

The California Ocean Protection Council's Once-Through Cooling Interim Mitigation Program Annual Report: Fiscal Year 2020-2021

Program Background

The State Water Resources Control Board (Water Boards) established the statewide “Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling” (Policy)¹ in 2010 requiring power generating facilities in California to significantly reduce using once-through cooling (OTC) technology. The Policy requires that interim mitigation payments assessed against power plants for using OTC technology as they come into final compliance with the Policy support “mitigation projects directed toward increases in marine life associated with the state’s marine protected areas (MPAs) in the geographic region of the facility.” Per the Policy, the California Ocean Protection Council (OPC) receives up to \$5.4 million annually from interim mitigation payments made by power plants that are still operating.

These funds are distributed through the OTC Interim Mitigation Program (Program) at OPC’s discretion and in close coordination and collaboration with the Water Boards and the State Coastal Conservancy. The funds can be distributed through two funding mechanisms: 1) a competitive award program, and 2) discretionary awards including but not limited to interagency contracts and other projects addressing timely or emerging problems. Funds will decrease as power plants come into compliance with the Policy, and the Program is expected to end in 2030 when all power plants are required to be in compliance.

To offset the negative impacts of OTC on coastal environments, the Program prioritizes mitigation payment investment through four categories to ensure effective management of California’s MPA network:

- **Enforcement of MPA regulations statewide**
Enforcement of relevant MPA regulations is specifically mentioned in the Marine Life Protection Act² as essential to ensure a successful MPA network that has the best chance to achieve ecological goals. Recurring poaching of marine life in MPAs decreases diversity, populations, and reproductive output, and can therefore affect an ecosystem’s ability to recover from or mitigate negative impacts.³
- **Outreach and education to improve compliance of MPA regulations statewide**
Outreach and education to the public is a critical component of establishing and maintaining compliance with MPA regulations. Improved public awareness of MPA regulations can serve as OTC impact mitigation because it increases protection of marine life within MPAs, which in turn maximizes the expected ecological benefits from these areas.⁴
- **Research to establish and quantify the expected ecological benefits of the MPA network and understand what additional mitigation may be required to offset OTC impacts**

¹ https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/otcpolicy_2017.pdf

² http://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=FGC&division=3.&title=&part=&chapter=10.5.&article

³ IUCN World Commission on Protected Areas (IUCN-WCPA) (2008). Establishing Marine Protected Area Networks—Making It Happen. Washington, D.C.: IUCN-WCPA, National Oceanic and Atmospheric Administration and The Nature Conservancy. 118 p
https://cmsdata.iucn.org/downloads/mpanetworksmakingithappen_en.pdf

⁴ <https://www.jstor.org/stable/j.ctt1657v5d.27>

The Marine Life Protection Act Master Plan⁵ identifies research and monitoring as a key focal area to ensure that cutting-edge science informs adaptive management of the MPA network. Research to establish and quantify the expected ecological benefits of the MPA network is critical to understanding what additional mitigation projects may be required to offset for OTC impacts. A Working Group⁶ of the OPC Science Advisory Team (OPC-SAT), convened by the California Ocean Science Trust, identified this type of research as being essential to achieve the goals of the Policy.⁷ Research supported by Program funds will help evaluate and quantify the degree to which the MPA network may be mitigating for OTC impacts and document ecological benefits provided by the increasing biomass and reproductive output.

- **Restoration that increases marine life in the geographic region of the facility**

The OPC-SAT Working Group⁶ - scientists with expertise in mitigation, restoration, larval dynamics, oceanography, kelp forests, MPAs, and OTC impacts - identified an ecological framework that would evaluate restoration projects that would have a high likelihood of meeting the requirements of the Policy to increase marine life associated with California's MPA Network. The Working Group also applied the best science available to interpret the Policy's key terms: "increases in marine life", "associated with the state's marine protected areas", and "geographic region of the facility".⁷ Further explanation of these key policy terms is provided in OPC's Program Award Guidelines.⁸

OPC will allocate the funds across these four categories as determined by an ongoing needs assessment and the MPA Statewide Leadership Team Work Plan⁹. All projects funded through the Program will be subject to Council review and approval. A minimum of a 10-day public comment period will be made available prior to the Council meeting for public review of the recommended projects.

Project Eligibility

All projects funded through the Program must be consistent with the Water Boards' Policy. Projects must demonstrate that the expected outcomes increase marine life associated with the State's marine protected areas and fall within at least one of the four Program priorities categories described above. Projects should be focused within the geographic region of the facilities as defined by the OPC-SAT Working Group as Big Sur to San Diego including islands, wetlands, and estuaries within that region. Projects with a statewide application are eligible to receive funding if the expected outcomes are connected to the geographic region. Projects that address water quality issues must show direct long-term benefits to MPAs in the geographic region. Projects must be ready to start work upon approval, though planning activities that will lead to the successful design and implementation of projects may be included in an award. Such activities may include project development, implementation strategy development, watershed assessments, and project-specific activities such as design and baseline data collection.

Funded Projects

As of August 2021, OPC received \$5,400,000 in mitigation payments from the power plants' Operating Years 15/16, 16/17, 17/18, and 18/19 totaling \$21,600,000 in funds for the Program to date. OPC has financed 10 projects with these funds spanning the four priority categories. Of the funds received thus far, \$18,126,768.48 have been encumbered. An overview of the projects that have been funded through the Program and the distribution of funds across priority categories are listed in the table and pie chart below.

⁵ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=133535&inline>

⁶ <http://www.oceansciencetrust.org/projects/scientific-guidance-for-once-through-cooling-mitigation-funds/>

⁷ <http://www.opc.ca.gov/webmaster/OST-Ocean-Restoration-Methods-Final-HighRes.pdf>

⁸ https://opc.ca.gov/webmaster/media_library/2018/10/OTCAwardGuidelines_OceanProtectionCouncil_FINAL.pdf

⁹ <http://www.opc.ca.gov/programs-summary/marine-protected-areas/partnerships/>

Future Investments

To best invest the nearly \$54.5 million OPC anticipates receiving over the timeframe power plants are required to make interim mitigation payments, OPC has set the following funding guidelines across the Program's priority categories:

- Outreach & Education: \$10,570,741
- Enforcement & Compliance: \$14,000,000
- Research & Monitoring: \$10,000,000
- Restoration: \$16,000,000
- Staff support: \$3,900,000

In agreement with the State Coastal Conservancy and the Water Boards, OPC will dedicate \$6 million of the approximately \$9 million it anticipates receiving from the Los Angeles Department of Water and Power for mitigation payments for the Haynes Generating Station to restoration projects in the greater Los Angeles area.

The amounts listed above could change depending on circumstances such as power plant compliance deadline extensions or unanticipated funding needs for emerging concerns. Whenever possible, OPC will leverage other funds and partnerships to further amplify the impact of the Program's investments.

Contact

Visit the OTC Interim Mitigation Program website for more information:

<https://www.opc.ca.gov/once-through-cooling-interim-mitigation-program/>

For additional questions or information, please contact:

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Once-Through Cooling Interim Mitigation Program: Grants and Contracts Active in Fiscal Year 20/21

Outreach and Education							
Grant/Contract #	Grantee	Project	Project Amount	Funding Source (Operating Year)	Start Date	Termination Date	Geographic Area
OCA17009	California Department of Parks and Recreation	<p style="text-align: center;">State Parks MPA Outreach & Education Projects</p> <ul style="list-style-type: none"> • Year-round interpretive and educational programs at seven park districts associated with the MPA network. • Expand distance learning platforms and digital educational opportunities through the Parks Online Resources for Teachers and Students (PORTS) Program to provide MPA content for K-12 classrooms throughout the state. • Translate MPA published materials into Spanish and Asian languages. • Deliver full-time summer interpretive and campfire programs on MPA-related topics. 	\$1,206,515.00	OY 15/16	6/12/2018	11/30/2022	Statewide
C0302101	California Marine Sanctuary Foundation	<p style="text-align: center;">MPA Outreach and Education Improvement Program 2</p> <ul style="list-style-type: none"> • Enhance MPA regulation education to increase compliance in fishing communities and ocean recreation businesses, across the state through digital and physical MPA toolkits 	\$195,573.00	3/21/2019	5/31/2021	OY 15/16	Statewide
C0302102	California Marine Sanctuary Foundation	<p style="text-align: center;">MPA Outreach and Education Improvement Program 3</p> <ul style="list-style-type: none"> • Design and install 15 new signs and 4 new exhibits for trade shows and fishing events that communicate MPA regulations and maps and contribute to ocean conservation messaging. • Collaborate with State Parks to develop local educational presentations to increase compliance statewide. • Develop and implement a statewide MPA social media campaign focused on MPA regulations and conservation messaging. 	\$498,435.00	OY 15/16	7/12/2019	9/30/2021	Statewide
C0302103	Coastal Quest	<p style="text-align: center;">MPA Outreach and Education Small Grants Program</p> <ul style="list-style-type: none"> • Coastal Quest supports OPC to administer a competitive small grants program for 10 MPA outreach and education projects ranging from \$25,000-\$100,000 over two years. • Coastal Quest secured additional funding from The David and Lucile Packard Foundation and the Marisla Foundation for projects in areas outside of the geographic region of OTC facilities and with a focus on serving disadvantaged communities. These project awards total \$144,000. • Projects include a boater education program, MPA science cruise, bringing MPAs to life with augmented reality coloring pages, supporting indigenous people traditional knowledge, and more. 	\$357,199.75	OY 15/16	8/9/2019	12/31/2022	Big Sur to San Diego
		TOTAL	\$642,800.25	OY 16/17			
			\$1,000,000.00				
Outreach and Education TOTAL			\$2,900,523.00				

Once-Through Cooling Interim Mitigation Program: Active Grants and Contracts

Enforcement and Compliance							
Grant/Contract #	Grantee	Project Name	Project Amount	Funding Source (Operating Year)	Start Date	Termination Date	Geographic Area
OCA17016	California Department of Fish & Wildlife	<p style="text-align: center;">Law Enforcement Division MPA Enforcement Pulse Project</p> <ul style="list-style-type: none"> • Increase resources of the California Department of Fish and Wildlife's Law Enforcement Division to patrol and deter violations occurring within the MPA network statewide. • Provide MPA enforcement training seminars for law enforcement personnel. • Maintain patrol equipment and operational costs. 	\$3,000,000.00	OY 15/16	10/29/2018	12/31/2022	Statewide
C0302104	Resources Legacy Fund	<p style="text-align: center;">Marine Protected Area Compliance Initiative</p> <ul style="list-style-type: none"> • Support the MPA Collaborative Network to work with its membership and local agencies to increase compliance with MPA regulations in specific problem areas through educational materials and training seminars. • Creates training materials for district attorneys and judges to better uphold MPA regulations. • Supports the MPA Watch Network of locally-based community science programs to track, analyze, and share information about MPA compliance. 	\$2,532,262.00	OY 17/18	9/9/2019	11/31/2022	Statewide
Enforcement and Compliance TOTAL			\$5,532,262.00				

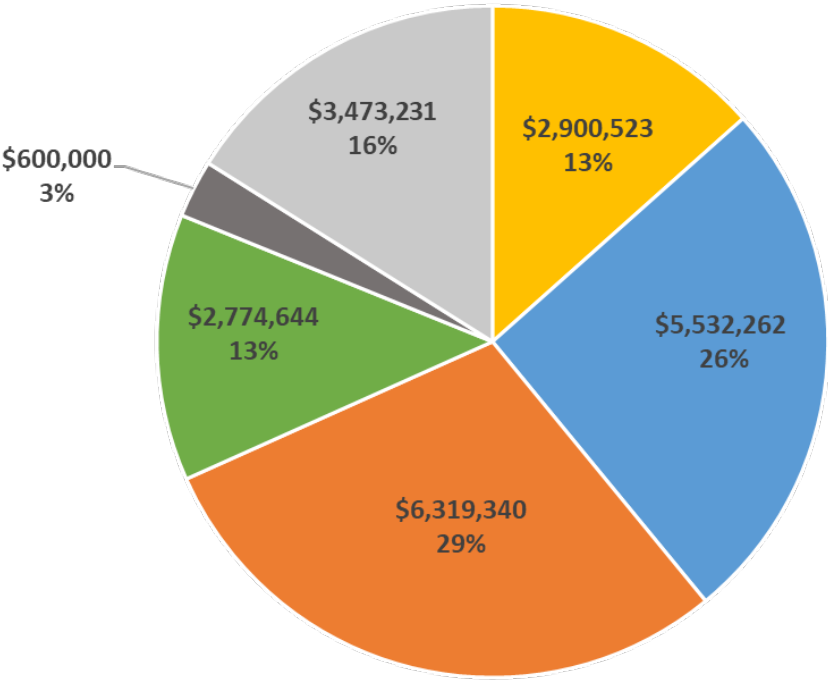
Research and Monitoring							
Grant/Contract #	Grantee	Project Name	Project Amount	Funding Source (Operating Year)	Start Date	Termination Date	Geographic Area
C0302700	UC San Diego	<p style="text-align: center;">MPA Long-Term Monitoring Projects</p> <ul style="list-style-type: none"> • California Sea Grant supports OPC to issue a call for proposals to implement a monitoring program for specific habitat types and species within the state's MPA network. • Leveraging other OPC funds, a total of \$9,500,000 have been disbursed to fund 7 long-term MPA monitoring projects that are grounded in the state's MPA Monitoring Action Plan. • Projects track priority ecological measures and metrics inside and outside MPAs in key habitats as well as assess the effect of MPAs on consumptive human uses. These projects will provide the State with critical information to inform adaptive management of the MPA network. 	\$4,561,626.75	OY 16/17	7/25/2018	5/31/2023	Statewide
			\$1,626,768.48	OY 18/19			
C0752003	San Jose State University Research Foundation	<p style="text-align: center;">California Collaborative Fisheries Research Program</p> <ul style="list-style-type: none"> • Leveraging other OPC funds, a total of \$1,000,000 have been disbursed to monitor top priority MPA sites statewide through hook-and-line surveys using rigorous standardized scientific protocols and volunteer anglers. • Evaluate MPA performance and ecosystem changes for abundance, species diversity, trophic structure, occurrence of special status species, spillover and fish movement patterns, and attitude/perception of MPAs in the recreational fishing community. • Continue to expand community outreach efforts to inform the public about MPA regulations. 	\$130,945.25	OY 17/18	9/1/2020	5/31/2022	Statewide
Research and Monitoring TOTAL			\$6,319,340.48				

Once-Through Cooling Interim Mitigation Program: Active Grants and Contracts

Restoration							
Grant/Contract #	Grantee	Project Name	Project Amount	Funding Source (Operating Year)	Start Date	Termination Date	Geographic Area
C0302105	WILDCOAST	<p style="text-align: center;">Restoration of 42 acres of wetland habitat in San Diego County</p> <ul style="list-style-type: none"> • Restore 41.7 acres of degraded wetlands adjacent to the Batiquitos Lagoon and the San Dieguito Lagoon State Marine Conservation Areas in San Diego County, which contain a total of 396.8 acres of wetland ecosystem. • Increase marine life associated with MPAs by enhancing critical habitat adjacent to MPAs. • Engage a diverse audience including students, youth programs, local tribes, and non-profit organizations in outreach and education to improve public awareness of MPA regulations and participate in an annual on-the-water cleanup day. 	\$1,081,061.00	OY 17/18	10/11/2019	3/31/2024	San Diego County
C0302106	UC Santa Barbara	<p style="text-align: center;">Restoring Rocky Intertidal Foundation Species in California</p> <ul style="list-style-type: none"> • Restore impacted rockweed at 9 sites from Big Sur to San Diego, including the Channel Islands, to provide key ecosystem functions and benefits to rocky intertidal ecosystems and increase marine life in the geographic region of the OTC facilities. • In addition to the restoration, tasks include site reconnaissance, genetic analysis, biological surveys, data analysis, and reporting and communications. 	\$337,850.25	OY16/17	4/14/2020	3/30/2024	Big Sur to San Diego
			\$1,355,731.75	OY17/18			
			TOTAL	\$1,693,582.00			
Restoration TOTAL			\$2,774,643.00				
Staff Support							
Grant/Contract #	Grantee	Project Name	Project Amount	Funding Source (Operating Year)	Start Date	Termination Date	Geographic Area
N/A	N/A	MPA Program staff support	\$300,000.00	OY 17/18	7/1/2019	6/30/2020	Sacramento
N/A	N/A	MPA Program staff support	\$300,000.00	OY 18/19	7/1/2020	6/30/2021	Sacramento
Staff Support TOTAL			\$600,000.00				
TOTAL PROGRAM AMOUNT (ACTIVE)			\$18,126,768.48				

Ocean Protection Council's Once-Through Cooling Interim Mitigation Program Funding by Program Priority

Total Funds Administered to OPC from Operating Years 15/16, 16/17, 17/18, and 18/19
(\$21,600,000)



■ Outreach & Education ■ Enforcement & Compliance ■ Research & Monitoring ■ Restoration ■ Staff Support ■ Not yet encumbered