



September 12, 2011

The Honorable John Laird, Secretary for Natural Resources
Chair, California Ocean Protection Council
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814
VIA ELECTRONIC MAIL: opc.comments@scc.ca.gov

Re: Comments on the Ocean Protection Council Draft Strategic Action Plan, Industrial Uses Section

Dear Chair Laird and Ocean Protection Council Members:

On behalf of California Coastkeeper Alliance (CCKA), Surfrider Foundation, Coastal Environmental Rights Foundation (CERF), California Coastal Protection Network (CCPN), Residents for Responsible Desalination (R4RD), Planning and Conservation League (PCL), Desal Response Group, Southern California Watershed Alliance, and Food and Water Watch, and our tens of thousands of California members, we submit these comments on the Industrial Uses Section of Ocean Protection Council’s near-term Strategic Action Plan (Strategic Plan). We also attach **1,120 comment letters** submitted by surfers, divers, swimmers, scientists, anglers, parents, students, and others who took the time to ask the Ocean Protection Council (OPC) to immediately undertake work to protect our ocean and coast from improperly located and designed ocean desalination facilities.

With this broad public support of Californians, we respectfully request that the OPC adopt a Strategic Plan that reflects its commitment to minimize the intake and mortality of marine life from industrial withdrawals of seawater. We strongly encourage the OPC to adopt a Resolution on the development of ocean desalination facilities that is consistent with OPC’s earlier policy position on once-through cooling (OTC) power plants.

We strongly support the OPC’s stated commitment on page 36 (Action 9.2.1) to a position of no open-ocean intakes for desalination facilities, and no co-location with facilities using OTC. As a coalition laboring for over a decade on the State Water Resource Control Board’s (State Water Board) Once-Through Cooling Policy (OTC Policy), we oppose the ocean desalination facilities that would

perpetuate the use of power plant open-ocean intakes that are in the process of being phased-out under the Clean Water Act Section 316(b). Numerous alternatives to open-ocean intakes and co-location exist, including sub-surface intakes, rendering destructive open-ocean intakes unnecessary. Unfortunately, the first major ocean desalination proposal in California intends to withdraw more water, and kill more marine life, than is currently occurring at its co-located power plant.¹

The position of no open-ocean intakes only restates the OPC's five-year commitment to phasing-out OTC. In 2006, the OPC passed the Resolution Regarding the Use of Once-Through Cooling Technologies in Coastal Waters.² **The OPC Resolution recognized that open-ocean intakes cause "multiple types of undesirable and unacceptable environmental impacts."**³ Consequently, the OPC urged the State Water Board to implement "more stringent state requirements requiring reductions in impingement and entrainment at existing coastal power plants."⁴ This position was subsequently supported by the Legislature and other government agencies.⁵ It would be poor public policy for the OPC to take any position on seawater withdrawals for ocean desalination other than one that is, at a minimum, as protective of marine life and marine ecosystems as the OTC Policy. It is best for the marine environment, as well as project proponents, to ensure that the best technology for minimizing marine life mortality is built into the original site and design of potential ocean desalination facilities before permitting and construction begins. This is the best way to safeguard against difficult and expensive retrofits once the State finalizes clear guidance on what constitutes the best technology available for proposed facilities.

Open-ocean intakes have clear, significant impacts on the marine environment. Numerous regulatory agencies, including the OPC, already made this conclusion. The State Water Board found that open-ocean intakes kill on average seventy-nine billion fish and other aquatic species annually, including threatened and endangered species such as the Delta Smelt and the iconic Garibaldi.⁶ The U.S. EPA found these types of impacts to include entrainment and impingement; damage to critical aquatic organisms, including important elements of the food chain; diminishment of a population's compensatory reserve; losses to populations including reductions of indigenous species populations, commercial fisheries stocks, and recreational fisheries.⁷ Researchers also find that the threats to marine ecosystems from desalination plants using open-ocean intakes are "greater, harder-to-quantify [than

¹ See Cal. Regional Water Quality Control Board, San Diego Region, Order No. R9-2009-0038 (2009), available at www.swrcb.ca.gov/rwqcb9/board_decisions/adopted_orders/2009/R9_2009_0038_rev1.pdf.

² California Ocean Protection Council, Resolution of the California Ocean Protection Council Regarding the Use of Once-Through Cooling Technologies in Coastal Waters (2006), available at <http://www.opc.ca.gov/2006/04/resolution-of-the-california-ocean-protection-council-regarding-the-use-of-once-through-cooling-technologies-in-coastal-waters/>.

³ *Id.*

⁴ *Id.*

⁵ *Id.* "On April 17, 2006, the California State Lands Commission passed a resolution urging the California Energy Commission and the State Water Resources Control Board to develop and implement policies that *eliminate the impacts* of once-through cooling on the environment." "The 2005 Integrated Energy and Policy Report to the California Legislature recommended the OPC work with other agencies to improve assessment of the ecological impacts of once-through cooling and to develop a better approach to implementing best technology available."

⁶ See Cal. State Water Resource Control Board, Scoping Document: Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling 1 (2008), available at <http://www.energy.ca.gov/2008publications/SWRCB-1000-2008-001/SWRCB-1000-2008-001.PDF>.

⁷ *Supra* note 2.

other threats]...and may represent the most significant direct adverse environmental impact of seawater desalination.”⁸

OPC’s position of no open-ocean intakes is consistent with the plain meaning of California law. The California Water Code Section 13142.5(b) states that “[f]or each new or expanded coastal powerplant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life.”⁹ Subsurface intakes have been implemented around the world to minimize the intake of marine life, including locations such as: Japan, Malta, Spain, Canary Islands, Greece, Israel, Saudi Arabia, and the United States.¹⁰ In California, sub-seafloor intake technologies are proving to be a superior alternative for protecting marine life for ocean desalination projects through pilot studies in Doheny Beach¹¹ and Long Beach.¹² If designed properly, subsurface intakes “can operate with negligible impingement and entrainment effects on local marine life.”¹³ It is well accepted that if sub-seafloor wells are located in areas with proper geological sub-strata, or man-made galleries are employed where sub-seafloor aquifers are not available, subsurface intakes are the best alternative to meet the mandates of Section 13142.5(b) as it applies to ocean desalination.

We also add our support for OPC’s work on policy recommendations regarding implementation of “Integrated Water Management” as it is briefly described on page 35 of the Draft Strategic Plan. We encourage the OPC to define and usher in a new approach to comprehensive water management by multiple agencies that will result in multiple economic and environmental benefits to Californians – not the least of which is the minimization or elimination of current threats to coastal and ocean resources. True “Integrated Water Management,” and accompanying enforceable policy, is a timely and important component of the OPC’s consideration of the role of ocean desalination in California’s future water supply portfolio.

If the OPC does not specifically prohibit open-ocean intakes for ocean desalination facilities, the Strategic Plan should—at a minimum—provide a clear Action for future guidance. If OPC Staff decides to edit the current language on page 35 specifically prohibiting open-ocean intakes in the Draft Strategic Plan, then we strongly recommend replacing that metric with the following: *Take immediate and appropriate action to formalize OPC’s position regarding open-ocean intakes to be consistent with the law, and the former goal of the OPC Resolution on Once Through Cooling, to protect marine ecosystems from the adverse impacts of entrainment and impingement.*

We look forward to working with the OPC to not only finalize the Draft Strategic Plan—but more importantly—to a cooperative effort to ensure the goals and metrics of the Strategic Plan are

⁸ Heather Cooley et al., *Desalination, with a Grain of Salt, a California Perspective* 59 (2006), available at www.pacinst.org/reports/desalination/desalination_report.pdf.

⁹ California Water Code §13142.5(b).

¹⁰ David Boris et al., *Beach Wells for Large-Scale Reverse Osmosis Plants: The Sur Case Study 2* (2009) available at http://www.roscoemoss.com/pdfs/Beach_Wells_for_Large_Scale_RO_Plants-The_Sur_Oman_Case_Study.pdf.

¹¹ See: <http://www.mwdoc.com/services/desalination>.

¹² See: <http://www.lbwater.org/desalination/under.php>.

¹³ Environmental Impact Assessment for the Proposed Desalination Project at Mile 6, Swakopmund, Namibia 5 (2009). There are operational advantages to subsurface intakes because the beach sediments act as a filter, eliminating fine particulate material, thereby reducing pre-treatment substances and cost. In areas of high turbidity, harmful algae blooms, or oil spills, subsurface intakes allow a desalination plant to continue operation, while open-ocean intakes will not.

implemented. Please do not hesitate to contact our organizations to seek clarification on this brief letter's comments.

Respectfully,

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SAMPLE LETTER

Submitted in substantially similar form by 1,120 members of CCKA, Surfrider, Coastal Environmental Rights Foundation (CERF), California Coastal Protection Network (CCPN), Residents for Responsible Desalination (R4RD), Planning and Conservation League (PCL), Desal Response Group, Southern California Watershed Alliance, and Food and Water Watch.

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John Laird, Secretary for Natural Resources Chair, California Ocean Protection Council California
Natural Resources Agency
1416 Ninth Street, Suite 1311
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Dear Chair and Members,

I am a Californian who cares deeply about our coast and ocean. I want to thank the Ocean Protection Council (OPC) Members and Staff for working hard to identify critical issues in the Draft Strategic Plan. All of the issues identified in the Strategic Plan deserve thorough and coordinated attention from OPC. However, one issue requires OPC's immediate attention: "Ocean Desalination and Once-Through Cooling."

Numerous ocean desalination project proponents are applying for permits as we speak. Currently, there is no clear state guidance on the siting and design of the facilities, nor the technology mandated to protect marine life from deadly open-ocean water intakes.

OPC played a critical role in coordinating several agencies to ensure that our coastal power plants could be modernized with cooling technologies that eliminated marine life mortality from "once-through cooling" (OTC). These antiquated systems have already been proven to cause significant harm to marine ecosystems.

Further, we have now identified practices for withdrawing seawater from sub-seafloor intakes as a feasible way to avoid the marine life mortality from "open-ocean intakes" for desalination projects. However, if ocean desalination facilities perpetuate the use of outdated open-ocean intakes, it would undermine the purpose of OPC's 2006 OTC Resolution and the work by numerous state agencies to protect marine life from this outdated and destructive technology.

I encourage the OPC to immediately undertake work to protect our coast and ocean from proposed ocean desalination facilities. I respectfully request that OPC adopts a Strategic Plan that reflects its commitment to protect our coast and ocean from desalination facilities, consistent with its related work on OTC facilities.