

U.S. Fish & Wildlife Service

Organization Name: The Ocean Foundation
Program Title: Ocean Connectors
Program Timeframe: July 1, 2017 – June 30, 2018
Total Amount Requested: \$22,500
Contact Person: Frances Kinney, Ocean Connectors Executive Director
 Email: frances@oceanconnectors.org Tel: 619-336-7744

Challenge:

Children are spending about half as much time outside as they did 20 years ago (Thomas et al. 2004). **Ocean Connectors uses environmental education as a platform to connect urban youth from low-income areas with conservation, marine science, and habitat restoration.** Participants come from National City, an industrial area located along San Diego Bay with less than 5% public coastal access and green space (National City Overview November 2010). Residents face many life obstacles and environmental issues. National City has the highest childhood obesity rate in San Diego County, more than a third of children live in poverty, and it is in the top 10% of zip-codes statewide for combined impacts of pollution and population vulnerabilities (CA Center for Public Health Advocacy 2010; Advameg 2013; CA Office of Environmental Health 2013). These grave concerns could be linked to the historic lack of environmental education programming in National City.

Ocean Connectors works with park rangers from the U.S. Fish & Wildlife Service (FWS) to inspire the awareness and concerted community action necessary to address these challenges and break down barriers in the long-term. Ocean Connectors engages 4th through 6th grade National City schoolchildren in free, hands-on marine science programming and field trips, including to two Urban Wildlife Refuge sites, Sweetwater Marsh and San Diego Bay. Ocean Connectors works to address a variety of community issues by providing educational programs that stimulate interest in STEM careers, connect youth with the natural environment, and engage local schoolchildren in the FWS mission.

Audience:

Ocean Connectors focuses on engaging individuals from National City. **Next year, 1,500 National City schoolchildren, 100 parents, and 50 teachers will visit Urban Refuges and get a chance to work one-on-one with Ocean Connectors instructors, FWS park rangers, and other local experts, such as from Scripps Institution of Oceanography and SeaWorld,** who serve as volunteer mentors during Ocean Connectors field trips. This unique mentorship opportunity promotes curiosity for STEM careers and connects youth with the incredible natural resources in their own “backyard”, San Diego Bay.

All the schools in National School District are categorized as Title I and lack any other source of consistent environmental education programming outside of Ocean Connectors. **99% of National City students are eligible for the free lunch program.** By the fourth grade, children growing up in low-income income communities are on average three grade levels behind their peers in high-income communities (Smith 2005). Our audience is comprised of 95% Latino

students. Only 15% of Latinos over age 25 hold a four-year degree in the U.S., and less than 10% of Bachelor's degrees in science and engineering are awarded to Latino students (U.S. Census Report; Education Week 2010).

Ocean Connectors provides three continuous marine science education programs that achieve lasting, long-term impacts for low-income schoolchildren and families in National City, helping them to access, engage with, and understand their natural environment.

Ocean Connectors has successfully recruited our target audience through close collaboration and partnership with schools in National City, and by providing evidence that our programs directly benefit the lives and educational achievement of local students. Ocean Connectors helps National City residents come to view Urban Refuges as a community asset for outdoor recreation, conservation, and hands-on STEM learning.

Strategy:

The mission of Ocean Connectors is to educate, inspire, and connect underserved youth living in Pacific coastal communities through the study of migratory wildlife. Ocean Connectors utilizes a multiyear educational approach consisting of classroom activities and field trips to build a foundation of environmental awareness. Our programs utilize FWS expertise and knowledge to teach elementary students about native flora and fauna, environmental stewardship, and San Diego ecosystems. **The curricula align with the Urban Wildlife Refuge Standards of Excellence, Common Core, Ocean Literacy Principles, and Next Generation Science Standards.**

The majority of classroom instruction and field trips are led by the Ocean Connectors Program Assistant, with planning support and oversight by the Executive Director. At the start of the school year, all participating teachers receive training and a "User Guide" binder of bilingual, standards-based environmental activities that can be used to teach about ocean conservation in conjunction with the standard programming. Students receive waterproof science journals for note-taking in class and on field trips throughout all three years of Ocean Connectors. At the conclusion, students take their journals home, full of memories, drawings, and facts from their Ocean Connectors learning experience. This process broadens their perspective and creates building blocks of environmental knowledge that lead to stewardship.

Ocean Connectors safely engages urban youth in diverse outdoor activities on field trips that combine physical activity with environmental education and hands-on STEM learning.

Field trip sites include the Living Coast Discovery Center at the Sweetwater Marsh Refuge, whale watching with Flagship Cruises & Events, and habitat restoration at the San Diego Refuge, where Ocean Connectors students get to experience the fun of working in the outdoors while helping the environment and observing a variety of bird species. Results, outcomes, and the support of our partners are shared on the Ocean Connectors website, social media pages, in electronic newsletters, and at community fairs and festivals.

Ocean Connectors has cultivated a variety of strong partnerships over the past ten years, including with FWS, the Living Coast Discovery Center, and National School District, which is now providing all school bus transportation for the Ocean Connectors field trips, contributing educational materials, and providing an office and storage space inside District headquarters. FWS employees provide support with habitat maintenance and preparation, youth instruction, logistical support, and a portion of the restoration materials. Funding from FWS has helped Ocean Connectors leverage new financial support from other organizations including the State

Coastal Conservancy, The San Diego Foundation, and Wells Fargo. Ocean Connectors is a fiscal sponsorship project of the 501(c)(3) nonprofit The Ocean Foundation (TOF), which provides infrastructure, administration, and accounting support. **These partnerships demonstrate our strong track record working in the community and a history of effectiveness at promoting stewardship and expanding awareness for the natural environment.**

Objectives:

Process Objectives

- Provide educational programs at 100% of National City elementary schools and a minimum of three additional schools in adjacent communities of San Diego Bay.
- Provide two classroom lessons and one visit to the San Diego Refuge to a minimum of 750 sixth grade students from Title I elementary schools in National City.
- Provide two classroom lessons and one visit to the Sweetwater Marsh Refuge to a minimum of 750 fourth grade students from Title I elementary schools in National City.
- Engage a minimum of 100 National City parents in the above-mentioned field trips to Urban Wildlife Refuges.
- Provide User Guide binders, training, and website resources to a minimum of 50 elementary schoolteachers in National City.
- Conduct habitat restoration over two acres at the San Diego Refuge, including litter removal, clearing invasive plant cover, and installing 800 native plants.
- Conduct knowledge exchange with 1,500 students in National City and a corresponding number of students who live at the end of the Pacific Flyway in Nayarit, Mexico.

Outcome Statements

- Increase student understanding of migratory, threatened and endangered species, and related issues such as pollution, habitat loss, and plastic contamination, as measured by performance on a pre/post assessment.
- Increase student awareness of challenges related to conservation of oceans, wetlands, and coastal watersheds, as measured by performance on a pre/post assessment.
- Increase student actions and behaviors to preserve watersheds in their communities, as measured by performance on a pre/post assessment.
- Expand student understanding of how environmental issues affect us and our communities, as measured by performance on a pre/post assessment.
- Empower students to consider environmental careers and to discuss environmental issues and themes in class, and with their friends and family, as measured by performance on a pre/post assessment and recorded observations throughout program activities.
- Expand resources for local schoolteachers to effectively teach about STEM and the natural environment, as measured by responses to a program evaluation form.

Program Design:

Ocean Connectors begins each school year by providing classroom presentations focused on three different species of migratory marine life, issues, and conservation themes:

- 4th Grade – Sea Turtle Discovery (waste management, single-use plastic, “3 R’s”)
- 5th Grade – California Whale Exploration (sustainable seafood, bycatch, fishing methods)
- 6th Grade – Bird and Habitat Study (pollution, coastal development, ecosystem services)

This format helps to maintain student interest, as they look forward to studying a new species each year, adding notes in their science journals, and exploring different coastal habitats during their multi-year involvement. We are currently in the process of introducing a 7th grade shark curriculum to extend the Ocean Connectors learning experience into middle school.

Ocean Connectors class presentations are provided at all ten National City elementary schools two to three times each year. During the classroom visits, Ocean Connectors conducts a “knowledge exchange” consisting of bilingual scientific communications between the students in National City and children living at the end of the Pacific Flyway in Nayarit, Mexico. This unique activity creates a cross-border, peer-to-peer dialogue between Latino students, promoting stewardship of our shared migratory wildlife.

Following the classroom presentations, approximately 750 fourth grade students observe sea turtles, fish, and birds during field trips to the Living Coast Discovery Center, a nonprofit living museum and animal rehabilitation center located inside the Sweetwater Marsh Refuge. The children explore the aquariums and green sea turtle exhibit, then take a guided tour of the surrounding habitat to learn about protecting wetlands.

Approximately 750 sixth grade students perform habitat restoration with mentorship from FWS experts during bird watching outings along upland and river corridor habitat in the San Diego Refuge. They remove litter and weeds, install native plants, and use binoculars to observe the waterfowl frequenting San Diego Bay. This brings the learning experience full-circle, showing how watersheds connect to the sea and how our actions have a direct impact on wildlife.

Final program evaluations are conducted at the end of the school year, including teacher evaluation forms and student assessments. Ocean Connectors activities are implemented by the Executive Director, Program Assistant, Youth Leader, and volunteers. With support from our advisory board and other key partners, program adjustments are made throughout implementation to continue meeting our objectives and ensure we are on-track to achieving all stated goals.

Urban Refuge Standards of Excellence:

- Connect Urban People with Nature via Stepping Stones of Engagement
- Build Partnerships
- Be a Community Asset
- Provide Equitable Access
- Ensure Visitors Feel Safe and Welcome
- Model Sustainability

Evaluation:

Process Objective	Instrument for Measurement	Frequency of Data Collection	Person Responsible
Provide educational programs at 100% of National City elementary schools and a minimum of three additional schools in adjacent communities of San Diego Bay.	Participant data tracking sheet.	Year-round.	Executive Director and Program Assistant.
Provide two classroom lessons and one visit to the San Diego Refuge to a minimum of 750 sixth grade students from Title I elementary schools in National City.	Participant data tracking sheet, activity schedule, and field trip tally sheet.	Year-round.	Executive Director and Program Assistant.
Provide two classroom lessons and one visit to the Sweetwater Marsh Refuge to a minimum of 750 fourth grade students from Title I elementary schools in National City.	Participant data tracking sheet, activity schedule, and field trip tally sheet.	Year-round.	Executive Director and Program Assistant.
Engage a minimum of 100 National City parents in the above-mentioned field trips to Urban Wildlife Refuges.	Activity schedule and field trip tally sheet.	October through May.	Executive Director and Program Assistant.
Provide User Guide binders, training, and website resources to a minimum of 50 elementary schoolteachers in National City.	Activity schedule and anonymous program evaluation form for participating teachers.	Year-round.	Executive Director, Program Assistant, and Youth Leader.
Conduct habitat restoration over two acres at the San Diego Refuge, including litter removal, clearing invasive plant cover, and installing 800 native plants.	Field trip tally sheet and before-and-after photos.	January through May.	Executive Director and Program Assistant.
Conduct knowledge exchange with 1,500 students in National City and a corresponding number of students who live at the end of the Pacific Flyway in Nayarit, Mexico.	Participant data tracking sheet and activity schedule.	Year-round.	Executive Director and Program Assistant.

Process Objectives Evaluation: Teacher Evaluation Form

Date:

1. Grade?
2. Number of students?
3. Approximately how many of your students speak Spanish?
4. Is the Ocean Connectors content relevant to California Common Core standards?
5. By what percentage do you think student *participation/engagement* increased as result of Ocean Connectors activities?
6. Did Ocean Connectors provide tools to build environmental topics into your classroom lessons?
7. Did you refer to the User Guide for activities and information during the year?
8. On a scale from 1 (poor) to 10 (excellent), how would you rate the project overall?

1 2 3 4 5 6 7 8 9 10
9. What did you like most/least about the Ocean Connectors program?
10. Other comments:

Outcome Statements	Instrument for Measurement	Frequency of Data Collection	Person Responsible
Increase student understanding of migratory, threatened and endangered species, and related issues such as pollution, habitat loss, and plastic contamination.	Pre/post student assessment delivered through the School District's online evaluation platform.	Once at start and conclusion of each school year.	Program Assistant, Executive Director, and Teachers.
Increase student awareness of challenges related to conservation of oceans, wetlands, and coastal watersheds.	Pre/post student assessment delivered through the School District's online evaluation platform.	Once at start and conclusion of each school year.	Program Assistant, Executive Director, and Teachers.
Increase student actions and behaviors to preserve watersheds in their communities.	Pre/post student assessment delivered through the School District's online evaluation platform.	Once at start and conclusion of each school year.	Program Assistant, Executive Director, and Teachers.
Expand student understanding of how environmental issues affect us and our communities.	Pre/post student assessment delivered through the School District's online evaluation platform.	Once at start and conclusion of each school year.	Program Assistant, Executive Director, and Teachers.
Empower students to consider environmental careers and to discuss environmental issues and themes in class, and with their friends and family.	Pre/post assessment delivered through the School District's online evaluation platform and recorded observations.	Pre/post assessment conducted once at start and conclusion of each school year, and recorded observations conducted throughout program activities and field trips.	Program Assistant, Executive Director, and Youth Leader.
Expand resources for local schoolteachers to effectively teach about STEM and the natural environment.	Anonymous program evaluation form for participating teachers.	Once at conclusion of school year.	Program Assistant and Executive Director.

FWS Evaluation Commitment:

Ocean Connectors agrees to administer a subset of questions provided by the SoCal Urban Wildlife Refuge Project as a component of pre/post testing, and submit individual participant responses in a spreadsheet for analysis, as appropriate and feasible for Ocean Connectors staff.

Outcome Statements Evaluation: Student Pre/Post Assessment

1. Migratory birds depend on coastal habitats along the “Pacific Flyway” because _____.

- A) they need safe places to rest, feed, and hide
- B) they prefer to bathe near the ocean
- C) people go to the coast and leave behind food

2. Small pieces of plastic have a negative impact on birds and coastal species because _____.

- A) the plastic makes it hard to swim
- B) predators hide behind the plastic
- C) animals confuse plastic for their prey

3. Sea birds are threatened by _____ and _____. (*PICK TWO*)

- A) seaweed
- B) habitat loss
- C) horses
- D) strong winds
- E) pollution

4. To help protect birds, people should _____ and _____. (*PICK TWO*)

- A) ignore the signs posted outdoors
- B) never visit wetlands
- C) pick up litter
- D) leave leftover food at the beach
- E) volunteer to help plant at natural areas

5. An important message to share with friends and family is that _____.

- A) the coastal environment does not need help
- B) littering is bad for us and the environment
- C) going to the beach is too dangerous

6. How often do you talk to your friends and family about issues related to the ocean or coast?

- A) Always
- B) Often
- C) Sometimes
- D) Rarely
- E) Never

7. How often do you pick up litter that is not your own?

- A) Always
- B) Often
- C) Sometimes
- D) Rarely
- E) Never

8. I feel it is important to help protect the wildlife living in our oceans and natural areas.

- A) Strongly disagree
- B) Disagree
- C) Neither agree nor disagree
- D) Agree
- E) Strongly agree

9. It is important for someone like me to help improve wetland or coastal natural areas.

- A) Strongly disagree
- B) Disagree
- C) Neither agree nor disagree
- D) Agree
- E) Strongly agree

10. Environmental problems have a direct effect on my everyday life.

- A) Strongly disagree
- B) Disagree
- C) Neither agree nor disagree
- D) Agree
- E) Strongly agree

Ocean Connectors Budget:

	Grant Request	Total Budget
Personnel		
Executive Director	\$0	\$60,000
Program Assistant	\$14,712	\$14,712
TOF Program Manager	\$1,283	\$1,283
Youth Leader	\$0	\$3,000
Fringe Benefits	\$4,460	\$23,585
Total Personnel	\$20,455	\$102,580
Operating Expenses		
Field Trip Transportation	\$0	\$10,000
Travel	\$0	\$5,000
Equipment	\$0	\$0
Supplies	\$0	\$10,500
Contractual Services	\$0	\$6,000
Field Trip Admission	\$0	\$8,525
Indirect Charges	\$2,045	\$13,045
Total Operating	\$2,045	\$53,070
<u>Budget Total</u>	<u>\$22,500</u>	<u>\$155,650</u>

Matching Contributions:

Additional program support is provided by the Coastal Conservancy (\$20,000 for personnel and supplies), Qualcomm Inc. (\$5,000 for personnel), the Unified Port of San Diego (\$6,000 for personnel and travel), The San Diego Foundation (pending; \$25,000 for personnel and field trip admission), the County of San Diego (pending; \$10,000), and Wells Fargo (pending; \$10,000 for personnel and supplies).

National School District is contributing approximately \$25,000 in in-kind support (field trip transportation, supplies, and office/storage space).

Description of FWS Costs:

Program Assistant: \$13.50 per hour for part-time hourly position

- Leads the educational aspects of the work, including classroom lessons, field trips, youth instruction, and outreach events.

TOF Program Manager: \$26.44 per hour for 48 hours

- Oversees narrative and financial reporting, coordinates all financial transactions, and monitors progress towards the project's goals and objectives.

Fringe Benefits

- Approximately 30% of Program Assistant and Program Manager wages for benefits and payroll taxes. This amount is not an audited rate; it was achieved during an internal review of the foundations actual expenses compared to actual salaries for staff where it was found that the total amount TOF was paying for benefits/taxes averaged 30%, due to the increases in health insurance premiums as a result of the Affordable Care Act.

Indirect Charges: 10% *de minimis* rate of MTDC

- Ten percent of Modified Total Direct Costs (MTDC) will be allocated to The Ocean Foundation for indirect costs associated with infrastructure, administration, and accounting. Indirect costs represent the expenses of doing business that are necessary for the general operation of the organization, such as administrative and accounting staff costs, office rent, telephone/internet, office equipment general office supplies, etc.