



Item 4b

CALIFORNIA OCEAN PROTECTION COUNCIL

Staff Recommendation  
July 25, 2018

**Once-Through Cooling Interim Mitigation Program:  
Improving Enforcement and Compliance Associated with California’s MPA Network**

Tova Handelman, Marine Protected Area Program Manager

**RECOMMENDED ACTION:** Authorization to: 1) disburse up to \$1,206,515 to the Department of Parks and Recreation (Parks) to administer year-round interpretive and educational opportunities to increase marine protected area (MPA) literacy and compliance with regulations, and 2) disburse up to \$3,000,000 to the California Department of Fish and Wildlife Law Enforcement Division (CDFW LED) to increase patrols and associated resources for the CDFW LED Marine Enforcement District within MPAs statewide.

**LOCATION:** Statewide.

**STRATEGIC PLAN OBJECTIVES:** 8.1: Support effective implementation of MPAs consistent with the Marine Life Protection Act (MLPA) through strategic partnerships. 8.2: Coordinate MLPA implementation with other ocean management agencies to improve management effectiveness.

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**EXHIBITS**

Exhibit A: Map of Parks Project Sites

Exhibit B: Letters of Support

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**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), the Ocean Protection Council 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 the adopted State Water Resource Control Board’s Once-Through Cooling Policy.
- 3) The proposed projects are not ‘legal projects’ that trigger the California Environmental Quality Act pursuant to Public Resources Code section 21068 and Title 14 of the California Code of Regulations, section 15378.”

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

“The California Ocean Protection Council hereby approves the disbursement of: 1) up to \$1,206,515 to the Department of Parks and Recreation (Parks) to administer year-round interpretive and educational opportunities to increase marine protected area (MPA) literacy and compliance with regulations, and 2) up to \$3,000,000 to the California Department of Fish and Wildlife Law Enforcement Division (CDFW LED) to increase patrols and associated resources for the CDFW LED Marine Enforcement District within MPAs statewide.”

This authorization is subject to the condition that prior to disbursement of funds, both Parks and CDFW LED, shall submit - for review and approval by OPC’s Executive Director - detailed work plans, schedules, staff requirements, budgets, and the names of any contractors intended to be used to complete the projects, as well as discrete deliverables that can be produced in intervals to ensure the projects are on target for successful completion. All projects will be developed under a shared understanding of process, management, and delivery.

**PROJECT SUMMARY:**

Once-through cooling technology pulls water from the ocean to cool coastal power plants. Marine animals, seaweeds, and billions of eggs and larvae of fish and invertebrates are taken in with the seawater and killed as they are subjected to thermal, physical, and/or chemical stresses. Larger organisms may also be pinned against seawater intake screens, causing injury or death. These impacts contribute to the decline of fisheries and the degradation of marine habitats near power plants using once-through cooling. To address these damaging impacts, the State Water Resources Control Board established a policy in 2010 requiring power plants to stop using once-through cooling technology. Until power plants transition to less harmful cooling systems, the policy requires power plant owners and operators to make mitigation payments to the state of California to support projects that will offset negative ecological effects and increase in marine life associated with MPAs in the geographic area of the facilities.

The two proposed projects aim to offset the harmful effects to marine and estuarine life resulting from once-through cooling, consistent with OPC’s Once-Through Cooling Interim Mitigation Program<sup>1</sup>. The first project expands the Department of Parks and Recreation’s year-round interpretive and educational programs that increase MPA literacy and compliance with regulations statewide. The second project supports the California Department of Fish and Wildlife Law Enforcement Division to increase patrols and associated resources for the CDFW LED Marine Enforcement District within MPAs to ensure compliance and reduce violations statewide. These projects are aligned with the objectives of the MPA Statewide Leadership Team Work Plan<sup>2</sup> and continue the momentum of California’s significant investment in the state’s network of 124 MPAs, which have been established to safeguard the long-term health of California’s marine life.

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<sup>1</sup> [http://www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20171101/Item6\\_OTC\\_November\\_1\\_FINAL.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20171101/Item6_OTC_November_1_FINAL.pdf)

<sup>2</sup> [http://www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20150922/Item5\\_Attach2\\_MPALeadershipTeam\\_Workplan\\_FINALv2.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20150922/Item5_Attach2_MPALeadershipTeam_Workplan_FINALv2.pdf)

## PROJECT DESCRIPTION

### Project Background:

“Once-through cooling” is a technology used by some thermoelectric and nuclear power plants to cool turbines by passing the water once through the facility, then discharging the water to the same vicinity from which it was extracted. In California, the water used at these once-through cooling (OTC) facilities often comes from estuarine and coastal sources. OTC technology can have significant environmental impacts during both the intake and discharge processes. Specifically, during intake, marine life (fish, shellfish, larvae, and other species at all life stages) can be entrained inside or impinged against the water intake structures.

In 2010, California’s State Water Resources Control Board (SWRCB) adopted a Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Policy)<sup>3</sup>. This Policy establishes technology-based standards to comply with the Environmental Protection Agency-issued regulations of Clean Water Act’s section 316(b)<sup>4</sup> and reduces the harmful effects associated with cooling water intake structures for power generating facilities on marine and estuarine life.

Ten OTC facilities are still in operation and are required to make payments to mitigate the environmental impacts of impingement and entrainment until they come into compliance with the Policy. Given the close alignment between the types of environmental impacts caused by OTC facilities and the documented ecosystem benefits that MPAs can provide, the Policy directs the mitigation funds to support “mitigation projects directed toward increases in marine life associated with the State’s Marine Protected Areas in the geographic region of the facility.”<sup>3</sup> To ensure that use of these interim mitigation funds meets the requirements of the Policy, OPC has entered into a Memorandum of Understanding (MOU) with the SWRCB and the State Coastal Conservancy.<sup>5</sup>

To offset the negative impacts of OTC on coastal environments, California’s MPAs must be ecologically functioning as a network, which requires effective MPA management. At the November 1, 2017 OPC meeting, the Council received an update on the ongoing implementation of OPC’s OTC Interim Mitigation Program (Mitigation Program).<sup>6</sup> During the development of this Mitigation Program, OPC created a white paper<sup>7</sup> outlining the nexus between the state’s MPA network and OTC impacts. This document identifies education and enforcement as being critical components to establishing and maintaining compliance with MPA rules and regulations. Improved education to users about MPA regulations can serve as OTC impact mitigation because it increases compliance with MPA regulations, which in turn maximizes the expected ecological benefits from these areas. Recurring poaching of marine life in MPAs can decrease diversity, populations, and reproductive output, and can affect an ecosystem’s ability to recover from negative impacts. Investment of OTC interim mitigation fees in the State’s MPA Management Program will contribute to improved effectiveness of the MPA network and

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<sup>3</sup>[https://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/docs/otcpolicy\\_2017.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/otcpolicy_2017.pdf)

<sup>4</sup><https://www.federalregister.gov/documents/2014/08/15/2014-12164/national-pollutant-discharge-elimination-system-final-regulations-to-establish-requirements-for>

<sup>5</sup>[http://www.opc.ca.gov/webmaster/media\\_library/2016/10/Compressed\\_Acceptance-Use-of-Interim-Mitigation-Funds-for-the-Once-Through-Coolin.pdf](http://www.opc.ca.gov/webmaster/media_library/2016/10/Compressed_Acceptance-Use-of-Interim-Mitigation-Funds-for-the-Once-Through-Coolin.pdf)

<sup>6</sup>[http://www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20171101/Item6\\_OTC\\_November\\_1\\_FINAL.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20171101/Item6_OTC_November_1_FINAL.pdf)

<sup>7</sup>[http://www.opc.ca.gov/webmaster/media\\_library/2016/10/FINALScience\\_PolicyFramework\\_LinkingMPAstoOTCmitigation\\_8.30.16.pdf](http://www.opc.ca.gov/webmaster/media_library/2016/10/FINALScience_PolicyFramework_LinkingMPAstoOTCmitigation_8.30.16.pdf)

help to maximize the potential ecological benefits of the interim mitigation program.

As directed by the SWRCB Policy Resolution 2010-0020<sup>8</sup>, OPC, in collaboration with the MPA Statewide Leadership Team<sup>9</sup>, developed the following guidelines for identifying projects appropriate to receive once-through cooling interim mitigation funds. OPC's Once-Through Cooling Mitigation Program (Program) focuses on four main components that meet the requirements of the SWRCB Once-Through Cooling Policy and the State's MPA Management Program<sup>10</sup>, while having a clear nexus with OTC impacts<sup>11</sup>. These components include:

**1. Enforcement of MPA regulations**

Enforcement of relevant MPA laws and regulations is essential to ensure a successful MPA network that has the best chance to achieve the ecological goals described in the Marine Life Protection Act (MLPA). 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.

**2. Outreach and education to improve compliance with MPA regulations**

Outreach and education to the public is a critical component of establishing and maintaining compliance with MPA rules and 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.

**3. Research to determine the degree to which the MPA network can offset OTC impacts**

Research supported by OTC funds will help evaluate and quantify the expected ecological benefits provided by the MPA network in mitigating for OTC impacts.

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

A Working Group of the OPC-SAT<sup>12</sup>, convened by the Ocean Science Trust, applied the best science available to help identify projects that would meet the requirements of the Once-Through Cooling Policy to bolster marine life associated with California's MPA network. Their report<sup>13</sup> determined that due to oceanographic currents connecting locations both inside and outside of MPAs, harmful effects of once-through cooling could extend hundreds of kilometers from a power plant's intake pipe. Given the geographic extent of power plants still using once-through cooling, the findings of this report define the areas impacted as the entirety of State waters (3 nautical miles from the coastline) from San Diego to Big Sur, including the waters around the Channel Islands.

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<sup>8</sup> [http://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/policy.shtml](http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/policy.shtml)

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

<sup>10</sup> [http://www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20150922/Item5\\_Attach2\\_MPALeadershipTeam\\_Workplan\\_FINALv2.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20150922/Item5_Attach2_MPALeadershipTeam_Workplan_FINALv2.pdf)

<sup>11</sup> [http://www.opc.ca.gov/webmaster/media\\_library/2016/10/FINALScience\\_PolicyFramework\\_LinkingMPAstoOTCMitigation\\_8.30.16.pdf](http://www.opc.ca.gov/webmaster/media_library/2016/10/FINALScience_PolicyFramework_LinkingMPAstoOTCMitigation_8.30.16.pdf)

<sup>12</sup> <http://www.oceansciencetrust.org/projects/scientific-guidance-for-once-through-cooling-mitigation-funds/>

<sup>13</sup> <http://www.opc.ca.gov/webmaster/OST-Ocean-Restoration-Methods-Final-HighRes.pdf>

**Fund Disbursement Mechanism:**

Numerous state, federal, tribal and non-governmental entities are involved to varying degrees in the MPA Management Program. In 2015, the Leadership Team created a Work Plan<sup>14</sup> that outlined priority tasks among the members of the Team needed to advance the goals of the MLPA. In January 2016, a related report<sup>15</sup> was submitted to the Legislature that contains a comprehensive accounting of all costs associated with the MPA Management Program. Together, these documents identify tasks and priorities with a clear nexus with OTC impacts that can now be funded by OTC mitigation funds for the duration of the Program. It is important to note that funds are expected to be reduced each year as facilities comply with the Policy. Program payments are expected to end in 2029.

Two different disbursement mechanisms will be used to ensure flexibility to achieve the goals of the Program, as described at the November 1, 2017 OPC meeting. These are: (1) direct contracts to government member agencies of the MPA Statewide Leadership Team through the development of vetted multi-year work plans with measurable deliverables; and (2) an open competitive grant process. The priority for the Program is to fund tasks identified in the MPA Statewide Leadership Team Work Plan that have a direct nexus with OTC impacts. The proposed Parks and CDFW LED projects are being recommended to achieve these identified tasks. Grant guidelines that outline the competitive process for funding projects that will benefit MPAs and offset OTC impacts will be brought to the October 25<sup>th</sup>, 2018 OPC meeting for Council approval.

**Project Details and Scope of Work**

*Department of Parks and Recreation Marine Protected Area Outreach and Education Projects*

**Summary**

The Department of Parks and Recreation (Parks) Marine Protected Area Outreach and Education project focuses on expanding year-round interpretive and educational opportunities at seven park districts that are co-located with the state’s MPA network. Projects will use traditional and digital methods to effectively deliver MPA messaging and engage audiences in understanding, valuing, and complying with MPA regulations. This effort includes updates to onsite interpretive media and improvements to MPA messaging in Parks’ online resources.

Park visitor and program participant data show that interpretive and educational information reaches visitors from all over the state, country, and world. It is imperative that MPA messaging is not only available within the geographic region of the power plant facilities using once-through cooling, but that it is consistent statewide to assure that visitors comply with MPA rules and regulations throughout the network. Working within Parks’ established K-12 education programs statewide, MPA messaging will reach students in coastal and inland counties. Parks will coordinate with OPC, CDFW, and statewide MPA partners to ensure that materials and course content use consistent and approved messaging related to California’s MPA network to produce high quality programming.

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<sup>14</sup> [http://www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20150922/Item5\\_Attach2\\_MPALeadershipTeam\\_Workplan\\_FINALv2.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20150922/Item5_Attach2_MPALeadershipTeam_Workplan_FINALv2.pdf)

<sup>15</sup> [http://www.opc.ca.gov/webmaster/media\\_library/2016/02/MPA\\_Managment-Program\\_Budget- FINALv4.pdf](http://www.opc.ca.gov/webmaster/media_library/2016/02/MPA_Managment-Program_Budget- FINALv4.pdf)

**Project goals:**

- Expand Parks Online Resources for Teachers and Students (PORTS) Program to include additional MPA messaging and increase K-12 student participation by 40%.
- Create at least three digital MPA education packages for K-12 students that are consistent with Next Generation Science Standards, Common Core State Standards, and Environmental Principles and Concepts.
- Increase MPA messaging on Parks' digital and social media channels.
- Create an inventory of State Park Interpretive Materials for 30 Coastal Park Units that are co-located with the MPA network.
- Translate published MPA materials (brochures, flyers, signs, etc.) into Spanish and Asian languages.
- Develop 750 MPA-focused campfire and interpretive programs to be delivered year-round with special focus during the summer months when visitation rates are highest.
- Hire a State Park Interpreter II to facilitate Department-wide MPA content that aligns with CDFW messaging and standards, increase Park staff's participation in the MPA Collaborative Network, and help improve overall coordination with the MPA Management Program.
- Train at least five regionally based year-round staff to be trainers for MPA Watch and contribute surveys at least three times per year.

**Accountability and Transparency**

This project will support interagency collaboration, prioritize public engagement, and retain full OPC oversight of funded projects by providing opportunities for:

- Coordination of MPA educational messaging between Parks, CDFW, OPC, and the Statewide MPA Leadership Team, which will ensure consistent messaging statewide.
- Collaboration between Parks and CDFW with non-agency partners, such as the MPA Collaborative Network and other local non-profits.
- Ongoing reporting, including project summaries and progress reports that will be posted online as projects move forward.

**Site Description**

The project will take place statewide and will include seven park districts that are co-located with the state's MPA network (see Exhibit A for table and map):

- North Coast Redwoods
- Sonoma-Mendocino
- Santa Cruz
- Monterey
- San Luis Obispo Coast
- Orange Coast
- San Diego Coast District

### **Project Timeline**

Should OPC approve this project, work will begin immediately once planning and approval requirements are met and will be completed by 2021.

### *California Department of Fish and Wildlife Law Enforcement Division Enforcement Projects*

#### **Summary**

The California Department of Fish and Wildlife's Law Enforcement Division has a Marine Enforcement District (MED), which allows specialized wildlife officers to focus their efforts solely on enforcing marine regulations. MED will measurably increase the presence of MED resources to patrol, deter, and issue citations for violations occurring within the statewide MPA network. Specific areas for enforcement activity will be determined using available sources of human-use and compliance information, including but not limited to, data from MPA Watch, e-FINS, and the soon-to-be launched statewide electronic records management system. Past CDFW LED efforts, both on land and at sea, have shown that while an enhanced enforcement detail focused on one protected area or geographic region reduces violations in that area, violations increase in other regions not receiving the same attention. This project addresses this need for consistent enforcement efforts statewide, as a statewide application is most successful in reducing violations overall.

#### Project goals:

- Provide four MPA enforcement training seminars for CDFW LED personnel to review new and existing MPA regulations as well as other violations that may occur in an MPA and to provide guidance on the data reporting of contacts, citations, and warnings to be included in a statewide database.
- Increase law enforcement patrols in the MPA network in long range vessels, near-shore vessels, and shore-based patrol areas. Patrols will include sport and commercial fishing inspections as well as educational outreach to commercial, recreational, and non-consumptive users.
- Maintain all required equipment for offshore, nearshore, and shore-based patrols in good working order.
- Secure wireless connectivity for six offshore vessels to improve reporting and enforcement efficiency.

#### **Accountability and Transparency**

This project will support inter-agency collaboration, prioritize public engagement, and retain full OPC oversight of funded projects by providing opportunities for:

- Creation of standardized enforcement training materials in collaboration with OPC and with input from partner organizations in the MPA Statewide Leadership Team.
- Sharing of enforcement training materials with enforcement agency trainers, including but not limited to Parks and National Marine Sanctuaries.
- Coordination of MPA educational messaging between Parks, CDFW, and OPC, which will ensure consistent messaging statewide.
- Ongoing reporting, including project summaries and progress reports that will be posted online as projects move forward.

### **Site Description**

The project will take place statewide.

### **Project Timeline**

Should OPC approve this project, work will begin soon after (end of July 2018). This project's contract will terminate at the end of Fiscal Year 2019/2020, with the possibility of time-only extension if needed.

### **PROJECT FINANCING**

#### *OTC Interim Mitigation Funds*

Pursuant to the MOU signed by OPC, SWRCB, and the Coastal Conservancy, each year \$5.4 million of payments made by power plants still using once-through cooling technology will be allocated to the Ocean Protection Trust Fund, except for fees from Mandalay and Ormond Beach Generating Stations, which will be paid directly to the Coastal Conservancy pursuant to a litigation settlement. In addition to fees from Mandalay and Ormond Beach, any fees above \$5.4 million will be allocated to the California Coastal Conservancy for wetland restoration projections.

The following summary outlines OPC's strategic approach to allocating OTC funds over the next year in support of MPA durability, pending Council approval:

- July 25, 2018 meeting
  - \$1,206,515 outreach and education contract to Parks
  - \$3,000,000 enforcement contract to CDFW LED
  - \$4,561,627 competitive grant funding for MPA Action Plan (see Item 4a staff recommendation)
- October 25, 2018 meeting
  - Up to \$7,431,858 competitive grant funding for outreach and education, restoration, and enforcement
- May 15, 2019 meeting
  - Competitive grant projects will be presented to OPC for consideration and approval

### **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 are:

1. Directly relate to the ocean, coast, associated estuaries, or coastal-draining watersheds: This project directly relates to the coast because it will provide tools and opportunities needed to overcome barriers that would otherwise prevent the state from achieving some of the goals of the Marine Live Protection Act.
2. Support of the public: See Exhibit B Letters of Support



3. Greater-than-local interest: These projects will be implemented statewide.
4. Improvements to management approaches or techniques: The proposed work will improve management approaches or techniques by providing the current, best available technology and resources to educate the public, improve enforcement, and inform adaptive management of the state's MPA network.
5. Timeliness: These projects will address gaps identified in the MPA Statewide Leadership Team Work Plan. These projects will increase capacity to sustain and advance momentum toward successful adaptive management of the MPA network statewide.
6. Coordination: These projects continue to support the diverse statewide network of scientists, tribes, fishermen, citizen scientists, educators, and federal and state managers that are actively engaged in ensuring the state's MPA network being managed according to the goals of the MLPA.

**CONSISTENCY WITH THE OPC'S STRATEGIC PLAN:**

These projects implement Focal Area C: Sustainable Fisheries and Marine Ecosystems. Specifically, these projects will support effective management and implementation of MPAs consistent with the Marine Life Protection Act through partnerships between State agencies and their stakeholders.

**CONSISTENCY WITH THE OPC'S GRANT PROGRAM FUNDING GUIDELINES:**

The proposed projects are consistent with the program plan as presented at the November 1, 2017 OPC meeting. The projects are also consistent with the priorities that will be identified on the OTC Interim Mitigation Program grant guidelines which are scheduled to be presented to the Council for approval at the October 25, 2018 OPC meeting.

**COMPLIANCE WITH CEQA:**

The proposed project is exempt from review under the California Environmental Quality Act ("CEQA") pursuant to 14 Cal. Code of Regulations Section 15308 because the project involves public outreach and enforcement activities associated with California's MPA network and does not have the potential for resulting in a physical change in the environment.