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 Ocean Protection Council Draft Strategic Action Plan

Dear Secretary Laird & Members of the Ocean Protection Council:

I am writing on behalf of the Surfrider Foundation and our nearly 20,000 California members – all of whom are dedicated to the restoration and protection of our coast and ocean. We want to express our support for the draft Strategic Plan that was thoughtfully prepared by your staff. We encourage you to move forward on finalizing statewide guidance on each of the issues identified in the Draft Strategic Plan.

Below you will find our comments on what we believe are intertwined issues in the Draft Plan: "Ocean Desalination" and "Integrated Water Management." In fact, **we strongly encourage you to take up these issues simultaneously and immediately.** As we speak, ocean desalination proponents are preparing three projects in southern California that will require billions of dollars in development and untold costs in operation and maintenance. Simultaneously, what little efforts taken by the State and local agencies to advance multi-benefit "Integrated Water Management" linger from lack of funding as well as clear guidance and prioritization.

The Ocean Protection Council (OPC) was empowered by the California Ocean Protection Act to better coordinate executive agencies, and make recommendations to the Legislature, to ensure the restoration and long term health of our coast and ocean. Fresh water management is one of the best examples we know of where "fragmented governance" is directly and indirectly resulting in not only threats to a safe and secure source of water for California's future growth, but numerous adverse impacts on our coast and ocean.

We believe California is at a critical turning point where we can either choose comprehensive reform of our current system through "integrated water management", or waste this opportunity and financial resources on unsound investments in numerous ocean desalination facilities statewide that will only exacerbate adverse impacts to our marine environment.

To be clear, we are not strictly opposed to ocean desalination where it fills a niche in a water supply portfolio after the practices and principles of "integrated water management" have been fully realized. However, that is not what we are currently experiencing. Just the opposite: while examples of integrated water management are being implemented on a piecemeal basis without holistic guidance and sufficient fiscal support, ocean desalination is consuming critical time and money that could be directed towards multi-benefit reform.

1) Desalination & Integrated Water Management -- General Comments

The current draft Strategic Plan includes "Issue 9" on "Desalination and Once Through Cooling" as well as "Issue 6" on "Integrated Water Management." We are very supportive of the OPC developing strong and clear guidance on these two issues. And we are supportive of the language in the draft Strategic Plan – although some clarification would be beneficial.

We believe the Strategic Plan could be improved by noting the linkage of these two important policies. We believe true "integrated water management" will result in local supply reliability, help restore and protect our coast and ocean, and reduce overall water management costs. And we look forward to working with the OPC on a more detailed definition of "integrated

water management" and detailed policy for prioritizing multi-benefit water management reform and coordination of the several relevant agencies. (See below)

In contrast, ocean desalination only exacerbates the problems of "embedded energy" in our water supplies and introduces new threats to marine life populations if the intake and discharge are not designed to minimize these impacts.

With this in mind, we think ocean desalination should be an option of last resort after multi-benefit integrated water management strategies are fully implemented. And in these rare circumstances, ocean desalination must be designed to minimize adverse impacts to our marine ecosystem.

We have heard ocean desalination project proponents assert that the use of "sub-seafloor intakes" is infeasible because of the constraints on the volume of water that can be extracted from either sub-seafloor wells or man-made galleries. However, these constraints are self-induced. A water supply portfolio that fully employs all the practices and principles of integrated water management will resolve the difficult challenge of balancing fresh water demand and supply. The need for introducing ocean desalination would be rare, and the volume demanded would be dramatically reduced. This has already been shown, in part, by the efforts of the California Public Utilities Commission's efforts in Monterey to find a solution to current over-drafting in the Carmel River. While that deliberative process was unsuccessful at fully implementing "integrated water management" – it does provide an example of how even a partially successful attempt can alleviate the perceived need for a massive ocean desalination proposed to co-locate with a coastal power plant cooling water intake.

So we support the clear language prohibiting open ocean intakes for desal facilities. We believe this is consistent with the State's current efforts to reduce the intake and mortality of marine life from Once Through Cooling. But unfortunately, the first large ocean desalination facility being considered in Carlsbad will withdraw MORE seawater than the power plant withdraws. It is true that your past Resolution on Once Through Cooling did not address ocean desalination intakes. But allowing another industry to continue withdrawing seawater through open ocean intakes completely undermines the intent of your adopted "Resolution on Once Through Cooling" – to reduce the intake and mortality of marine life. And, it is inconsistent with the clear language in the Porter-Cologne Act, codified in the Water Code, mandating all industrial withdrawals of seawater be designed and located to employ the best technology available to minimize the intake and mortality of marine life. It is important to note that the Water Code makes no distinction between "cooling water intakes" and other industrial uses. Therefore, the rules on ocean desalination "feedwater" intakes should be consistent with those currently being applied to coastal power plants by the State Water Resources Control Board. **So we support the current language in the draft putting seawater desalination proponents on notice that open ocean intakes should be prohibited in the foreseeable future. If staff should find a valid reason to amend this clear language and direction, we would not oppose 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."

And we want to highlight that the impacts of the brine discharge are just now being identified by the Southern California Coastal Water Research Project. We support this research because the best science available should inform our State policies. However, we think one thing is clear – the current proposals to increase the volume of seawater withdrawn in order to dilute the brine before discharging it only exacerbates the mortality of marine life. **Your draft language on Desalination and Once Through Cooling should make it clear that "augmented seawater intake for in-plant dilution" is also prohibited -- and then research and identify the best technology for brine disposal.**

Finally, the Ocean Protection Council should research and document the comparable energy demands, and potential reductions in "embedded energy" when comparing the benefits of "integrated water management" with the potential proliferation of ocean desalination.

In brief, ensuring advancements in "integrated water management" is consistent with the OPC's mission to coordinate multiple agencies so that their collective actions help restore and protect our coast and ocean. **We respectfully suggest the OPC undergo a thorough comparative analysis of the financial and environmental costs and benefits of "integrated water management" with those of ocean desalination. We also request the OPC research the potential for modifying the Public Utility Commission's "loading order" for energy to explore a similar tool for identying priority actions, as well as ensuring implementation and enforcement of "integrated water management" principles and practices.**

2) INTEGRATED WATER MANAGEMENT

The brief introduction on Integrated Water Management in "Issue 6" is a good start and we appreciate the OPC connecting how we currently manage freshwater with the adverse impacts it creates on our precious coast and ocean. We look forward to a more detailed discussion and definition of a thorough "integrated water management" policy.

For now, we would recommend that the draft language include the benefits of reducing "embedded energy" in local, regional and statewide water supply portfolios. This is in line with State policies on reducing greenhouse gas emissions and simultaneously adapting for the impacts of inevitable climate change. So we believe California's energy agencies – the Public Utilities Commission and California Energy Commission – be included in the list of agencies reviewing an integrated water management policy and implementation strategy.

As noted above, true integrated water management will alleviate the need for massive ocean desalination projects, and the adverse impacts they have on marine ecosystems and the State's cumulative energy demand. One major source of freshwater that could both reduce energy demand in our current portfolio, as well as alleviate point-source discharges to the ocean, is the advancement of recycled wastewater. While other components of integrated water management may have superior benefits to habitat restoration, wildlife population recovery, water conservation, flood protection/groundwater re-charge, and pollution prevention – wastewater recycling offers the greatest volume of usable water in a holistic reform of water management. We currently discharge approximately 3.5 million acre/feet of treated wastewater to the ocean every year. Although the State Water Board policy on recycled water recommends increasing our currently limited recycling capacity of 650,00 ac/ft , it falls far too short of what could be done.

One major hurdle to advancing far greater use of recycled wastewater is the absence of clear guidance from the Department of Public Health on guidelines and regulations allowing Direct Potable Reuse. ***So we also recommend including the Department of Public Health and other relevant research institutions to ensure that clear guidance on recycled wastewater be developed as soon as possible.***

And true integrated water management should include urban watershed restoration efforts that will require including local land use planning efforts and flood control reforms. So those relevant agencies should also be included in this discussion and policy development.

Finally, integrated water management should not be considered as simply options in water supply portfolios, but rather a priority list for future investments based on the multiple benefits – some of which you have identified in your draft. Some localities have made some admirable efforts at pieces of the "integrated water management" vision, practices and principles. But these efforts are just a beginning – much more needs to be done before we begin to see all the benefits to our economy, our quality of life, and healthy coastal and ocean ecosystems. Further, water supply agencies are not fully integrating these practices and principles. A detailed priority list of the practices and principles of integrated water management would benefit the creation of future Urban Water Management Plans, as well as amending current plans. ***So we strongly recommend the OPC coordinate with the Department of Water Resources, the State Water Resources Control Board, the Department of Public Health, the Public Utilities Commission, and the California Energy Commission – as well as local, State and federal agencies responsible for land use planning and flood management -- to draft something akin to the PUC's "loading order" for water.***

California can once again set the standards for sustainable and comprehensive protection of our coast and ocean by establishing statewide standards for full implementation of "Integrated Water Management." We look forward to working with the OPC and these partner agencies to better define and implement true integrated water management.

3) OCEAN DESALINATION

We want to first thank the OPC for taking up the issue of ocean desalination in your 5-year Strategic Plan. As you know, ocean desalination projects are being proposed from the Bay Area to San Diego – with no clear guidance from the State on minimizing the intake and mortality of marine life. Further, there is no clear guidance on best technology for disposal of the concentrated brine and other constituents in the waste stream.

So we support the OPC's position of no open-ocean intakes for desalination facilities. We also support the OPC's position of no co-location with facilities using Once-Through Cooling. These policies are vital to ensuring the State Water Board's Once Through Cooling Policy is not undermined. For example, the Carlsbad-Poseidon proposal would withdraw over 300 million

gallons a day – every day of the year. This new seawater withdrawal far exceeds what the power plant has been withdrawing. So the intent of your past Resolution on Once Through Cooling, and the new Policy being implemented by the State Water Resources Control Board, would be meaningless because, in the end, the desal facility would intake and kill more marine life than the power plant was just required to reduce.

It's important to note that the most difficult part of implementing the OTC Policy is that we are dealing with existing facilities -- and retrofitting these facilities is much more difficult than designing them properly in the first place. This is a situation we want to avoid if ocean desalination proposals move forward. **So we think it's important to put desalination project proponents on notice that there is a reasonably foreseeable chance that, should they move forward with open ocean intakes before State policy is adopted, they should consider and plan for retrofitting in the not-too-distant future.**

We also want to highlight that the current plans for the brine discharge at some of these facilities violate the intent of the law to minimize the intake and mortality of marine life and simultaneously keep within the requirements to ensure the discharge of brine and other constituents dilutes within the Zone of Initial Dilution. Instead of employing spray brine systems or other technology to dilute the brine – the proposals in Carlsbad and Huntington Beach plan to withdraw more seawater then the desal facility needs – only to dilute the brine BEFORE it is discharged. This so-called "augmented flow for in-plant dilution" will only exacerbate marine life intake and mortality, and is inconsistent with language in the Ocean Plan requiring that dilution occur between the outfall and the Zone of Initial Dilution. Imagine if this were the rule for a sewage treatment facility. They wouldn't need to treat the sewage at all. They would simply pump enough water out of the ocean to dilute the effluent to the regulatory standards – and then discharge it. That can't be right! **So we recommend the staff research this issue and include language in the Strategic Plan to develop policy to ensure brine disposal employs the best technology available for minimizing adverse impacts, and that "augmented intake flows for in-pant dilution" do not meet that standard.**

Finally, we very much appreciate that the draft Strategic Plan has language in the issue description concerning the extreme energy demand and associated greenhouse gas emissions. We want to note that the current Climate Change Adaptation Plan includes actions to develop more local supply reliability and reduce our dependence on energy-intensive imported supplies. That is something we support. But unfortunately, one of the options suggested for more local water supply reliability is the potential development of ocean desal. Ocean desalination is approximately 40% more energy intensive than importing water from the Delta to San Diego. In effect, the Department of Water Resources have drafted an adaptation plan that exacerbates the problem we are adapting to. Again, that just can't be right. Reducing "embedded energy" in local, regional and statewide water management should be a key consideration in integrated water management plans. **We strongly recommend adding language in the Metrics to ensure reductions of "embedded energy" in our local, regional and statewide water supply portfolios.**

CONCLUSION

In closing, thank you for your hard work on this Strategic Plan. We're very supportive and appreciative of the first draft, and we very much look forward to working with you on the next draft. Please do not hesitate to contact me if you have concerns or questions about this comment letter. We also hope you will include Surfrider Foundation in your future refinements to the Strategic Plan, as well as meeting the laudable goals you have identified.

Sincerely,

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