

M E M O

TO: Board of Directors

FROM: Environmental Analyst

SUBJECT: EDUCATION GRANT PROGRAM FINAL PROJECT REPORT;
“WATERSHED CRUZIN’ TEACHER WORKSHOPS FOR
SAN LORENZO VALLEY AND SCOTTS VALLEY TEACHERS
IN GRADES 4-8”

DATE: July 23, 2007

RECOMMENDATION

It is recommended that the Board of Directors review this memo and accept the Education Grant Program Final Project Report for “Watershed Cruzin’ Teacher Workshop for San Lorenzo Valley and Scotts Valley Teachers in Grades 4-8.”

BACKGROUND:

At the April 20, 2006 Board of Directors Meeting, your Board awarded Education Grant Program funds in the sum of \$2,500.00 to the Santa Cruz County Resource Conservation District (SCCRCD) for a project entitled “Watershed Cruzin’ Teacher Workshop for San Lorenzo Valley and Scotts Valley Teachers in Grades 4-8.” The project provided funds to conduct a series of eight teacher workshops in 2007 to detail for teachers what meaningful watershed experiences entail. The workshops were conducted by teachers and education specialists, and based on the Watershed Cruzin’ activity guide. A total of 56 teachers from throughout the county attended the workshops, including Santa Cruz County Office of Education Outdoor Science Camp instructors.

On June 13, 2007 the District received the SCCRCD’s Final Project Report. See Attachment 1. It is recommended that your Board receive and accept the Education Grant Program Final Project Report for “Watershed Cruzin’ Teacher Workshop for San Lorenzo Valley and Scotts Valley Teachers in Grades 4-8.”

Betsy Herbert, Ph.D.
Environmental Analyst

BH/bsb

**San Lorenzo Valley Water District
FINAL REPORT NARRATIVE
Watershed Cruzin' Teacher Workshops for San Lorenzo Valley
and Scotts Valley Teachers in Grades 4-8**

The goal of *Watershed Cruzin'* teacher workshops is to increase the depth and breadth of environmental education taught in the classroom. This goal is met by encouraging and supporting teachers in grades 4-12 to use local watersheds as a learning environment for meaningful outdoor experiences. The curriculum used was the 312-page *Watershed Cruzin': An Activity Guide to Santa Cruz County Watersheds*, a publication funded by the Coastal Conservancy and the California Coastal Commission through the Santa Cruz County Resource Conservation District.

The objectives of the teacher workshops were formulated for San Lorenzo Valley and Scotts Valley teachers in the 2006-07 school year. The teacher objectives of the workshops included the following:

- Learn how to use *Watershed Cruzin'* effectively to meet their particular classroom needs.
- Understand what a meaningful watershed experience involves: project-oriented, hands-on, and activities; part of a sustained activity in the classroom and field; reflect an integrated approach to learning (including art, science, history, economics, and politics).
- Learn how to use their local watershed to conduct meaningful watershed experiences that establish a direct link between students' lives and their connections to the Monterey Bay National Marine Sanctuary (PowerPoint presentation).
- Encourage students to become stewards of their environment and provide opportunities to become involved in Monterey Bay National Marine Sanctuary and community conservation ventures and field projects (First Flush, Snapshot Day, restoration activities at state parks, etc.).
- Become adept at accessing and printing GIS maps, historical images, and site-specific maps containing local streams, land use information, topographic charts, on the *Watershed Cruzin'*
- CD-ROM, and use the resources in two (per teacher) of twenty-five *Watershed Cruzin'* activities.
- Be able to cite the state content standards the activity guide addresses, and explain how conducting the activity is in alignment with their required curriculum.
- Involve students in their own investigations of watershed issues and problems, and assist them as they develop hypotheses, collect data, and evaluate data. This includes integration of economics, history/social sciences, art, and math into their watershed studies.
- Learn how to successfully collaborate with federal, state, and countywide agencies and organizations for classroom presentations and field trip opportunities (these organizations are partners in the larger grant that supports *Watershed Cruzin'* and contact information is listed).

The teacher workshops were held at the Santa Cruz County Office of Education, Wetlands Education and Resource Center (WERC) at Pajaro Valley High School, and the Seymour Center at Long Marine Lab, UCSC. SCCOE and Seymour Center provided excellent field sites to conduct activities described in *Watershed Cruzin'*. The workshops included a general introduction to watersheds of Santa Cruz County; instructions on how to use the *Watershed Cruzin'* CD-ROM for creating GIS maps for classroom use; teaching tips for using the guide, and hands-on demonstrations of integrating watershed studies into the classroom through science and art activities. Funding for similar workshops in north, mid- and south Santa Cruz County has been provided by the National Marine Sanctuary B-WET program (Bay-Watershed Education and Training).

The two-hour workshops were co-taught by Julia Davenport, education coordinator of the *Watershed Cruzin'* curriculum project; Barbara Novelli, mentor fourth grade teacher at Bay View Elementary, Santa Cruz City Schools; Lynn Guenther, SPECTRA artist and watershed arts education specialist; watershed agency and non-profit organization guest speakers who described their pieces of the watershed puzzle and provide insights on natural resources and agency functions in the San Lorenzo River watershed and other Santa Cruz County watersheds.

The *Watershed Cruzin'* workshops detailed for teachers what meaningful watershed experiences entail: they are project-oriented, hands-on, and investigative; they are part of a sustained activity; they reflect an integrated approach to learning (including art, science, history, economics, and politics); and that sharing and communicating with their peers is part of creating a watershed ethos of which all are a part.

Workshops

Eight workshops were held on different weekdays in fall and winter 2006-2007, from 4:00 to 6:00pm. A final workshop was held early summer 2007 at the Seymour Center. The following format was followed at each workshop.

- 10 minutes: Introduction
- 10 minutes: PowerPoint presentation of watershed to the sanctuary connections, MBNMS
- 20 minutes: guest speaker (Appendix B. IWRP Partners)
- 30 minutes: How to use *Watershed Cruzin'* activity guide and inclusive GIS software to create maps for your classroom
- 40 minutes: hands-on "how to" field demonstration of activity from *Watershed Cruzin'*. Demonstrations included presentations and activity modeling by two specialists. Barbara Novelli, a mentor fourth grade teacher who specializes in using watersheds as a classroom focus for integrating science, math, and art. Lynn Guenther, a SPECTRA artist, provided a Powerpoint presentation with a mini-history of art in nature, and demonstrated art techniques and materials.

There was also a special five-hour workshop in late January for the Santa Cruz County Office of Education Outdoor Science Camp instructors. Fifth graders from most schools in Santa Cruz County attend this camp, and the workshop provided an excellent

opportunity to reach educators who have exposure to fifth grade students for an entire week. For many of these students this week at outdoor camp is the most memorable experience of their elementary school years, and for some of them, the first time they have been in a forest or known they were in a watershed.

The eight workshops were attended by a total of 56 teachers. At the time of this report, the July workshop had not been held so the teacher statistics do not include teachers from the final workshop. Ten of the workshop teachers were from Scotts Valley or San Lorenzo Valley Schools. We tried numerous methods to recruit more teachers from these schools (direct mail to the teachers, emails, phone calls) but were unsuccessful. However, the teachers who attended from Scotts Valley Middle School were particularly interested, as their principal has mandated that watersheds will be the curricular theme for the entire school next year and in the future.

Performance Measures/Assessment

Integrated into the program was a pre-workshop survey of each individual teachers' backgrounds, content knowledge, experience, and specific teaching challenges to provide a baseline for evaluating possible causes of differential learning results among students in different classes. All efforts were made in the workshops to address ways to adapt the activities to best handle these challenges (i.e., ELD, SDAIE, budget, space, and other classroom limitations). In addition, this data will be used to compare pre- and post-workshop survey results to determine possible correlations between teacher profile and ease of using the guide.

A survey was sent to teachers three months after the workshop, to give them sufficient time to complete an activity and report their experience. Twenty-two teachers returned the survey. Excerpts from these surveys are in Appendix B. Teachers had the opportunity to provide verbal and written feedback to *Watershed Cruzin'* workshop staff via telephone and e-mail.

Two classroom observations were conducted with a teacher at Main Street Elementary in Soquel. The 25 students conducted stream water quality measurements in Soquel Creek, using some of the materials provided by the *Watershed Cruzin'* workshop program. The students showed active engagement and were extremely responsive to teacher questions, remembered details of a stream field study they completed four months earlier, and were enthusiastic and knowledgeable.

One measure of success came about rather unexpectedly. In the original Sanctuary grant program (B-WET), we had asked for a materials budget to give all teachers who attended workshops some materials to help them get started on one of the activities. However, we had such a variety of grades represented at each workshop, it was implausible to give materials in a "one size fits all" approach. *Watershed Cruzin'* activities follow grade-specific science content standards mandated by the California Department of Education. Content standard alignment is required of all materials used in public schools, and the content standards (that is, the content the students are expected to learn) are different for each grade. Each grade-specific *Watershed Cruzin'* activity requires materials specific to

that activity. After the first two workshops, we realized that among workshop participants there was a wide variety of grade levels, teacher experience, comfort level with teaching science, and access to field sites. Some teachers were ready to go, tomorrow, to start their watershed explorations, and had previous experience in teaching about watersheds. Others, however, did not appear to be ready to begin, and the whole idea was overwhelming. Giving these teachers materials that may never be used ran the risk of having them gather dust in closets.

We made a request to the sanctuary to offer these funds to teachers who were either close to or already conducting watershed explorations, in the classroom and/or the field. They granted this request. We then requested all teachers who had attended a workshop to submit a short proposal that outlined their watershed program, existing or planned, and what they needed for materials. Fifteen teachers submitted requests for funds that ended up totaling about \$4000. Four of these teachers were from Scotts Valley and San Lorenzo Valley schools. Therefore, the teachers who attended the workshops from these valleys represent roughly one-fourth of Watershed Cruzin' workshop teachers who plan to be or are actively engaged in watershed studies. This is a higher percentage of teachers with active programs than anywhere else in the county.

In addition to the above benefits, many activities in *Watershed Cruzin'* can be turned into community outreach projects for students, and we anticipate seeing representations of these efforts in the coming school year. This may be in the form of more students involved in local watershed issues, speaking up for watersheds in a variety of ways (posters, letters to the editor, attending public meetings on land use, etc.). With the solid background they have received through *Watershed Cruzin'* activities, teachers and students have opportunities to share their watershed knowledge and experiences in a number of established venues either as partners with local agencies and organizations or as individuals at Santa Cruz County Science Fair, Resource Conservation District of Santa Cruz County, Water Wise presentations, State Parks, etc.

Reflection

Reflection is a valuable method that is encouraged in teachers to improve their practice. It is therefore invaluable for us to reflect on how we teach teachers, and how to improve our program to best support teachers wherever they are in their professional development curve.

We have learned that teachers, now more than ever, are under great pressure to ensure that their students meet a multitude of performance measures, from daily quizzes to yearly standardized tests. And, that schools are being evaluated by their students' performance. This means that teachers have less time to devote to activities and lessons that are outside their state-mandated textbooks. Environmental education, much less watershed education, is not included in their textbooks. However, there are teachers who are willing to take the risk, time, and devotion to align materials, activities, and ideas into the curriculum, and need materials support to do this. Often they do it on their own time and their own dime.

The teachers' proposals (Appendix B) provide an inside look at what some of these teachers are doing. Without programs like Watershed Cruzin', and the San Lorenzo Valley Water District support, these students would lack the opportunity to access their environment in an academic setting. Making connections between science concepts and local streams and watersheds and the fish and invertebrates that live in them, helps students become more invested in keeping their watershed healthy and functioning, and help them develop an environmental ethic that is based on knowledge, not slogans.

To best serve teachers' needs, our future programs will ask less of teachers to go outside the classroom for workshops, but provide more support to the teachers in the classroom. We will organize a "lending library" of sorts with grade-specific watershed materials that teachers can check out. We will offer to come into their classroom and conduct Watershed Cruzin' activities with their students. We will offer to take students out on walking field trips. And, we will continue to be amazed at the dedication of these teachers, and the positive, lasting affect they have on their students.

Appendix A: List of program partners.

Appendix B: Materials requests from teachers.

Appendix C: Some comments from teacher surveys.*

Appendix D: Some pictures from Teacher Trainings

*If requested, we can send an addendum of teacher comments after all the survey responses have been tabulated.

Appendix A Program Partners

Matching funds were granted from the National Marine Sanctuary B-WET program (**Bay-Watershed Education and Training**) for two teacher trainings in the San Lorenzo Valley in addition to similar workshops in mid- and south Santa Cruz County.

The Coastal Commission also awarded funding to the RCD for reproduction of materials. Resource professionals have committed their time to prepare, coordinate, and co-lead teacher trainings with Julia Davenport, project manager.

The Santa Cruz County Resource Conservation District provided project oversight for the project and the Natural Resources Conservation Service provided photocopying costs.

The Coastal Conservancy funded the development of *Watershed Cruzin': A Watershed Activity Guide for Santa Cruz County* through the Integrated Watershed Restoration Program (IWRP). IWRP is a California model of a county-wide watershed management program bringing together federal, state, and local agencies and organizations to work with landowners to restore impacted watersheds.

Appendix B
Requests for Materials Budget from
Watershed Cruzin' Workshop Attendees
31 May 2007

As part of our ongoing research of our local Pajaro River Valley Watershed at the headwaters in the Santa Cruz Mountains, we have been studying Mount Madonna Lake, a natural water reservoir with human made adjustments to it to all for more acre feet of storage. It takes a fair amount of runoff out of the flow toward the Pajaro River which helps in times of severe rains which might cause flooding. In addition, it provide a needed summer watering requirement by a student run garden and fire fighting protection for the MMS community. Our study in the coming year will continue our ongoing monitoring with the addition of a study on evaporation rates and the discovery of a potential "leak" in the lake which allows for the lake to go down considerably in the summer and fall.

We want to monitor this process and change.

We will need:

16 meter stick at \$5.00 each = \$80.00

Monitoring probes: flow rate sensor: \$129.00; pH sensor: \$78.00; soil moisture sensor: \$89.00

If the project can help with any of this that would be great.

thanks

jim rohan

Mount Madonna School

491 summit road

watsonville, ca

95076

My name is Sally Ghilarducci and I teach 7th grade biology at Scotts Valley Middle School. After going to the Watershed Cruzin' workshop at the Seymour

Center, I was really inspired to incorporate watersheds and art into my biology curriculum. This year, we went on a preliminary walking field trip to Evers Creek in Scotts Valley to make observations in field journals. Students made observations of the stream at 2 locations and we discussed watersheds and how they relate to the water cycle and oceans.

Next year, I plan to do some ongoing stream & watershed studies with my students. I'd like to do more quantitative measurements such as calculating stream flow and channel depth at different times of year. I'd also like to have students collect data on water quality and macroinvertebrate populations. We can easily share supplies within our science department at SVMS.

The following items are listed in order of preference if funds are limited.

Item	Quantity	Price	Total
Aluminum meter sticks	10	\$5	\$50
Reagents for O ₂ ,NO ₃ ,etc		\$40	\$40
Asst. Field guides	5	\$20	\$100
Magnifying lenses	15	\$2	\$30
Collecting buckets	10	\$3	\$30
Rubber boots	5 pairs	\$10	\$50
Total requested		\$300	

Sally Ghilarducci 268 Calvin Place, Santa Cruz 95060

Thank you for your email about the funds for watershed exploration. School is out and I don't have my Watershed Cruzin materials at home so I don't have exact information. I do know that next year I would like to make watershed tables with my 6th grade students. We made them this year using Diatomaceous Earth and sand and it worked great. Students were able to track and map the changes, compare their tray with other trays, add food coloring and experience the results, see how far sediment is carried and make other observations. It was both fun and educational for the students. Unfortunately much of the Diatomaceous Earth was not salvageable after three classes used it for two weeks.

It would be great to have funds to replenish the Earth and sand for next years activities. Looking online, I think I can get a 50lb bag of earth for \$33.00 and a 25lb bag of sand for \$15.00. Total amount needed for supplies would be about \$48.00 plus tax, \$51.83.

Thank you again for the opportunity to request watershed funds. If the request is approved, please send the check to:

Lisa Price
Calabasas Elementary School
202 Calabasas Road
Watsonville, CA 95076

or

Lisa Price
3085 W. Ledyard Way
Aptos, CA 95003

I will definitely continue my watershed project next year. The students and I really learned a lot with Debie Chirco and the GO program this year.

I teach 4-6 grade Science at Valencia and I will need new journals for my incoming 4th graders,(5th & 6th can still use the ones from this year) It will be a big class, about 105 students.

So I need about \$300 (105 x 3) to buy new journals. I'm not sure how much money is available so anything you can give us would be greatly appreciated. I am also thinking of buying about 6-10 good compasses and more rubber boots.

Thanks,
Cathy Guiley

I have some items I would like for my classroom as per your request regarding watershed equipment, that is if you still have funds.

Waders \$35 x 5 pairs = \$175
Soil Analysis kit = \$255
Plankton Net = \$50
Field Presses \$20 x 6 = \$120

Thank you,

Robin Davis
Scotts Valley Middle School
You can send the equipment check to my home address
which is 126 Tree Frog Lane, Santa Cruz, CA 95060

Dear Ms. Davenport,
Thank you for the email regarding the funds available to teachers that attended the Watershed Cruzin workshop.

After attending your workshop I realized that I had not adequately covered the watersheds topic with my students. I want to take some time this summer to revamp my unit, incorporating your 6th grade lessons on watersheds. At the same time I want to tie this unit to my unit on mapping. I want students to have a better understanding of topographic maps and how the lay of the land determines where water flows. I'd like students to use 3 dimensional models to create topo maps and see where water flows over these maps. I was also excited to receive from the Scotts Valley Water Waste Treatment Plant class sets of pamphlets on water curriculum. In the pamphlets they provided, there is a fold out county map of our watersheds! Im very excited about the prospect of incorporating new materials and teaching methods to make a great mapping and watershed unit for the coming year.

Materials that I am requesting would be shared amongst the science department at my school and be used by approximately 200 6th graders. If funds are still available, I would love to request the following materials:

Item	Qty	Price	Total
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Contour Kit - 3D models			
Demonstrates how contour lines are used to show elevations.	9	18.95	170.55
Orienteering and Map Games for Teachers	1	13.95	
13.95			
Includes map relays, watershed mapping, contour games, etc.			
How to Teach with Topographic Maps	1	14.95	14.95
How to visualize 3D using 2D maps, plans or models			
Rivers, the Hands-on Approach to Geography	1	6.95	6.95
Where rivers come from, how they form valleys & caves, create energy and support life.			

Thank you so much for your consideration,
 Renae Fish
 Scotts Valley Middle School

Home: 31 Apple Valley Rd, Scotts Valley, CA 95066

Hi Julia,

I received your email about the last minute funds request for those who participated in the Watershed Cruzin' workshops and I would like to submit the following request. 7th grade (and one 6th Math/Sci core). You could send the check to our school address (201 Brewington Av, Watsonville, CA 95046)./ Michael Cunningham

I would like to purchase a "Water Quality Educator and Monitoring Outfit" (Fisher Sci Pg 488 - \$369+tx)) for use next year with my Life Science Classes. This (last) year we conducted several experiments from the teacher guide (mostly involving Hydrology) but this coming year we are planning field trips to the Elkhorn Slough Watershed to study both the fresh and salt water environments. This handy kit will allow us to test for 7 basic water-quality factors, incl pH, nitrate-nitrogen, phosphate, dissolved O2, temp, turbidity, etc. A CD is also available for additional cost as well as test refills. Let me know what resources you have at the end of this grant cycle and I will surely put any of those funds to good use. Thanks/

Sincerely,
 Michael Cunningham
 EA Hall
 201 Brewington Av
 Watsonville, CA 95076

My classes would like to have journals and colored pencils to illustrate their discoveries. I think there will be 60 students- 30 from each core class.
So the total requested would be 60 science journals at \$3.00 each
And 60 sets of colored pencils at \$2.00 per set. The total requested is
\$180 for watershed science journals and \$120 for colored pencils.

Thanks again. It is so important for each student to have something that they can call their own- a set of pencils and their own journal for the year. This generosity makes students feel important and helps them to develop a sense of nature and their ability to interpret and share their experiences with others.

I will be teaching 6th graders at Branciforte Middle School next year.
Please send the funds to my home address for the summer. It is:
Jean Mahoney
3035 Buckingham Lane
Santa Cruz, CaA 95062

Hi Julia,

At the moment I'm in Costa Rica. If there's \$ for 2nd graders to get a field journal each, \$3 times 20, or for a field trip, which is a scarcity, I would love to have that for them. The cost of a field trip is very high but if you supplied part we could fund raise for the rest. \$200-\$300 would go a long way toward getting them into the field. Thank you for considering this. Rita Ramirez

My school is Calabasas School, 202 Calabasas Rd.,
Watsonville, Ca.

Proposal to request funds for materials:

Our middle school Science Explorations class will be learning about their local watersheds during the fall of the 2007-2008 school year. Our students are home-schooled and this is an enrichment class that meets once a week for 2 hours. We will be doing in-class studies using some of the Watershed Cruzin' activities as well as field trips. They will also have opportunities to complete activities outside of class time with their families and/or other students. In order to tie their studies all together, I would like to provide each student with a science journal in which to keep all their notes, drawings, lab activities, field observations, etc., as well as various materials that will enable them to add to their journals wherever they are. My vision is that the students will learn and internalize the concepts better if their journal is personal and meaningful to them.

The materials I would like to provide for each student are: a binder which contains a notebook (journal) and a clear plastic pouch for supplies. The supplies would include: pencil, pen, small ruler, colored pencils, glue stick, covered pencil sharpener, and scissors. I estimate the total cost of the materials will be about \$15.00 per student and my class is about 20 students. Therefore, I am requesting a total of \$300.00 for this endeavor.

Thank you for your consideration,

Beverly Bonde
Pacific Coast Charter School, Watsonville

home: 1605 Delaware Ave, Santa Cruz, 95060

In the fall, I am piloting a field investigation. I'll be working with a 5th grade class at Hall District Elementary School in South County. Hall Elementary is a Title I school with 100% second-language learners.

The school is a stone's throw from Carneros Creek, the seasonal source of fresh water into Elkhorn Slough. The realities of meeting grade level proficiency and limited transportation resources conspire to keep students from using the Reserve as a learning lab.

We will use a GPS unit to accurately locate the experiment sites on the trail map and communicate the importance creating a process that can be replicated. The intention is also to create a photographic record of the experience for students and for submission to funding sources for transportation and materials.

We will focus on the grade level standard for experimental investigation in tandem with application of language development. Students will observe native and non-native species: Japanese mudsnail, Eucalyptus, Coastal Live Oak, Hemlock, Harding grass, bunch grasses. Students will be invited to compare eucalyptus understory growth with oak understory growth, articulate a hypothesis about their observations, and design an experiment that tests their hypothesis.

This is a pilot that may be adapted to other grade level field studies in one school or offered to other schools.

Peggy Casper
PO Box 715
Aptos, CA 95001

Materials

2 trowels	@ \$ 5.00	\$ 10.00
1 package potting soil	5.00	5.00

7 Planting Trays (6 six-pack cells)	7.00	49.00
1 box one- gallon freezer bags	3.00	
1 box one-quart freezer bag	3.00	
7 packages California Poppy seeds	2.00	2.00
2 meter sticks	3.60	7.20
7 metric rulers	3.00	21.00
1 GPS unit		150.00
7 liters bottled water, not distilled	1.00	7.00
1 pH testing kit		41.50
7 permanent marker	2.50	17.50
34 field journals	3.00	102.00
2 spray bottles	3.50	7.00
		<hr/>
		\$425.20

Appendix C

Comments from Teacher Survey

A survey was sent to teachers approximately three months after the workshops, to give them time to conduct an activity and evaluate how it worked.

The most commonly checked box for greatest challenges to conducting watershed activities were:

- Activities take more time than I have to set up
- Supplies are expensive
- No time for class trips

Selected comments from surveys:

- So great! We are working up at Fall Creek and all activities work great. The binder is very well organized and easy to use. I love your program!
- Hands-on activities the students love!
- I need to find time to read the binder carefully—activities are complicated to understand. I need to find local streams, etc. It isn't a quick, easy thing to do.
- Difficult to walk students to stream and back in one 50-minute class period.
- Well layed out; great materials, will use more in the future.
- Loved the art. The curriculum is phenomenal. Would like a follow up training.
- It was a great inservice—loved the experiential portion and artist's presentation.
- It reinvigorated my classroom program and made me more dedicated.
- It has so much interesting and useful information.

**Teacher Training Pictures
San Lorenzo Valley Water District
FINAL REPORT**



Watershed Cruzin' Workshops



Workshop Dates 2007

Wednesday, Jan. 17, Seymour Discovery Center, Long Marine Laboratory, Santa Cruz, 4:00 - 6:00 pm

Wednesday, Jan. 24, Santa Cruz County Office of Education, 809-H Bay Avenue, Capitola, 4:00 - 6:00 pm

Wednesday, Jan. 29, Seymour Center. Special five-hour workshop sponsored by RCD and Soquel Creek Water District. Includes SPECTRA artist presentation on art in watersheds. 9:00-2:00 pm.

Wednesday, Feb. 7, SCCOE, 4:00 - 6:00 pm

Wednesday, Feb. 21, Seymour Center, 4:00 - 6:00 pm

More workshops scheduled at teacher request. We will come to your location if more than five teachers attend.



Additional stipend for educators in San Lorenzo Valley and Scotts Valley, courtesy of Calif. Department of Fish and Game and San Lorenzo Valley Water District.

**What is a watershed?
Why are Santa Cruz County watersheds unique? How can teachers use watersheds for hands-on learning?**

Watershed Cruzin' workshops help teachers get students into the WATER:

**Where you can find streams and waterways using GIS maps
Access nearby streams safely and with permission**

Time to do watershed studies while fulfilling state education content standards

Excite your students about exploring the great outdoors

Restore streams near your school

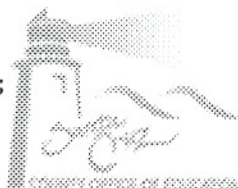
Come to one of these FREE two-hour fall teacher workshops and receive Watershed Cruzin' 312-page workbook; CD with historical Santa Cruz County photographs and GIS mapping data; \$50 materials stipend

**Workshops are from 4:00 to 6:00 pm
Refreshments included**

For grade 4-8 teachers and educators in Santa Cruz County

Contact

Watershed Cruzin' Workshops
Santa Cruz County Resource Conservation District
820 Bay Avenue, Suite 128, Capitola, CA 95010
(831) 464-2950
<http://www.sccrcd.org/watershedcruzin>



Santa Cruz County
Resource Conservation District



NATIONAL MARINE
SANCTUARIES



FINANCIAL ACCOUNTING Project Budget

Project Costs		Amount Expended	Amount of Cost Share	Project Total
CONSULTANTS				
Project Manager	35 hours @ \$65.00/hr	\$2,275.00	\$2,275.00	\$4550.00
Resource Professionals	25 hours @ \$75.00/hr		\$1,875.00	\$1,875.00
TOTAL CONSULTANT COSTS		\$2,275.00	\$4,150.00	\$6425.00
MATERIALS AND SUPPLIES				
Teacher materials	20 teachers @ \$25/ teacher	\$0.00	\$500.00	\$500.00
Photocopying		\$0.00	\$100.00	\$100.00
Mileage		\$0.00	\$0.00	\$100.00
TOTAL MATERIALS COSTS		\$0.00	\$700.00	\$700.00
SUBTOTAL		\$2,275.00	\$4,850.00	\$7125.00
ADMINISTRATIVE OVERHEAD @ 10%		\$225.00	\$485.00	\$715.00
GRAND TOTAL		\$2,500.00	\$5335.00	\$7350.00

Cost - Share: 54%

* Source of Cost-Share: National Marine Sanctuary B-WET program (**Bay-Watershed Education and Training**), Santa Cruz County Resource Conservation District, Coastal Commission, Coastal Conservancy, Resource Professionals (County of Santa Cruz, etc).

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