



Darryl Ramos-Young
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April 12, 2010

RE: Funding for Teach & Test Program and Waste Characterization Program

Dear Mr. Ramos-Young,

Thank you for your generous offer to consider on-going financial assistance to the South Bay Chapter of the Surfrider Foundation for our Teach & Test Program. I have laid out a brief Program Summary and Projected Budget for the upcoming year below.

As you know, the Surfrider Foundation is a non-profit environmental organization dedicated to the protection and enjoyment of the world's oceans, waves and beaches for all people, through conservation, activism, research and education. Surfrider Foundation is organized into 90 volunteer chapters globally with over 50,000 members, and I am writing on behalf of the South Bay Chapter – whose boundaries extend from San Pedro in the south to the Ballona Creek in the north.

The Teach and Test Program has expanded to coordinate with 6 local high schools – Westchester, El Segundo, Da Vinci Charter School (probable), Mira Costa, Redondo Union, and South Torrance - to improve water quality monitoring in the South Bay area. Students are greeted by dedicated Surfrider volunteers who facilitate them taking water samples every other Sunday (beginning the 1st weekend in October continuing through May) from 15-18 South Bay beaches & as well as the Ballona Creek Wetlands (3/school), and then analyzed at the SEA or LMU lab with the oversight of an experienced lab tech.

At the end of the school year bacteria level results will be presented and then published by the students – 1 Teach & Test team from each school. NRDC's 2009 report "Testing the Waters 2009" found record beach closures due to polluted water to still be a big problem. That's why this year's Teach and Test program is as important as ever in an effort to monitor bacteria levels in our own backyard – at our beaches and raise local awareness to any concerning results.

We are very appreciative of West Basin's on-going support of our Teach & Test program. Your generous past assistance has made it possible to initiate a very successful program that has grown tremendously within our local area, as well as, in other chapters along our Southern California coast. This last year the students have gained invaluable lessons from the West Basin Water Treatment/Ocean Friendly Garden and Wetlands tours as well as interacting with resident Surfrider "experts", including yourself, so they can absorb an understanding of the solutions to help improve water quality.

As an all volunteer organization, the South Bay Chapter is able to keep expenses for this program to a bare minimum – providing our community the greatest public service “bang for the buck.” Nonetheless, there are expenses for materials, laboratory space and professional assistance with the laboratory testing. However, we are very fortunate to have a partnership with Loyola-Marymount University (LMU) and SEA Lab, and “non-profit organization” discounts on laboratory materials, that allow us to keep even these expenses to a minimum. In fact, the use of the laboratory is free. Furthermore, we consider the minimal expense of paying a LMU graduate student and SEA Lab biologist to conduct the lectures and laboratory services just an extension of our mission to promote research and education – one of the primary goals of recruiting high school students to participate in Teach & Test.

We look forward to your continued support. As the program continues to grow, our cost to manage the program has increased to approximately \$7,200 (a bit more than West Basin’s historic \$5,000 grant) will finance the costs of this program – not including the considerable volunteer hours provided by Surfrider Foundation members.

In 2009-2010 we launched a Waste Characterization Pilot Study (WCPS). This study characterizes trash by its type and quantity, as it is found on the beach at the Herondo Street drain (site #9 in Teach and Test Program). Ultimately the purpose is to identify the most trash found by its type and try to determine the source. Later, in another program we would approach the sources of trash to reduce the amounts discharged in the storm drain system. The scope of this pilot program is as follows:

1. Students collect trash from the Herondo St drain for 10 mins when they take their water samples
2. SEA Lab Teach & Test lab support takes a sample after the first significant rainfall event (first flush) at the Herondo Street drain beach area. She will be accompanied by students if possible.
3. Students participate in two 4 hour trash separation workday, midyear, late in January or February.
4. Trash quantities are determined and logged on a data sheet and entered in to the computer. This data will also be entered onto the Surfrider Website
5. Students prepare a report from the trash data, pinpointing the most common trash. They can also present ideas on how to reduce the most common trash.

With the example set by the success of this pilot program, we’re hoping launch this program into other local beaches and areas throughout the coast for our 2010-2011 Program. The estimated cost for performing this study with the enumerated scope would be limited to a maximum of \$3,000 for lab support and materials necessary for trash sorting, storing and analyzing (approx. 120 man hours/trash site over the course of the T&T program). This is in addition to the customary cost of maintaining the Teach & Test Program.

We genuinely appreciate any support you can continue to provide – whether for solely the Teach & Test Program (\$7,200) or to support the combined Teach & Test and Waste Characterization Programs (\$10,200).

Please feel free to contact me at any time in regards to this program, or any other shared interests of Surfrider Foundation and West Basin Water District. We’ll gladly highlight your support however you’d like (on our websites, handouts, etc.)

Once again, thank you for your support.

Sincerely,

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Teach & Test Program South Bay Chapter, Surfrider Foundation

PROGRAM GOALS

The goals of the "Teach & Test" program are:

- 1) to monitor near shore water quality at several beach sites in the local area,
- 2) to involve local high school students in a "hands-on," real life scientific study,
- 3) to educate students about the importance of community service,
- 4) to expose students to a local university lab, and to allow them to interact with an advanced college level student
- 5) to provide a bas

PROGRAM SUMMARY

This program is a partnership with local high schools to monitor water quality in the near-shore water at local beaches. In the first year of the program, the 2004-2005 school year, Surfrider Foundation coordinated, financed, and carried out the program with four local high schools: El Segundo High School, South High School, Redondo Union High School, and Chadwick High School. Since then, Chadwick High School has discontinued participation, but we have added Westchester High School, Mira Costa and (potentially) Da Vinci Charter School to the list of participants.

Student "teams", lead by Surfrider volunteers dubbed Team Captains, will continue collecting water quality samples from 15-18 sites every other Sunday. These teams will also participate in the lab work conducted to process the water samples, monitor and record the bacteria content over the course of the school year. We have recruited and will pay for a graduate student from Loyola-Marymount University and a marine biologist from the SEA Lab in Redondo Beach to manage the laboratory work, and give short lessons on the biology of waterborne pollutants to participating teams. The data collected will be added to an on-going database of the monitoring results from the previous years.

We are continually adapting the program to reflect the lessons we have learned from past years. We will be:

- Requiring the student "teams" to prepare presentations at the end of the school year that will describe the project, the conclusions drawn from the data, and possible solutions for reducing pollution. Each school will incorporate a Surfrider affiliated program to improve water quality (Water Recycling, Ocean Friendly Gardens, Waste Characterization/Trash Sources and Wetlands) and present on how they tie together. These presentations will be given to an audience at the award ceremony at the end of the school year and possibly uploaded to the Chapter website;
- Incorporate the Waste Characterization Program
- Assign Lab Days, where after water samples are collected they'll have to go to the lab and process samples themselves.
- The Chapter will be taking the students on several field trips to expose them to multi-purpose pollution prevention practices (eg. West Basin's Wastewater recycling facility, treatment wetlands, Ocean Friendly Garden demonstration sites, etc)
- We also want to keep this fun for students and will incorporate a Kick-Off party and Year End party and something fun at the beach around the holidays.

The Chapter continues to recruit and train new volunteers to coordinate the sampling and to ensure consistency in the monitoring protocol by the several "teams."

South Bay Chapter's development of this approach to education and outreach, as well as collecting valuable data on important "beach health" issues, was recognized by the Surfrider Foundation's national office. The national organization plans to use the South Bay Chapter's program as a template for similar efforts in the 90 chapters globally. The Malibu/West Los Angeles Chapter of Surfrider Foundation used our template and materials to launch their "Teach & Test" program that will add to the dataset started by the South Bay Chapter. The MN Chapter reached out to us and we've also worked closely with to helping get the MN Chapter's Teach & Test program up and running.

TEACH & TEST PROGRAM BUDGET

The administration of the program, including: recruitment and coordination of the "teams"; assistance in the laboratory work; coordinating field trips; hosting a year-end award celebration; etc, will be conducted by Surfrider Foundation volunteers. The considerable amount of volunteer time is not reflected in the budget below.

**All costs below reflect support of 15-18 sampling sites, 2 interactive labs, approx. 160 enthusiastic students and 15 volunteers*

| Laboratory Testing & Sampling Materials | |
|--|-------------------|
| Whirl-Pak sample collection bags | \$2,300.00 |
| 10 ml Pipets (12 Sites x 14 Sample days = 168) | |
| Enterolert re-agent | |
| Quanti_Trays | |
| Pipet pumps (2) | |
| Coolers, blue ice, plastic gloves, trash bags, etc | \$100.00 |
| Sertile Water | \$150.00 |
| TOTAL | \$2,550.00 |

| Other Program Materials | |
|--|-------------------|
| Field Trips & Events | \$500.00 |
| Planning Mtgs/Dinners, Kick-Off Party (decorations/snacks), Field Trips (Fall - Westbasin, Spring TBD), Holiday Event, | |
| Year End Party & Awards Ceremony (Food, Invitations, Materials for Awards) | \$300.00 |
| Volunteer Suuport Materials (13 Binders - 1/Volunteer) | \$150.00 |
| T-Shirts to give to Students and Volunteers | \$750.00 |
| Use of Sea Lab for Events (required "donations") | \$150.00 |
| TOTAL | \$1,850.00 |

| LMU Student & SEA Lab Biologist Salaries | |
|---|-------------------|
| LMU graduate student | \$1,400.00 |
| SEA Lab biologist | \$1,400.00 |
| TOTAL | \$2,800.00 |

TOTAL PROGRAM COSTS **\$7,200.00**

We gratefully request a grant from West Basin Water District in the amount of \$7,200 for the Teach & Test Program, plus \$3,000 for the Waste Characterization Program. We will gladly highlight the West Basin's support for this program on the Chapter website, invite West Basin representatives to participate in the field trips, year-end awards event, and make the data and presentations available to West Basin.