# SYMBIOSIS

### NEWSLETTER OF THE MRCA - WINTER 2014

- •WATER QUALITY AND PARKS
- MRCA HELPS PARK-POOR AREAS GET A LITTLE GREENER
- BEST MANAGEMENT PRACTICES FOR WATER QUALITY
- •WATER EDUCATION ON THE TRAIL



## WINTER 2014 SYMBIOSIS





The MRCA is dedicated to the preservation and management of local open space and parkland, watershed lands, trails, and wildlife habitat. The MRCA manages and provides ranger services for almost 69,000 acres of public lands and parks that it owns and that are owned by the Santa Monica Mountains Conservancy or other agencies and provides comprehensive education and interpretation programs for the public.

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### Special thanks to:

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## MESSAGE FROM THE MRCA

Greetings dear friends,

The focus of the Winter 2014 issue of Symbiosis, the Mountains Recreation and Conservation Authority's (MRCA) newsletter, is very much in the news right now and rightfully so: that is water and the lack of it. This past year was the driest calendar year on record for our state, with only 32.8% of our average precipitation and a scant 3.6 inches of total rainfall here in Los Angeles. The situation is truly alarming. As most of us know, the lack of water throughout the State of California and the impacts of drought will require better management of the water resources we do have, and there is a real possibility that additional legislated conservation measures may become necessary. That Governor Jerry Brown has already declared a drought State of Emergency requesting Californians reduce water use by 20% - should underscore the critical importance of our most precious resource, water.

As a park agency, the MRCA to many may not seem to have a direct link to water. However, we consider this vital resource very carefully when we purchase open space, design parks, and create education programs. Each management decision can play an important role in helping conserve water, improve water quality, and inform the public about water conservation.

As we know, undeveloped natural parkland is drought tolerant. Native plants may struggle, but for the most part they do survive through drought periods with no irrigation. We also know porous unpaved natural land acts like a sponge, allowing rainwater to percolate and help replenish underground aquifers where they exist. The use of landscape features such as bioswales also can serve to slow, clean and capture rainfall. In developed parks we can incorporate native, drought tolerant plants which only "sip" on irrigated water. And with the advent of sophisticated controllers that can be remotely adjusted in real-time based on weather conditions, sprinkler times can be regulated based on weather forecasts, temperatures and/or humidity.

In this issue, we highlight four MRCA projects which to some degree incorporate many of the above noted features: Marsh Park, Milton Street Park & Green Street, 8th Street Park, and Compton Creek Natural Park. In addition, we discuss the broader role of green spaces for creating cleaner water. We hope these articles will demonstrate how integration of best management practices can positively affect the local water supply.

Over the coming year, our water supply will decrease due to the current drought. And while we don't have the power to make it rain, we each can do our part to help conserve water. At the MRCA, we will continue to do our best to conserve the precipitation that has already fallen onto our parks and pursue ways to better manage future precipitation. We hope that you can continue to educate your families and friends on conservation, including increased drought tolerant landscaping practices. Water is a vital resource for all of us, and all life on the planet; and it's one that none of us can afford to overlook at this critical time.

Sincerely,





## GREEN PARKS,

## CLEAN WATER

### Consider what happens when an inch of rain falls

on an asphalt parking lot at a shopping center somewhere in the Los Angeles River Watershed. That water hits the ground and flows toward the lowest part of the parking lot, where it enters a storm drain, flows into a flood control channel like the L.A. River, and eventually reaches the ocean. On the way to the storm drain, it picks up a few drops of oil from a leaking car, a bit of radiator fluid from another car, and a plastic lid from a discarded coffee cup. Oh yeah, there is also some time-released fertilizer used on the plants along the perimeter of the parking lot, as well as a bit of insecticide used to keep the flies under control. Hmmm, there's also a bit of fecal material, where a dog was allowed to "do his business" in the bushes, with each gram of dog feces containing 23 million bacteria.

Multiply this situation by thousands of asphalt parking lots. It is no wonder that, according to Heal the Bay's 2012-2013 Annual Beach Report Card, 3 of the 5 most polluted beaches in the state were in L.A. County (which is actually an improvement from 2005 when all the top 5 were in L.A. County).<sup>1</sup>

Now consider what happens to that same inch of rain when it falls on one of our parks or open spaces. Some of it percolates into the soil, where it is cleansed of fecal bacteria, viruses and other pollutants. Some of it flows into streams, where UV sunlight acts as a disinfectant, killing the fecal bacteria that come from the animals that live there. The clearer the water, the more effective the sunlight, so properly constructed trails and minimal erosion are important. And if visitors pack out their trash, (and pick up after their dogs) there is no litter either.

### What's So Bad About Storm Water Runoff

A Few Facts about Los Angeles

1) Every day in Los Angeles County, at least 100 million gallons of contaminated water and debris drains through the storm drain system and flow directly into the ocean. On a rainy day, that amount can increase to 10 billion gallons. Our MRCA parks and open spaces reduce this flow by creating sites for overflow and infiltration.

2) The Los Angeles storm drain system drains water from a 1,060 square mile area into 35,000 catch basins, 1,500-miles of underground pipes and 100 miles of open channels that discharges directly into our coastal waters at 65 points on our coast. MRCA parks and open spaces, such as Upper Las Virgenes Canyon Open Space Preserve and Tujunga Wash Greenway, are located throughout the watershed, to minimize pollution from the start, middle and end of a storm drain.

3) Unlike the sewer system, storm water runoff is not treated. Storm water runoff is contaminated with the chemicals and organisms that make up our urban lives: pesticides, insecticides, herbicides, fertilizer, petrochemicals, heavy metals and fecal bacteria. The MRCA designs many of our riverside parks to filter these pollutants out of the water. We also require dogs to be on leash and that dog owners clean up after their dog.

### What Can Be Done About It?

Increase the amount of pervious surfaces. Los Angeles is often referred to as a concrete jungle, as it is covered with parking lots, sidewalks, concrete plazas, and other impervious surfaces. When land is covered with these types of surfaces, dirt and pollutants collect on top until rain washes all this build up into our storm drains and waterways. If more areas are converted to green pervious surfaces, like urban parks, the natural process of capturing and filtering water can help reduce pollution. There are also situations where we need impervious surfaces. In such cases, water should be directed to filtering areas.

*Filter storm runoff.* In the urban core storm water runoff can be diverted to where it can be filtered before percolating into the ground or flowing into storm drains. Vacant lots and abandoned sites can be transformed into filtration areas, incorporating best management practices such as bioswales, cisterns and vegetated storm water curb extensions. These areas can be scalable in size - small for the area the size of a parking lot, or larger, such as Marsh Park, to treat runoff from a residential neighborhood.

Plant more native species. Natural parks in urban areas bring much needed native vegetation to the community. Native plants and soil (with its many micro-organisms) are







Planning sketches of 8th Street Park

Street Park and Green Street is being developed as a prime example of a park with multiple benefits (page 12). In November of 2013, we opened Compton Creek Natural Park, bringing much needed green space to the students of the adjacent elementary school (page 14). And Pacoima Wash Eighth Street Park, opening later this year, is part of a larger vision to create a network of parks and open spaces connecting to the National Forest via a future 3-mile Pacoima Wash Bikeway (page 10).

In the heart of the San Fernando Valley, the Tujunga Wash Greenway is a unique restoration and recreation project. This 1.2 mile segment is the first of its kind along the Tujunga Wash flood control channel, providing a natural solution for cleaning water and incorporating walking trails, picnic tables and other recreational features for the community. A gravity-fed pipe takes urban runoff from the channel and flows into a new stream with some of the natural characteristics of the once-free flowing Tujunga Wash. Native plants along the stream help clean the water and establish habitat for local animals. During a year with average rainfall, as much as 325,000 gallons of water will flow through the naturalized streambed and will produce enough groundwater recharge to provide 760 families of four with drinking water for an entire year.

At many of our parks, we have also installed permeable surfaces like pavers in park plazas and decomposed granite walkways to allow water to soak into the ground. This is used throughout the watershed, from parks in the Santa Monica Mountains and into Downtown L.A. at Vista Hermosa Natural Park. Now imagine if more surfaces were changed from impervious to pervious? Just imagine the impact on regenerating the groundwater! Even small improvements at our parks (and at our homes) can have a big impact in the long run.

Downstream, the MRCA is working with a number of agencies and groups involved with the Ballona Wetlands Ecological Reserve. The MRCA has been authorized by the State Coastal Conservancy to "help implement stewardship activities to protect and enhance the site" through our Youth Leadership Series (Junior Naturalists and Naturalist Explorers) and minor improvement projects.

As at Ballona Wetlands, the MRCA goes beyond land acquisition and park design by offering education and public programs throughout the greater Los Angeles area. These programs highlight important water features of our parks and explore large water-related issues. For instance, we've created programs on the effect of water quality on native flora and fauna, the importance of water conservation, and the impact of humans on watershed health. We have specific programs focusing on wetlands, oceans, rivers, and watersheds as a whole. We think we

### ONLINE with WATERSHEDS

Here are some websites to learn more about watershed management and water quality.

### **EPA's Watershed Academy**

Provides a basic and broad introduction to the watershed management field www.epa.gov/watertrain/

### Landscape Architect Foundation

Landscape Performance Series, Case Study Briefs - Database of projects with quantified landscape benefits www.lafoundation.org/research/landscapeperformance-series/case-studies/

### The State Coastal Commission Educators Page

Offers child-appropriate lessons and activities about topics like wetlands, beach clean-ups, and wildlife www.coastal.ca.gov/publiced/directory/educate.html

### City of Los Angeles

Devoted to stormwater issues, including a glossary of terms and FAQ's about stormwater runoff www.lacity.org/SAN/wpd/index1.htm

### Heal the Bay

Beach Report Card - Each week, over 500 beaches are graded A to F based on bacteria analysis www.brc.healthebay.org

can increase the benefits of our parks by weaving water education throughout the MRCA's programs, including our Youth Leadership Series, Outdoor Education, and free public hikes and programs.

From the top of the watershed, through the urban core, and out to the ocean, the MRCA is active in helping keep our water clean through education, open space acquisition, and park design.

- (1) Heal the Bay. 2012-2013 Annual Beach Report Card
- (2) American Society of Civil Engineers and the U.S. Environmental Protection Agency. Pollutant load removals by constituent for Green Best Management Projects

## WATER BEST MANAGEMENT PRACTICES

**Bioswales and Cistern System:** As water flows through park landscape, it is cleaned and filtered through sloped collections of plants and rocky soil called bioswales. Then, the water flows into an underground cistern. Both overflow irrigation and rainwater are collected in the cistern and used to water the park during drier weather.

**Natural Habitat:** The parks are planted with native plant species naturally adapted to the semi-arid Southern California climate. Once established, they require little water and maintenance. The vegetation will attract increasingly more wildlife as it matures, and provide refuge for migrating birds.

### Vegetated Stormwater Curb Extensions (VSCE):

VSCEs capture, treat, and infiltrate wet and dry weather urban runoff as well as runoff from nearby parks and neighborhood lands that drain to their street. They remove pollutants such as trash and oil from the water before they reach the storm drains. VSCEs reduce impervious street surface, such as asphalt, which produces storm water runoff.



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### OTH OSTREET PARK A GREENER FUTURE OPENS UP

Reprinted from the website of Los Angeles County Supervisor Zev Yaroslavsky (zev.lacounty.gov)

A new park will open in 2014 where once there was just industrial space.

For decades, it has been just another big, concrete L.A. channel, a place known mainly for the unfortunate passersby who have had to be rescued there during winter rains.

Size: 4.75 acres

Location: Along the Pacoima Wash between Eighth Street and Foothill Boulevard, City of San Fernando

### Organizations Involved:

MRCA, Pacoima Beautiful, Los Angeles County Department of Health, City of San Fernando, and Los Angeles County Flood Control District

**Opening Date:** Spring 2014

Green Features: Placitas that capture storm water, native habitat But the hardworking Pacoima Wash has been getting a makeover lately, and last September, the Board of Supervisors approved the finishing touches for a 4.75acre park that will give yet another neighborhood along the tributaries and banks of the Los Angeles River a welcome sliver of green.

"I think it's going to be good," said Bertha Macias, a stay-athome mom in San Fernando on Tuesday as her 4 year old, Benjamin, ran back and forth between the fence and the walkway of her tiny front yard a block from the soon-to-be-opened Pacoima Wash Eighth Street Park.

A mother of three, Macias said her dense neighborhood has far too little open space for the number of children who live there. "I think it will be good for the kids to go to in the afternoons after school," she

said in Spanish. "They'll watch less television if they can go to a park."

Due to open in early 2014, the park, which runs between Eighth Street and Foothill Boulevard in the City of San Fernando, marks yet another bit of progress, both for its community and for the long-term movement to re-green the Los Angeles River and its various branches in L.A.

Constructed in the 1940s as a 10-mile-long flood control channel, the Pacoima Wash is a tributary of the Tujunga Wash, which in turn is a tributary of the Los Angeles River. When it rains, its industry-lined banks typically fill with trash and polluted runoff.

Historically, it has been viewed as a purely utilitarian conduit for inland water, and it has been fenced off from the dense, park-starved communities that abut it, dividing them like a freeway. But in 2005, the Mountains Recreation and Conservation Authority acquired several parcels of land along the channel. And in 2008, with the help of a Los Angeles County Department of Public Health grant, a coalition led by the grassroots environmental nonprofit Pacoima Beautiful launched an initiative to reimagine the wash as a place that might not only do a better job of filtering storm water, but also double as an urban greenbelt.



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"These communities are, in a lot of ways, park-poor and in need of nature and green space," said Ana Petrlic, deputy chief of urban projects and watershed planning for MRCA. "And bringing nature to the city is a primary goal of MRCA."

Indeed, according to Pacoima Beautiful, the community of Pacoima alone has only about a quarter of the park space it should have under the City of Los Angeles' general plan standards. Meanwhile, one in four residents suffers from heart disease and 29% of the young people are obese.

The MRCA acreage has been combined with land owned by the Los Angeles County Flood Control District to create the first of what MRCA envisions as a series of parks along the wash. Nearly complete, the Pacoima Wash Eighth Street Park, designed by the Los Angeles environmental design firm Blue Green, will feature a small loop trail, a pair of quaint bridges, an arbor for shade and some picnic tables and benches.

"There are great views of the mountains and the Angeles National Forest," said Petrlic, "and native plants for habitat for the local wildlife." Built into the park's design is a system to detain and treat storm water runoff, which will enter the site underneath two small circular plazas one at Eighth Street, the other at Bromont Avenue — that are equipped with underground filters to catch trash. From there, the water will flow into a newly constructed creek bed that runs parallel to the wash, where it will be further cleansed of pollutants.

"And," Petrlic said, "that's all before the water actually reaches the wash."

In September, the Los Angeles County Supervisors voted to take the greening effort up a notch. They approved a \$100,000 grant from Third District park funds to add about 150 new trees to make the now spare-looking space a bit more inviting.

"This is a good thing," said Manuel Franco of Pacoima, an MRCA worker, as he checked sprinkler heads Tuesday along the greenbelt. "Good for this area. Good for families."

**UPDATES:** This natural park is part of a larger vision to create a network of parks and open spaces connecting to the National Forest via a future 3-mile Pacoima Wash Bikeway. The bikeway project is currently in planning and design by MRCA in partnership with the Los Angeles Bicycle Coalition, City of San Fernando, County of Los Angeles and others. Construction of a 1.5-mile portion of the bikeway within and by the City of San Fernando is planned to begin in 2015/2016.



**Size:** 5.4 acres (when phases 1-3 are complete)

**Location:** Along the Los Angeles River Greenway between Marsh and Gleneden Street

### Organizations Involved: MRCA, Santa Monica Mountains Conservancy, Proposition 84 Integrated Regional Water Management Grant Program Round 2, State Department of Parks and Recreation (Proposition 84), L.A. County Regional Park & Open Space District (Proposition A), City of L.A., L.A. Conservation Corps, L.A. Neighborhood Land Trust, Trust for Public Land, and Artshare

### **Opening Date:** Summer 2014

**Green Features:** Bioswales, park cool island, habitat restoration, environmental education

### MARSH PARK DOING A LOT WITH A LITTLE

What can you do with a half acre of land? A lot actually! In 2006, we opened the first phase of Marsh Park, as part of the Los Angeles River Greenway. This small 0.5 acre space has already provided a wealth of benefits for the local environment and neighborhood, including much-needed green space, a peaceful place to enjoy the river, and a site of our free nature programs and campfires, serving over 450 people last year alone.

Marsh Park was also the first Clean Water Natural Park along the L.A. River. The park has a detention and infiltration system that uses a plentiful and naturally occurring substance — soil — to cleanse storm water runoff of pollutants before it enters the river. A section of the city's concrete drainage pipe was removed from under the park. The ground was then lowered so that dirty water coming from the streets slowly soaks into the ground during a natural cleansing process known as infiltration. Trash and other pollutants are removed before the water enters the river. Storm water can also soak deep into the ground between sand, rocks, and clay and replenish the natural underground water storage system known as the aquifer. In the semi-arid climate of Los Angeles this is especially important.

# MILTON STREET PARK

#### Size: 2.2 acres

**Location:** Milton Street between Mascagni Street and Westlawn Avenue, Los Angeles

#### Organizations Involved: MRCA, the Office of Supervisor Mark Ridley Thomas, Baldwin Hills Regional

Conservation Authority, State Coastal Conservancy, Baldwin Hills Conservancy, Santa Monica Bay Restoration Commission, and the City of Los Angeles

### **Opening Date: Winter 2015**

**Green Features:** Vegetated Stormwater Curb Extensions, native plants, screen covers for storm drains If you walk down Milton Street today, you will find a wide asphaltpaved street with no shade from the sun. The lack of trees and other vegetation allow for excessive polluted runoff to flow immediately into the storm drains. This runoff, consisting of dirt, litter, and oil, goes directly into the Ballona Creek and eventually the Pacific Ocean untreated. Luckily, the MRCA and our partners view these conditions as an opportunity to bridge water quality improvement with educational and recreational opportunities.

The Milton Street Park and Green Street Project combines multiple green features to improve the quality of the water that enters Ballona Creek. Vegetated Stormwater Curb Extensions (VSCEs) will be installed to both sides of Milton Street and native vegetation will be planted in the park, adding shade and beauty to the neighborhood. Both features reduce the amount of pollutants that flow into the river untreated. This improvement of the water quality in Ballona Creek benefits the habitat in and around the park as well as the coastal habitat of the Pacific Ocean. Adding green features, such as VSCE and native vegetation, to the park creates opportunities for partnering with educational organizations to promote environmental stewardship. The students of nearby Marina Del Rey Middle School are gaining an This isn't even the end to the story. Phase II of Marsh Park is currently under construction and is planned to open later this year. The 3 acre expanded area will give even more outdoor space for the park-poor neighborhood, which has less than 0.21 acres of park space per 1,000 residents (far below L.A. City's recommendation of 10 park acres per 1,000 residents). The new section will include an outdoor classroom, landscaped walking and nature trail, a free-play meadow, fitness stations, an open-air picnic shelter, parking, and restrooms. This additional area will enable us to expand our free nature programs and campfires, and will hopefully lead to more community use of the park.

To build upon the clean water features of Phase I, the second phase is designed to have water feed into bioswales that would intercept and cleanse storm water before flowing into the river. This would help to reduce the amount of pollutants entering the river and eventually ending up in the Pacific Ocean. The park will also be planted with native riverine and upland plants, which assist with water infiltration and encourage birds, mammals, and insects such as butterflies to inhabit the area.

Marsh Park shows how a lot can be done with a little space and this is just one example. Many other pocket parks along the L.A. River accomplish similar goals of providing community green space and act to clean the local water. We are excited about what has already been done at Marsh Park, and are eagerly awaiting the opening of Phase II.



### ONE PARK, MULTIPLE BENEFITS GREEN STREET PROJECT

education tool through the creation of the park. The students and teachers will soon have access to the park for use as an outdoor classroom and the students will have the opportunity to learn through hands-on experiments like testing water quality and conducting wildlife surveys at the park. The park and green street will also add a sidewalk on the south side of the street, encouraging multiple modes of transportation and recreational use of the park.

The development of Milton Street Natural Park with its green street features creates a chance to increase much needed open space in Los Angeles. The project takes advantage of a rare opportunity location along Ballona Creek, the land is publicly owned by a local park agency, is the largest vacant parcel on the creek, and can be easily accessed by the general public. Residents will gain paths for biking and walking and a shade structure for resting and bird watching.

The Milton Street Park and Green Street Project combines green features, an outdoor classroom, and recreational uses to create an area of multiple community benefits. This project shows how the MRCA and our partners seek to create multibenefit planning projects that bridge water quality improvement with educational and recreational opportunities. To quote Joseph T. Edmiston, Executive Director of the Santa Monica Mountains Conservancy (SMMC), "We bring nature back into the neighborhoods and create parkland and recreational opportunities in densely populated urban areas where they are needed most. Joint use, multi-benefit projects give the public the most for its money."

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# COMPTON CREEK NATURAL PARK A PARK FOR STUDENTS & THE COMMUNITY

### Size: 3 acres

**Location:** 1421 North Wilmington Avenue, George Washington Elementary School

#### Organizations Involved: MRCA, the

Santa Monica Mountains Conservancy, Los Angeles Conservation Corps, the Office of Supervisor Mark Ridley Thomas, Compton Unified School District, the State Coastal Conservancy, the Rivers and Mountains Conservancy, and the California Natural Resources Agency River Parkways Program

### **Opening Date:** Fall 2013

Green Features: Bioswales, cistern, native plants There is nothing better than seeing the smiling faces of children enjoying a park. On November 13th, 2013, this is exactly what we saw as students of Washington Elementary School became the first visitors to Compton Creek Natural Park. The MRCA, in partnership with Compton Unified School District and the Los Angeles Conservation Corps (LACC), built an innovative new natural park along Compton Creek, directly adjacent to the elementary school. This park is not only much needed green space for students and community; it is also a model of modern sustainable design.

The more than three acre park was built on an underutilized portion of the school, although it is wholly separated from the campus. Designed through a collaborative process with teachers, school staff, community members, and other stakeholders,

the new park features some of the natural habitat and plant communities found in the historic Compton area marshlands, walking paths, grassy areas, fitness equipment, seating areas, a multi-use amphitheater, parking, a community plaza, and interpretive signage. Compton Creek Natural Park includes Best Management Practices (BMPs) and environmentally friendly features, such as natural bioswales for storm water treatment and an underground cistern which stores rainwater for park irrigation. The cistern can hold up to 127,094 gallons (or 16,900 cubic feet) and it is estimated that it will provide irrigation supply for 2 months out of the year. Essentially the park acts like a sponge that slows and filters water that runs off the site, including rainfall and irrigation runoff. The park will also provide habitat for local and migratory birds, and an environmental learning area for Washington Elementary.

The park is a model of State, local, and nonprofit partnerships. The project was funded with grants from Los Angeles County Proposition A, Supervisor Mark Ridley-Thomas, and State bond funds approved by the voters (Propositions 84 and 12). Funding partners include the Santa Monica Mountains Conservancy, the State Coastal Conservancy, the Rivers and Mountains Conservancy, and the California Natural Resources Agency River Parkways Program.

The park was constructed in part by the Los Angles Conservation Corps (LACC), a youth job training nonprofit. The park will be maintained by LACC. Future phases of the park will include a work center for LACC youth, public restrooms, and more recreational amenities.

The natural park is the first to fulfill the vision of the Compton Creek Regional Garden Park Master Plan, which seeks to create a 3.75 mile-long park system of gardens, plazas, trails, habitats, outdoor classrooms, promenades to transform Compton Creek and create much needed park space for local schools and community.





![](_page_14_Picture_2.jpeg)

![](_page_14_Picture_3.jpeg)

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For more information visit: LAMountains.com facebook.com/LAMountains

![](_page_15_Picture_2.jpeg)

### WATER EDUCATION PR TRAIL

![](_page_15_Picture_4.jpeg)

Our parks make for the perfect classroom to learn about water, especially sites alongside riparian areas such as the Los Angeles River. For years the MRCA has integrated water education into our education and public programs. Every student that comes to Outdoor Education learns about their local watershed, the water cycle, and why it's important to help keep our watersheds clean. Participants in our Youth Leadership Series, which includes Junior Naturalists, gain a deep understanding of water and water conservation through exploration and investigation. Even our free programs for the public, particularly those along the L.A. River, incorporate water-related topics. Whether working with kids or adults at the top of the watershed or at the ocean, we feel water education is important for all ages and a topic where a little education can go a long way.