

AGENDA
COMMUNITY AFFAIRS COMMITTEE MEETING
LEUCADIA WASTEWATER DISTRICT
March 7, 2016 – 9:30 AM
1960 La Costa Avenue, Carlsbad, CA

1. **Call to Order**
2. **Roll Call**
3. **Public Comment**
4. **New Business**
 - A. Review Teacher Grant applications. (Pages 2-13)
5. **Information Items**

None.
6. **Director's Comments**
7. **General Manager's Comments**
8. **Adjournment**

MEMORANDUM

DATE: March 2, 2016
TO: Community Affairs Committee
FROM: Paul J. Bushee, General Manager
SUBJECT: Review of Teacher Grant Applications

RECOMMENDATION:

Staff requests that the CAC recommend that Board of Directors:

1. Award four Teacher Grants totaling \$4,000; or
2. Discuss and provide direction, as appropriate.

DISCUSSION:

Tactical Goal: Services/ Teacher Grant Program Awards

During November 2015, staff provided grant information to nine elementary schools, one middle school, and one high school indicating that the submission deadline was February 26, 2016. The District received the following four applications by the deadline:

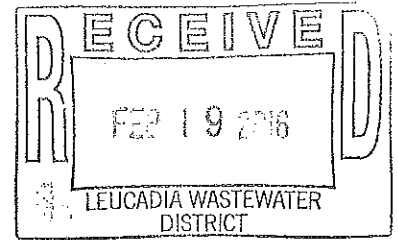
Received Teach Grant Applications:

Applicants	School	Amount Requested:	Project
June Honsberger	La Costa Canyon High School	\$1,000	Native Plant Garden
Chris Noonan	La Costa Heights	\$1,000	SWPPP Internship Field Trip and Water Test Lab Reports
Tanya Degregorio	Park Dale Lane Elementary	\$1,000	WaterWise Learning and Demonstration Garden
Mim Michelove	EUSD – Encinitas K-6 Schools	\$1,000	Israeli Rain Barrel Pilot

The applications have been attached for your review. The FY 16 budget includes \$5,000, which is intended to fund up to five \$1,000 teacher grant applications. Staff recommends that the CAC review the teacher grant applications and forward the qualified applications to the Board of Director’s at the March 9, 2016 meeting for their approval.

th:PJB

Attachments



LEADERS IN ENVIRONMENTAL PROTECTION

Grant Application Form

During the 2015-2016 school year Leucadia Wastewater District will award grants to teachers in local elementary, middle, and/or high schools in LWD's service area. The District anticipates awarding up to five grants up to \$1,000 each.

Use this cover sheet as page one of your application. Identifying information is to be included on the cover sheet only. IN YOUR PROJECT NARRATIVE DO NOT INCLUDE YOUR NAME, THE NAME OF YOUR SCHOOL, OR THE NAME OF YOUR DISTRICT. Completed applications MUST BE emailed to thill@lwwd.org or received by February 26, 2016.

IDENTIFYING INFORMATION

June Honsberger

Teacher's name

9th- 12th

Grade

Earth Science

Subject

La Costa Canyon High School

School name

San Dieguito Union High School District

District

1 Maverick Way, Carlsbad, CA 92009

School address, including street, city and zip

Bryan Marcus

Principal's name

760-436-6136

School's phone number

La Costa Canyon Foundation

Name of parent organization (i.e. PTA or school foundation)

Native Plant Garden

Project's title

\$1000.00

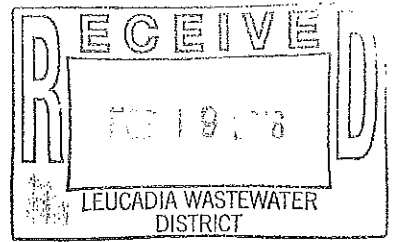
Grant amount requested

June Honsberger

Teacher's signature

Please tell us how you heard about this program

Posture/Flyer Website Another Educator Newsletter Other



Native Plant Garden

A. Description of Project:

This water use project will have students design, plant and maintain a native plant garden at the entrance to our school. The native garden will showcase our schools commitment to protect our environment and water resources. The project will allow students to experience nature and the connections between local climate, native plants and the water cycle. The students will observe the connections between local climate, native plants and wildlife in this native garden. The class will investigate the benefits of providing a habitat for native wildlife through a variety of garden activities and experiments. These hands on activities require garden tools, soil, compost, plants, trees, seeds, and mulch. Funds are needed to make this garden project a success. The grant would be used to purchase necessary supplies.

This garden project will involve two classroom teachers and 90 high school science students, grades 9-12. The project will be on going and will begin in April 2016. Each class will be responsible for one area of the outdoor garden for the duration of the school year. Our parent foundation will provide the shovels and wheelbarrows needed for this project.

B. Learning Objectives

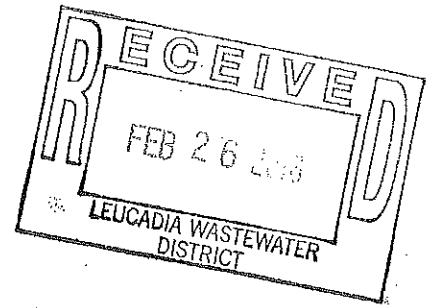
Students will understand the water cycle and the symbiotic relationship between local climate, native plants and wildlife. Students will study our arid climate in Southern California and how it affects the choices we make in our garden. Students will research and choose low-water plant varieties. Students will record and graph growth patterns in plant varieties to determine the characteristics of successful gardening.

C. Budget

Item	Quantity/vendor	Amount	Non-Consumables
Hose reel	1 @ 50.00- Home Depot	\$50	x
50' hose & nozzle	2 @ 25.00 – Home Depot	\$50	x
Garden Soil & Compost	30 @ 5.00 – Home Depot	\$150	x
Watering cans	10 @ 5.00 – Home Depot	\$ 50	x
Plants, Trees & Seeds	Sunshine Gardens/Andersons	\$700	
	Total	\$1000	



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IDENTIFYING INFORMATION

Chris Noonan

Teacher's name

6th

Grade

Environmental Education

Subject

La Costa Heights

School name

EUSD

District

3035 Levante Street Carlsbad, CA 92009

School address, including street, city and zip

Christie Kay

Principal's name

760/944-4375

School's phone number

La Costa Heights PTA

Name of parent organization (i.e. PTA or school foundation)

SWPPP Internship Field Trip and Water test Lab Reports \$1,000.00

Project's title

Grant amount requested

Teacher's signature

Please tell us how you heard about this program

Posture/Flyer Website Another Educator Newsletter Other

February 25, 2016

Leucadia Wastewater District Teacher Grant Program

Description of Project

The SWPPP Internship program is a yearlong program using a business model to educate 5th and 6th grade students about water resource management, water use and ocean water pollution. They learn about these important subjects by writing a SWPPP (Storm Water Pollution Prevention Plan) for their school campus. The plan includes BMPs (Best Management Practices) that not only reduce pollutants from flowing off campus, but also retain water on campus to be used for irrigation. To bring real world experiences into the SWPPP program, the students collect storm event samples from their campus and send them to the Encina Lab for testing. The students also go on a field trip to La Costa Town Center where the City of Carlsbad's Storm Water and Engineering employees conduct a tour and discuss the BMPs installed in the parking lot area. From there, the students go to Leucadia Wastewater Facility to tour the pump station and see the process for producing reclaimed water. It is these two activities this teacher grant will fund.

The SWPPP Internship has 125 students, 24 teachers, and four community members, along with parents of the interns. At the end of the year, with what the SWPPP students have learned, they present a storm water pollution and water conservation assembly for the entire school.

The activities the \$1,000 grant will be applied to include: 1) The lab expense for testing the storm water samples from the Encina Lab 2) The transportation (bus) for the field trip to La Costa Town Center and Leucadia Wastewater Facility.

These activities are also receiving funds from Olivenhain Municipal Water District and DUDEK, which help pay for the other five schools going on field trips.

The storm water event samples are collected from five different drains on the school site campus. The first collection event occurred December 11, 2015. The SWPPP Interns are waiting for the next rain event... The field trip to La Costa Town Center and Leucadia Wastewater District is scheduled for March 16th.

Objectives

This science-based program engages students in a deeper understanding of the impact storm water runoff has in our community. The production of a SWPPP, modeled after a requirement that many businesses and special districts must produce, provides a real world understanding of how we are all connected to the same goal of improving our coastal water quality. It also develops real skills that create a foundation for future learning along with career possibilities in special districts.

The Storm Water Pollution Prevention class meets once a week for the entire school year. The school year is divided into three sections:

- 1) Research and Education
- 2) Data Collection, Evaluation and Plan Formation
- 3) Plan Completion, Implementation and Reporting

Once the interns have collected data (storm water testing and monthly visual observations) and evaluated the results, they begin designing BMPs to reduce the pollutants from going into waterways. The objective of this field trip is to see and learn about real world BMP installations. In addition, the tour of LWD demonstrates the dedication and professionalism needed to effectively manage the various water transportation infrastructures.

Last year's SWPPP included BMPs that were modeled on designs and ideas they learned about during this very same field trip.

Budget

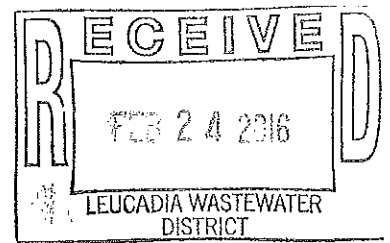
SWPPP Accounting

Expenses

3/16/16	Bus Transportation WESS	\$830.00
12/11/15	Encina Lab Sampling	\$177.46
	Total Expense	\$1,007.46

Income

3/16/11	LWD Grant	\$1,000.00
	Total Income	\$1,000.00



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IDENTIFYING INFORMATION

Tanya DeGregorio

Teacher's name

First

First Grade

Grade

Subject

Park Dale Lane Elementary

Encinitas Union School District

School name

District

2050 Parkdale Lane, Encinitas, CA 92024

School address, including street, city and zip

Jodi Greenberger

760-944-4346

Principal's name

School's phone number

Park Dale Lane Elementary PTA

Name of parent organization (i.e. PTA or school foundation)

WaterWise Learning & Demonstration Garden \$1,000

Project's title

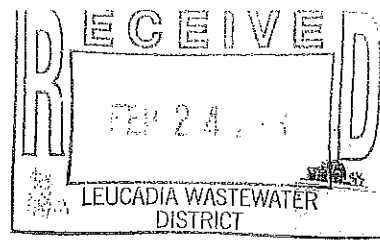
Grant amount requested

Teacher's signature

Please tell us how you heard about this program

Posture/Flyer Website Another Educator Newsletter Other

WaterWise Learning Garden



Project Description

Our elementary school's WaterWise Learning Garden will be the heart of our rapidly expanding Garden Science Program. The current garden program serves 505 students and 64 teachers and support staff with 31 garden boxes and a newly planted low-water edible fruit forest. These garden boxes house approximately 30 different types of fruits and vegetables annually.

As a part of our current Garden Science program, our students are educated about water conservation practices, but we would like to expand our ability to "practice what we preach" by developing our largest garden area on campus into a WaterWise Learning and Demonstration Garden. Through this grant partnership, we would install two large new rain barrels, two new garden beds dedicated to student-led experiments related to water conservation and chemical-free pest reduction, and a simple outdoor sink that collects greywater. Our goal is to have this WaterWise garden become the center for water conservation lessons and community demonstrations about rainwater harvesting and greywater systems.

Because we believe students 'learn by doing' – our young scholars and their families will be involved at every stage in the development of the WaterWise Learning Garden. Students will learn about the fundamentals of harvesting rainwater and be asked to map out where they think we should install our new gutters and rain barrels. Students, family and community members will install the barrels during one of our Community Garden Workday events. Students will also participate in lessons on greywater systems. They will learn how to capture the water they use when washing their freshly harvested fruits and vegetables and will reuse this water to irrigate our campus flower beds and fruit trees. Garden Club students will also run WaterWise demonstrations during our Family Science Nights.

Objectives

Our goal is for students to demonstrate – to themselves, their families, and their community - that we can grow healthy, fresh food in an environmentally friendly, WaterWise way through proper rain water collection and the use of water retention techniques.

In-kind resources/other sources of support

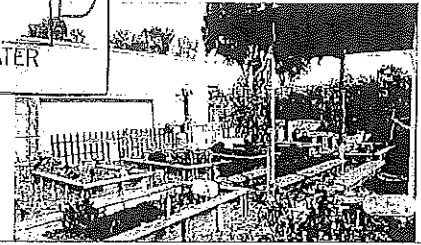
The PTA will provide \$100 to fund modifications and extensions to the existing irrigation system to provide water and piping to the outdoor sink. School district grounds crews will provide labor to prepare the garden area and to support the installations of the barrels, beds and sink. Our school principal has pledged support for the implementation and maintenance of the rain barrels, garden beds and outdoor sink. The Garden Team Lead will administer the project, and our team of over 35 Garden Parent Volunteers will donate over 150 hours each year to maintain the WaterWise Garden.

Proposed Timetable

April 2016: Order equipment and introduce students to rainwater harvesting techniques during their Garden Science lessons. Ask students to plan and map out their visions for our new WaterWise garden.

May 2016: Install rain barrels, the outdoor sink and build garden beds during Community Garden workdays.

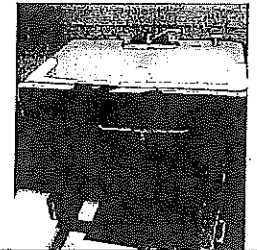
June 2016: Begin water retention lessons and experiments as students prepare our garden beds for the hot summer ahead.



The current garden beds that will become the WaterWise Learning Garden. Rainwater will be collected from the roof of the building on the far side of the garden. The greywater sink will be installed where the current hose is hanging on the fence.



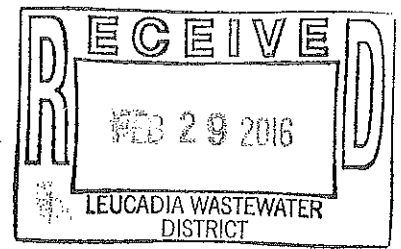
A large concrete area has already been cleared, making way for new WaterWise experiment garden beds to be built.



Sample sink with greywater bucket system

Proposed Budget

Number & Description of Materials Needed	Cost
58 Gallon Rain Barrels (2)	\$160.00
Gutters and downspouts for water transportation	\$40.00
Spouts and hoses	\$50.00
Concrete blocks and materials for rain barrel bases	\$25.00
Lumber and hardware for garden boxes	\$200.00
Soil for garden boxes	\$150.00
Outdoor sink & hardware	\$225.00
Lumber & hardware for sink installations	\$150.00
Total Cost:	\$1,000.00



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IDENTIFYING INFORMATION

Mim Michelove

Teacher's name

K-6

Grade

Interdisciplinary

Subject

EUSD Farm Lab

School name

Encinitas Union

District

441 Quail Gardens Drive

School address, including street, city and zip

Mim Michelove

Principal's name

760-944-4300 x1701

School's phone number

Encinitas Union School District

Name of parent organization (i.e. PTA or school foundation)

Israeli Rain Barrel Pilot

Project's title

\$1000.00

Grant amount requested

Teacher's signature

Please tell us how you heard about this program

- Posture/Flyer Website Another Educator Newsletter Other

EUSD Farm Lab Israeli Rain Barrel Project

A. Description of Project – Rain Barrel Project

1. Uniquely designed rain barrels will be used to collect rainwater by gravity and/or pumps from roofs and surfaces into 3-4 interconnected plastic tanks on stands. Tanks will be flushed frequently and storage will vary by size of collection area and rain frequency. The stored water will be used for the water education zone, as well as for toilet flushing, all of which will conserve potable water. This pilot project is part of a ten-acre farm and interactive education curriculum and retreat center for students.
2. The Encinitas Union School District Farm Lab will serve students from all of the Encinitas K-6 Schools including Flora Vista, Paul Ecke, Capri, Olivenhain Pioneer, El Camino Creek, Mission Estancia, Ocean Knoll and Park Dale Lane Elementary Schools.
The program is managed by Farm Lab Director Mim Michelove and involves numerous community volunteers and partners, Encinitas teachers, administrators and principals. Presently the program is geared towards first, third and sixth graders but will include all 5,600 students in grades K-6 in the 2016/2017 school year.
3. The core intent of Farm Lab is to provide students with hands-on educational experiences in the field and in food, science and maker labs where students will develop a rich understanding of the connection between our actions and our health, economy and environment. Educational activities will incorporate an innovative approach to learning that includes Design thinking, Research, Engineering, Art, Math and Science (DREAMS), on a fully functioning organic farm. Learning activities will also connect with the new Common Core State Standards, Next Generation Science Standards, and the district's One-to-One Digital Learning Program. The Rain Barrel Project is in partnership with the inventor of these rain barrels and partially grant funded through a partnership between the US Israel Center on Innovation and Economic Sustainability at the University of CA San Diego.
4. Matching funds total \$39,760 for barrels and related equipment, travel for Israel partners, training of staff and hands-on lessons with SWPPP students.
5. The location of the Farm Lab is at 441 Quail Gardens Drive, Encinitas.

B. Objectives

1. Students will learn efficient water resource management; understand the importance of keeping water from running off the land, picking up pollutants and then flowing into the ocean as well as appreciating the interconnectedness of the water supply with our surrounding environment, food supply and nutrition.
2. Students will develop an understanding of the connections between our actions and our health, economy and environment.
3. Since this project is interdisciplinary, they will learn by doing in numerous subjects (the DREAMS curriculum).

C. Budget

Our matching funds from other sources do not include any classroom learning materials. We are asking for \$1,000 for classroom posters, activity/homework sheets and handouts for students to take home and teach parents about their learning experience. Posters will show the water cycle, rain barrel technology, water quality, and other water-related information. Activity/homework sheets will incorporate math, science, art, nutrition and other issues based on students' activities on the farm.

Posters 6 @ \$100 each (design and printing)	\$600
Activity/homework sheets (design and printing)	\$300
Take home packets (development, design and printing)	\$100
Total	\$1,000