency  
IRWMP.... Integrated Regional Watershed Management Program  
MOWD.... Meiners Oaks Water District  
NNE..... California Numeric Nutrient Endpoint  
OFG..... Ocean Friendly Gardens  
OVSD..... Ojai Valley Sanitary District  
RCD..... Resource Conservation District  
RWQCB... Regional Water Quality Control Board  
SCCWRP.. Southern California Coastal Water Research Project  
SMC ..... Stormwater Monitoring Coalition  
SWAMP... Surface Water Ambient Monitoring Program  
SWRCB.... State Water Resources Control Board  
TMDL ..... Total Maximum Daily Load  
USFS..... United States Fish and Wildlife Service  
USGS..... United States Geological Survey  
V1 ..... Ventura River Watershed Protection Project Grant  
VCAILG .... Ventura County Agricultural Irrigated Lands Group  
VRCWD ... Ventura River County Water District  
VRWC..... Ventura River Watershed Council  
WPD..... Watershed Protection District  
WCVC..... Watersheds Coalition of Ventura County