# SEQUOIA PARK ZOO STORMWATER AND WATER POLLUTION PREVENTION PROGRAM

SEP 2015-2016 Request for Funds

Stormwater Pollution Prevention	\$7,500	
Education program continuation		PROGRAM EXPANSION continue to deliver the current program and expand the zoo storm water pollution prevention program to serve:
and expansion (staff salary costs)		1. the City of Eureka Afterschool Program with an on-site Watershed Heroes Club. Club activities might include litter pick up in Sequoia Park, storm drain
		marking throughout the zoo neighborhood and various thematic activities (i.e. storm drain pollution bingo);
		2. Humboldt County public schools with the implemention of a Watershed Heroes Tour for school field trips. This tour will focus on the Watershed Heroes
		exhibit. Its main messaging will be about how kids can be "Watershed Heroes" by keeping our watersheds clean. Tour will culminate with a photo opportunity
		at the pledge station and a public display of the child's pledge commitment on the "I am a Watershed Hero" Photo Posting Station (see below);
		3. <u>Visitors and the general public</u> with the development and implementation of the "Watershed Heroes Discovery Cart" relating stormwater pollution
		prevention to drinking water, using the EnviroscapeDrinking Water and Waste Water treatment model (see below).
		#S SERVED We anticipate with this additional funding for staff support and program development, we can serve at least 2,000 additional people. The
		program at current funding levels (\$5,000 staff) currently serves 1,400 K-6 school field trip students & 800 visitors (families) at Earth Day Celebration Party for
General Stormwater program	\$1,000	the Planet.
supplies	\$1,000	tattoos, stickers, supplies for demonstrations
Stormwater Pollution Watershed	\$1,000	This is a replacement for our current program, which after 5 years sprung a leak in the base.
Enviroscape model-replacement	. ,	http://www.enviroscapes.com/nonpoint-source.html.
Drinking Water and Waste Water	\$1,500	http://www.enviroscapes.com/nonpoint-source.num.
treatment Enviroscape model and	71,500	This is a new model that will be used for teaching visitors about Tap the Mad and where our tap water comes from. http://www.enviroscapes.com/drinking-
carrying case		water-wastewater.html
Watershed Heroes Discovery Cart	\$750	
		Discovery carts are mobile and thematic interactive carts provided to the public and during other programs and manned by staff & volunteers.
		Watershed Heroes Cart messages: 1. Animals and humans depend on a clean ahd healthy watershed;
		2. the health of the watershed depends on humans. YOu can be a Watershed Hero and keep our watersheds healthy for humans and animals.
		Supplies needed: Drinking Water and Waste Water treatment model (see above), Photo Posting Station, custom watershed element coins, animal skull replicas, cart
"I am a Watershed Hero" Photo	\$1,250	Located in the already existing Watershed Heroes Headquarters, we will install a "I am a Watershed Hero" photo posting station where pictures of
Posting Station		stormwater program participants taking a "Watershed Hero Pledge" through this stormwater program can be posted, therefore publically recognizing their
		commitment towards watershed health to the whole community. With these funds we will also replace Super Salmon paddles at the "Help Super Salmon find
		Pollution in her Stream" station, also located at the Watershed Heroes Headquarters.
Hydration Station Where Does	\$2,000	Design and fabricate an attractive information station that will surround and draw greater attention to the already installed Hydration Station a drinking
OUR Drinking Water Come From?		fountain with water bottle fill up and counter showing the "# of plastic bottles saved" from refilling personal water bottles (current # is "8750 plastic bottles")
Information Station and art		saved" since installation). This installation may also include an artwork made out of recycled plastic bottles to provide a visual regarding how much space
installation		1,000 waterbottles would occupy in a landfill. We intend to also tie in information about where our drinking water comes from and how it arrives in our home
		with the turn of a faucet. The community asks us the question "where does our water come from?" all the time when we are delivering stormwater
		education. Understanding the long journey from Ruth Lake, through treatment plants and under roads to our residential pipes, will provide a greater respect
TOTAL FLINDS DEGLIESTED	\$1E 000	and stewardship of this valuable resource.

TOTAL FUNDS REQUESTED

\$15,000

# CITY OF EUREKA PARKING LOT LID IMPLEMENTATION PLAN

SEP 2015-2016 Request for Funds

Parking Lot LID Implementation	\$19,500	The City of Eureka maintains a network of several dozen paved parking lots of various sizes. All parking lots were constructed some time ago using methods conventional at the time. Only one of the parking facilities (the Hikshari Trailhead lot) incorporates features that treat and detain stormwater, or allow it to infiltrate. Stormwater from all City parking lots is conveyed through the City's storm drain system to Humboldt Bay, the receiving waters for the Elk River Waste Water Treatment Facility.
		One of the most heavily used and visible parking facilities in the City is at City Hall. The City proposes through this SEP to develop and implement a plan to install LID measures in both the north and east lots at City Hall. The project will include but is not limited to curb removal, landscaping, and storm drain modifications. The goal of the project is to reduce runoff by treating and detaining stormwater on site, then allowing it to infiltrate prior to discharging to the City's storm drain system.

TOTAL FUNDS REQUESTED

\$19,500

# SPZ's STORMWATER AND WATER POLLUTION PREVENTION PROGRAM (SWPPP)

## **PROJECT ANSWERS**

1. Do the two projects have support by other public agencies, groups or persons?

The Sequoia Park Zoo Stormwater Pollution Prevention Program (ZooSPPP) is supported by:

- City of Eureka Stormwater Division
- City of Eureka Parks and Recreation Dept
- Seguoia Park Zoo Foundation
- Humboldt County Office of Education
- California Regional Environmental Education Community (CREEC)
- Washington Elementary School
- local teachers

The Parking Lot LID Implementation Plan is supported by:

- City of Eureka Stormwater Division
- North Coast Stormwater Coalition
- California Department of Fish and Wildlife
- 2. Does the Sequoia Park Zoo Stormwater& Pollution Prevention Program have success criteria?

SPZ SWPPP program success will be assessed through a variety of strategies as appropriate per activity. Assessment methods are as follows:

<u>Watershed Heroes Club, Afterschool program-students will be tested pre- and post-Club season to assess for learning outcomes related to their knowledge of water resources, stormwater and pollution prevention.</u>

<u>School Field trips</u>-students will be tested upon zoo arrival and departure to assess for learning outcomes related to their knowledge of water pollution prevention. Teachers will also be asked to participate in a follow-up survey to assess how the teacher integrated the zoo visit into their classroom curriculum and if students implemented their Watershed Heroes pledge into their daily lives after their zoo field trip.

<u>Hydration Station</u>—to determine if the new interpretive and water bottle display increases visitor use of the already existing Hydration Station (refillable water bottle station), we will average visitor use both before and after installation of the art sculpture and interpretive messaging.

<u>Zoo wide</u>- This spring we also intend to implement a zoo-wide, web-based evaluation to assess learning outcomes and long-term behavioral modification resulting from the visitors' experience at the Watershed Heroes exhibit and pledge station.

3. Will the LID Parking Lot Implementation Plan include any water quality monitoring (before vs. after implementation)? Have these areas already been identified as pollutant sources?

The LID implements constructed in the City Hall parking lots will be sized based on the North Coast Stormwater Coalition's LID implementation manual. As such, the goal is to allow runoff from an 85<sup>th</sup> percentile design storm (0.65 inches/24 hours) to be retained and infiltrate on site. Given the area of impervious surface of the two lots, nearly 5000 gallons of potentially contaminated stormwater will infiltrate on site instead of being discharged to Humboldt Bay.

The parking lots serving City Hall are the most routinely used lots operated by the City of Eureka. The employee parking lot serves over two dozen City and employee vehicles daily, while the front lot, used primarily for customers, sees hundreds of vehicles per day. Currently, the parking lots are entirely composed of impervious surface, so any hydrocarbons leaked onto the pavement are conveyed directly to the storm drain system and, ultimately, Humboldt Bay.

4. For the two proposed projects, please identify specific milestones and include a corresponding time schedule for implementing.

#### SEQUOIA PARK ZOO SWPPP TIMELINE

Jan/Feb 2016--Once funding is finalized,

- Plan program implementation with all involved parties (zoo staff, Aftershool program staff, stormwater division)
- Designinterpretives-- Watershed Heroes Photo Station, Hydration Station signage, Super Salmon paddle

#### March 2016

- Complete interpretives, send to fabricator and install
- Begin Watershed Heroes Club (run for 10--12 weeks)

#### Apr 2016

- Begin Implementation of school field trip program(April 1)
- Continue implementation of Watershed Heroes Club
- Begin implementation of Watershed Heroes Discovery cart
- Deliver SWMMP program at Earth Day event

### May 2016

- Continue to implement Watershed Heroes Club
- Continue to implement field trip program

## June 2016

- Wrap up all programs
- Evaluate program assessment and write report

## July 2016

• Write and submit final report

### CITY HALL PARKING LOT LID IMPLEMENTATION PLAN TIMELINE

Jan 2016--Once funding is finalized,

- Develop the LID retrofit plan using staff and/or local consultants
- Remove existing curbs in areas where alterations are to be performed

# February 2016

• Perform storm drain and curb alterations

#### March 2016

Finalize plantings

#### April 2016

 Weather permitting, perform any alterations to existing asphalt areas, including open grade asphalt or pervious pavers/concrete