

M E M O

TO: Board of Directors

FROM: Betsy Herbert, Ph.D.

SUBJECT: ENVIRONMENTAL PROGRAMS STATUS REPORT
WEEK ENDING JULY 27, 2007

DATE: July 26, 2007

RECOMMENDATION:

It is recommended that the Board of Directors review and file the Environmental Programs status report for the week ending July 27, 2007.

BACKGROUND:

WATERSHED MANAGEMENT PLAN

This project consists of a complete review and update of the District's Watershed Protection Plan adopted November 4, 1985. Staff is completing the administrative draft for Part One of the Watershed Management Plan; Existing Conditions Report. The administrative draft for this section of the report has been reviewed by the Environmental Committee at their January 25, 2007, March 1, 2007, March 15, 2007, April 19, 2007, May 3, 2007, May 24, 2007, June 11, 2007, and July 19, 2007 meetings. An Environmental Committee meeting is scheduled for August 16, 2007 to review the completed Administrative Draft. Staff continues work on activities associated with Part Two of the Watershed Management Plan; Policies, Practices and Recommendations.

WATER CONSERVATION

Staff has drafted a letter to all owners of restaurants in the District's service area, asking restaurants to serve drinking water to their customers only on request. This is part of the District's drought contingency water conservation program, which was approved unanimously by the Board on June 21, 2007. Staff communicates routinely with other representatives of the Santa Cruz County Water Awareness Committee, relating to its campaign of water-wise gardening and conservation in landscaping.

DISTRICT EDUCATION GRANT PROGRAM

Staff continues to solicit and evaluate completion reports for 2006 Education Grant recipients.

WATER SUPPLY MASTER PLAN

Staff met on July 25 to review sections of the Administrative Draft of the Water Supply Master Plan with the District Manager, the Director of Operations, and Water Resources Consultant Nicholas M. Johnson, Ph.D.

CLIMATE CHANGE

Staff is exploring partnerships with other water agencies in funding a research proposal from Peter Gleick, Ph.D., and in sponsoring a climate change/water resources forum to include Dr. Gleick's presentation, and other local climate change experts.

Staff mailed the District's Statement of Intent Form to the California Climate Action Registry on July 26, indicating the District's intent to inventory, certify, and report its greenhouse gas emissions.

FISHERIES SAMPLING IN ZAYANTE CREEK

On July 27, staff accompanied NOAA fisheries biologists led by Brian Spence, Ph.D. to the District's Zayante property to observe and photograph sampling activities on the Zayante Creek at Site SL249. This sampling is part of NOAA's random sampling research project in San Mateo and Santa Cruz counties (Attachment 1).

The last sampling took place at the same site on September 18 and 19, 2006 (Attachment 2). At that time, 74 pools were surveyed on a reach length of approximately 1,280 meters. Steelhead were found in 92% of the pools sampled. Young-of-the-year fish were found in 91% of the pools. Age 1 fish were found in 42% of the pools. Age 2+ fish were found in 26% of the pools. Sacramento suckers were also found. No coho salmon were observed.

Betsy Herbert, Ph.D.
Environmental Analyst

BH/bsb



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
Fisheries Ecology Division
110 Shaffer Road
Santa Cruz, California 95060

Attachment 1

June 15, 2007

Betsy Herbert
San Lorenzo Valley Water District
13060 Hwy 9
Boulder Creek, CA 95006

Dear Ms. Herbert:

Last summer, we contacted you about a fish survey we were conducting in Zayante Creek, which flows adjacent to San Lorenzo Valley Water District property on Zayante Road. During our conversation, you indicated that you would be interested in receiving a summary of our findings. Thus, I wanted take a moment to thank you for your assistance on this project, as well as to provide you with a little more detail about the nature of our study, what we found during last year's surveys, and our plans for the upcoming summer.

As the agency responsible for evaluating the status of salmon and steelhead populations, the National Marine Fisheries Service has been hampered in this task by the lack of quantitative information on the abundance and distribution of these species throughout the Central Coast region. There are several research and monitoring efforts ongoing in local streams, and these efforts can be useful in determining trends in abundance or distribution of fish for the specific stream reaches being examined. However, there is currently no systematic, random sampling of streams that would allow us to evaluate patterns and trends in abundance or distribution over broader geographic areas (i.e., outside of those reaches surveyed).

The goal of our research project is to provide scientific guidance on how to design and implement such a monitoring program in Santa Cruz and San Mateo counties. One of the key questions that we are seeking to answer is how to best design sampling strategies and protocols to detect fish species in streams when they are not very abundant or when their distribution is very "patchy" across the landscape. For example, is it best to sample a small number of sites very intensively (e.g., survey the entire reach)? Or should we sample a larger number of sites, but do so less intensively (e.g., survey only certain habitat types, such as pools, or only a certain fraction of the habitat units).

The studies we conducted in 2006 were the first step towards answering these and other questions. Overall, we surveyed 47 randomly selected streams reaches, each about 1.0 km in length, in Santa Cruz and San Mateo counties. Snorkelers surveyed every second pool habitat (defined as any water greater than 12 inches deep) within each reach and recorded the occurrence of coho salmon and steelhead. For about half of these reaches, we returned to survey a second time to determine how often our initial survey failed to detect a species when it was actually present, either because we did not detect fish in the habitats we surveyed or because they were present in habitat units that we did not sample in our initial survey. Over the entire study area, which extends from the San Gregorio watershed in the north to the Aptos/Valencia Creek watershed in the south, we detected coho salmon in only two of the stream reaches we surveyed: Scott Creek and San Vicente Creek. Both are locations where



coho salmon have been recorded in the recent past. In contrast, steelhead were detected in almost all stream reaches surveyed, though sometimes in low numbers. I've enclosed a sheet that briefly summarizes what we found in Zayante Creek.

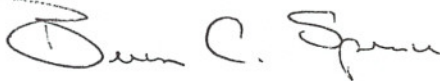
We plan to continue our study for the next two summers so that we have a more complete picture of coho salmon distribution across a full generation. Hopefully, this will provide us the ability to examine distribution patterns in years of differing abundance. Assuming all goes as planned, the surveys would be conducted between July 16 and September 28.

We will likely survey most (about 80%) of the study sites that we visited last year, along with some new sites as well. Thus, we would again like to request permission for NMFS crews to access our study site on Zayante Creek through San Lorenzo Valley Water District property. I have enclosed a form that you can fill out to indicate your willingness to further participate in our study, along with a self-addressed stamped envelope. If you could please take a moment to complete and mail the form, it would help us greatly streamline the process of obtaining access to our study streams. We strive to contact all landowners along a stream before conducting our surveys, so it can be a very time consuming process.

We sincerely appreciate your interest in our project and thank you for your support. If you have any further questions about the nature of our research or any other issues you would like to discuss, please do not hesitate to contact us. My contact information is listed below.

Thank you again for your help last year.

Sincerely,

A handwritten signature in dark ink, appearing to read "Brian C. Spence". The signature is fluid and cursive, with the first name "Brian" and last name "Spence" clearly legible.

Brian C. Spence, Ph.D.
Research Fishery Biologist
National Marine Fisheries Service
Phone: 831-420-3902
Email: Brian.Spence@noaa.gov

Summary of Survey Findings for Zayante Creek Site SL249 - Summer 2006

Site Number: SL249

Survey date: 9/18/06 and 9/19/06

Reach length: ~ 1,280 meters

Number of pools surveyed: 74

Aggregate length of pools surveyed (2-day total): ~ 860 meters

Fish species observed: Steelhead, Sacramento sucker

Summary:

This reach was surveyed on consecutive days in September, with alternate pools surveyed on the second pass to help estimate the probability of failing to detect fish due to the protocol of sampling only every second pool. Overall, steelhead were found in 92% of the pools surveyed. Young-of-the-year fish were common, being found in 91% of pools surveyed. Age 1 and age 2+ fish were found in 42% and 26% of the pools, respectively.

No coho salmon were observed during the survey. This is not surprising, as observations of juvenile coho salmon in the San Lorenzo watershed have been extremely rare over the last 25 years.

Site Map:

