Item 8b

Staff Recommendation
October 25, 2018

Proposition 1 Funding Recommendations: Newport Bay Water Wheel Project

Marina Cazorla, Program Manager

RECOMMENDED ACTION: Authorization to disburse up to $1,680,000 to the City of Newport Beach for planning and implementation of the Newport Bay Water Wheel Project, which will remove floating trash and debris in San Diego Creek before it enters the Upper Newport Bay marine protected area and the Pacific Ocean, and adoption of findings under the California Environmental Quality Act.

LOCATION: Within and along San Diego Creek approximately 800 feet upstream of Upper Newport Bay, near the Jamboree Road Bridge (See Exhibits 1 and 2).

STRATEGIC PLAN OBJECTIVE(S): Coastal and ocean impacts from land:

- Objective 9.1: Support an integrated approach to water management that minimizes harm to the health of downstream ocean and coastal ecosystems.
- Objective 10.1: Support collaborative efforts and effective partnerships that measurably reduce existing and new marine debris.
- Objective 10.2: Provide information to support implementation of policy initiatives and other efforts to reduce marine debris and its impacts.

EXHIBITS

Exhibit 1	Project Location Map
Exhibit 2	Project Site Plan and Graphics
Exhibit 3	Letters of Support
Exhibit 4	Mitigated Negative Declaration (CEQA Clearinghouse #2018081013)
Exhibit 5	Mitigation, Monitoring and Reporting Plan

FINDINGS AND RESOLUTION:
Staff recommends that the Ocean Protection Council (OPC) adopt the following findings:
"Based on the accompanying staff report and attached exhibit(s), OPC hereby finds that:

1) The proposed project is consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act;
2) The proposed project is consistent with OPC's Proposition 1 grant guidelines adopted in November 2017; and
3) OPC has reviewed the Mitigated Negative Declaration (MND) for the Newport Bay Water Wheel Project, adopted by the City of Newport Beach on September 25, 2018 pursuant to the to the California Environmental Quality Act (State Clearinghouse #2018081013) and attached to this staff recommendation as Exhibit 4, and adopts the mitigation monitoring and reporting plan included as Exhibit 5, and adopts the findings made in conformance with California Code of Regulations, Title 14, sections 15091 and 15096 (h) as contained in Exhibit 4."

Staff further recommends that OPC adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

"OPC hereby approves the disbursement of up to $1,680,000 to the City of Newport Beach for the Newport Bay Water Wheel Project, which will remove floating trash and debris in San Diego Creek before it enters the Upper Newport Bay marine protected area.

This authorization is subject to the condition that prior to disbursement of funds, the City of Newport Beach shall submit for the review and approval of the Executive Director of OPC:

1. A detailed work plan, schedule, staff requirements, budget, and the names of any contractors intended to be used to complete the project, as well as discrete deliverables that can be produced in intervals to ensure the project is on target for successful completion.
2. Evidence that all necessary permits and approvals for the project have been obtained prior to buying, fabricating or manufacturing any major equipment components for the Water Wheel; and
3. A plan to create signage to acknowledge OPC and Proposition 1 funding.
   Projects will be developed under a shared understanding of process, management and delivery."

PROJECT SUMMARY:

Located in San Diego Creek just upstream of Upper Newport Bay, the proposed project will remove floating trash and debris in San Diego Creek before it enters the Upper Newport Bay State Marine Conservation Area (a category of Marine Protected Area or MPA). The project includes both planning and implementation of the Newport Bay Water Wheel Project by the City of Newport Beach. The proposed 40-foot long, 30-foot wide, 14-foot high Water Wheel will be fixed to a pile system along the north shore of San Diego Creek. A buoy collection system will be deployed along the full width of the creek - about 140 feet wide - to direct floatable material to the Water Wheel. The design includes the installation of solar panels to create enough energy to support the needs of the water wheel. A rake and conveyor belt system, powered by the Water Wheel's solar-powered batteries, will lift trash from the water and deposit it onto a second conveyor belt that in turn transports the material into a dumpster located landside. Landside, a

truck access road will be graded into the wide channel bank to allow delivery of an empty dumpster that will be stationed on a landside concrete pad adjacent to the water wheel. When full, dumpsters will be removed and replaced with new ones. The channel bank and access road area will be revegetated with native plants, with attention to providing bushes and trees to screen the new hardscape improvements. The City of Newport Beach estimates that Newport Bay could immediately experience trash load reductions of 50%-80%. The proposed project schedule is for planning and permitting to be completed by the end of 2019, with construction taking place in 2020. The Water Wheel is designed to last a minimum of twenty years.

The proposed project design is based closely on the successful Baltimore Trash Wheel, which can remove 50,000 pounds of trash in a 24-hour period. Over the course of its first 22 months of operation, the Baltimore Trash Wheel picked up 127 dumpsters of trash and debris adding up to 420 tons. The public can track trash collection on the project website (www.Mr.TrashWheel.com) and can even download a spreadsheet detailing the composition of each individual dumpster. This data is used to educate the public via social media and educational events about the impact that trash has on local waterways and the ocean. The Baltimore project has over 17,000 followers on Facebook and 17,000 on Twitter.[1] Like the Baltimore project, the Newport Bay Water Wheel Project will also have a trash characterization component and a public education program based on the Water Wheel, both implemented by the City of Newport Beach.

Site Description

San Diego Creek accounts for about 80% of the freshwater flow into Newport Bay. The flood channel in this reach of San Diego Creek is about 7-8 feet deep and is bordered by banks vegetated in large part by exotic and invasive plants. Large volumes of trash and debris – hundreds of cubic yards - enter Newport Bay, the Santa Ana-Delhi Channel, and San Diego Creek each year, fouling the intertidal areas around Upper Newport Bay and depositing at beaches at the Newport Dunes or around the harbor. Some of the trash and debris exits the Harbor Jetty and deposits on the beaches along the Balboa Peninsula, and south to Big Corona Beach and other beaches south of Newport Bay. In addition, some of the trash becomes embedded in the Bay sediments. The trash and debris decay in the bay, polluting the water column or becoming part of bay bottom sediment, if not eaten by fish and birds. Trash and debris also act as vectors for bacteria and pathogens, a hazard to animals that feed on them.

In addition to direct benefits to the Upper Newport Bay State Marine Conservation Area located immediately downstream from the project site, downstream and down coast marine protected areas like Crystal Cove State Marine Conservation Area, Laguna Beach State Marine Reserve, and Laguna Beach State Marine Conservation Area will also benefit from improved water quality as a result of the Water Wheel. Located just south of Newport Bay and the Balboa Peninsula, the Robert E. Badham Area of Special Biological Significance (ASBS) and the Irvine Coast Area of Special Biological Significance (ASBS) will also likely benefit from the proposed project.

[1] Numbers are accurate as of the time of writing this document.

Project History
Since San Diego Creek was connected to Upper Newport Bay in 1969, Newport Bay has been inundated with trash. Aside from a large trash boom installed at North Star Beach in the 2000s, there has not been an area-wide concerted effort to capture upstream trash entering Upper Newport Bay. However, beginning in 2002, the City of Newport Beach began implementing projects to reduce trash entering both Upper and Lower Newport Bay (i.e. Newport Harbor).

For Upper Newport Bay, in addition to the North Star Beach trash boom, the City of Newport Beach is part of a multi-city agreement to construct a Regional Trash Collection facility at the Santa Ana-Delhi Channel that will capture all trash from dry-weather and first-flush storms for an 11-mile sub-watershed area. The Water Wheel project is a key element in addressing the second major input to the Upper Bay - San Diego Creek – which is a much larger drainage area (approximately 120 square miles) that by some estimates contributes as much as 80% of the total trash load to the Upper Bay. For Lower Newport Bay, the City has installed numerous projects, including catch basin screens, marina trash skimmers, and CDS units to address the extensive network of storm drains that empty into Newport Harbor.

Looking to the longer term, the City of Newport Beach coordinates with the Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) public education program to support its efforts to reduce the use of single-use plastics in favor of compostable materials. The City also partners with upstream cities and Orange County to do community outreach to promote trash source control changes.

Project Financing
Staff recommends that OPC authorize encumbrance of up to $1,680,000 to the City of Newport Beach to plan and implement the Newport Bay Water Wheel Project. The proposed project may not require expenditure of the full amount.

Ocean Protection Council	$1,680,000
City of Newport Beach (preliminary design work)	$99,000
Help Your Harbor (preliminary design work)	$12,000
PROJECT TOTAL COST	**$1,791,000**

FUNDING SOURCE AND CONSISTENCY WITH PROPOSITION 1 GRANT GUIDELINES:
The anticipated source of funds for this project is OPC's appropriation pursuant to the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1, Water Code §79700 et. seq.). Funds appropriated to OPC derive from Chapter 6 (commencing with §79730) and may be used "for multibenefit water quality, water supply, and watershed protection and restoration efforts for the watersheds of the state" (Water Code §79731). Section 79732 identifies specific purposes for Chapter 6, which include protecting and restoring coastal watersheds, including, but not limited to, bays, marine estuaries, and nearshore ecosystems.

The proposed project is an appropriate use of Proposition 1 funds because it will provide multi-benefits: a healthier Newport Bay with improved water quality, as well as estuarine and nearshore ecosystems as well as protection of marine managed areas (both marine protected areas and Areas of Special Biological Significance). The project will also reduce pollution or contamination of rivers, lakes, streams, or coastal waters.

The table below summarizes the projects and funding amounts that were already approved in July 2018 by the Ocean Protection Council using Proposition 1 Round 2 funding, together with the proposed funding for the proposed project. Including the proposed project funding amount, the total amount of OPC Proposition 1 funding would total $10,096,409.

Summary of OPC Funding - Proposition 1, Round 2	OPC Funds Prop 1
Water Quality and Marine Debris Projects	
THIS RECOMMENDED PROJECT – Newport Bay Water Wheel Project	$1,680,000
Quincy Jones Green Alley Stormwater Infiltration Project (Approved July 2018)	$1,000,000
Correcting Water Quality Problems at Morro Bay MPAs and National Estuary (Approved July 2018)	$992,644
SUBTOTAL	**$3,672,644**
Habitat Restoration and Climate Resilience Projects approved July 2018	
Eel River Estuary and Centerville Slough Enhancement Project	$950,000
Elkhorn Slough Foundation for the Elkhorn Slough Tidal Marsh Restoration	$2,373,241
Martin Slough Enhancement Project	$881,862
Elk River Estuary and Tidal Wetlands Enhancement Project	$1,038,853
Surfers Point Project	$355,000
Restoring Eelgrass and Climate Resilience in San Francisco Bay Project	$824,809
SUBTOTAL	**$6,423,765**
OPC Funds Expended in Round 2 of Prop 1 (if project approved) - TOTAL	**$10,096,409**

The proposed project was selected through a competitive grant process under the OPC's Proposition 1 Grant Guidelines, which were adopted in November 2017. OPC's Proposition 1 Grant Program assembled a Round 2 Review Committee in early 2018 that consisted of OPC staff and twelve external reviewers from state and federal government agencies. External reviewers represented partner agencies including the California Department of Fish and Wildlife, the climate program of the Resources Agency, the State Water Quality Control Board, State Lands Commission, CalRecycle, the National Oceanographic and Atmospheric Administration (NOAA, USC Sea Grant, and the Coastal Commission.

The Review Committee scored all complete and eligible applications submitted in Round 2 according to the Scoring Criteria provided in the Grant Guidelines. After all proposals were scored and ranked, the Review Committee met and determined which projects should receive site visits from OPC Staff and members of the Review Committee. Following long-standing

Resources Agency practice, site visits were offered to more projects than OPC had available funding for. Final funding recommendation decisions are made by OPC's Executive Director.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:
The proposed project is consistent with the Ocean Protection Act, Division 26.5 of the Public Resources Code, because it is consistent with trust-fund allowable projects, defined in Public Resources Code Section 35650(b)(2) as projects which:

- Eliminate or reduce threats to coastal and ocean ecosystems, habitats, and species;
- Improve coastal water quality;
- Protect, conserve and restore coastal waters and ocean ecosystems.

The Newport Bay Water Wheel Project will reduce threats to coastal and ocean ecosystems and improve coastal water quality by removing trash and debris from Newport Bay and preventing it from eventually entering the Pacific Ocean. The project will thereby eliminate and reduce threats to coastal and ocean ecosystems and species, improve coastal water quality, and protect coastal waters and ocean ecosystems.

CONSISTENCY WITH OPC'S STRATEGIC PLAN:
This project implements Focal Area D from the OPC's Strategic Plan, Coastal and ocean impacts from Land. Specifically, the project will support an integrated approach to water management that minimizes harm to the health of downstream ocean and coastal ecosystems. Additionally, the project will also support collaborative efforts and effective partnerships that measurably reduce existing and new marine debris.

COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):
A Mitigated Negative Declaration (MND) was prepared and adopted by the City of Newport Beach on September 25, 2018 pursuant to the provisions of the California Environmental Quality Act (State Clearinghouse #2018081013), which is attached as Exhibit 4. Based on the MND, the City of Newport Beach determined that the effects of the project will be avoided, reduced or mitigated to less than significant levels with imposition of the identified mitigation measures.

The Ocean Protection Council staff has reviewed and considered the Mitigated Negative Declaration pursuant to Section 15096 of the CEQA Guidelines and staff concurs with the City's conclusion. Accordingly, staff recommends that the OPC:

1) Find that the project, as mitigated, avoids, reduces, or mitigates the possible effects of the projects to a level of insignificance;
2) Finds that there is no substantial evidence that the project, as mitigated, may have a significant effect on the environment; and
3) Adopts the attached Mitigation, Monitoring and Reporting Program (Exhibit 5) and CEQA findings (Exhibit 4).

If the Ocean Protection Council approves the proposed project funding authorization, the Ocean Protection Council will delegate to staff the ability to file a Notice of Determination with the State Clearinghouse, consistent with the findings in the staff recommendation.