

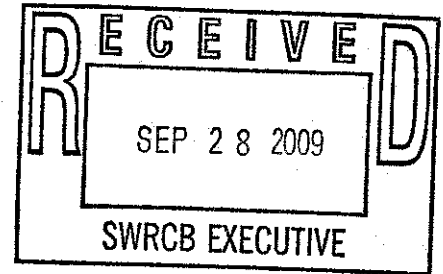


**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Southwest Region  
501 West Ocean Boulevard, Suite 4200  
Long Beach, California 90802-4213

SEP 28 2009

In response refer to:  
SWR/F/SWR3:JD

Jeanine Townsend, Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24<sup>th</sup> Floor  
Sacramento, California 95814



Dear Ms. Townsend:

NOAA's National Marine Fisheries Service (NMFS) appreciates the opportunity to comment on the State Water Resources Control Board's (SWRCB) proposed July 2009 Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling, Draft Substitute Environmental Document. This document presents a proposed state policy with the goal of controlling the harmful effects of once-through cooling (entrainment and impingement of marine and estuarine organisms) caused by coastal and estuarine power plants. The document estimates that the remaining 19 power plants that utilize this antiquated technology may withdraw more than 15 billion gallons of water for once-through cooling per day. According to the March 2008 Scoping Document (SWRCB 2008) for this proposed policy, these facilities impinge up to 9 million, and entrain 79 billion fish and other organisms on an annual basis. This impact represents an adverse effect to Essential Fish Habitat (EFH) as defined under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). NMFS administers the MSA for the conservation and preservation of the Nation's fishery resources. Impacts to salmonids, as well as Delta smelt listed under the Endangered Species Act (ESA), have been noted at the Contra Costa power plant in San Francisco Bay (SWRCB 2008).

NMFS supports the proposed policy. It is expected to result in significant reductions in impacts to marine and estuarine ecosystems affected by these facilities. We congratulate the SWRCB staff for their hard work over the several years it took to research this topic, develop this policy, and work with the other pertinent state agencies and entities (California Energy Commission, California Coastal Commission, State Lands Commission, California Public Utilities Commission and the California Independent Systems Operator) to propose a regulatory system that will not only protect the affected marine and estuarine beneficial uses, but does so in a manner that will not compromise electrical reliability for the general public. This reliability issue is discussed in an April 2008 report prepared for the California Ocean Protection Council and SWRCB (Jones and Stokes 2008). Most of the power plants that are subject to the draft policy are expected to upgrade their once-through cooling systems to closed-cycle cooling towers. Upgrading the cooling system to the SWRCB's



identified best technology (closed-cycle cooling) has been determined to be technically and logistically feasible at the majority of the coastal power plants according to a report by Tetra Tech (2008). These conversions would eliminate the vast majority of the entrainment and impingement impacts. If an alternative water supply (such as recycled municipal wastewater) is used as the make-up water in the closed-cycle tower, then impacts to EFH from the water intake systems can be completely eliminated.

We are pleased that the State has not chosen to wait for the U.S. Environmental Protection Agency to complete its long delayed Clean Water Act 316(b) implementation planning for existing power plants. We are confident that the proposed policy, as presented in the July 2009 document, will be equivalent if not more stringent than the national standards EPA eventually proposes.

NMFS specifically supports several provisions of the proposed policy:

1. The requirement for the facilities to submit proposed implementation plans to SWRCB and appropriate Regional Board within 6 months of policy adoption. It would be surprising to find a facility that is not able to comply with this provision due to the long time period between the release of the scoping document in March 2008 (SWRCB 2008) and the current proposed policy.
2. The inclusion of compliance dates for facilities to come into compliance with the policy.
3. The requirement for large organism exclusion devices to be installed on facilities which do not yet have them within one year of policy approval.
4. The requirement to cease intake flows when the facility is not generating power or conducting critical system maintenance within one year of policy approval.
5. The requirement for mitigation of interim impacts up to and until the facility achieves compliance with the entrainment and impingement reduction measures specified under section 2.A. of the proposed policy. The necessary level of mitigation is to be determined through the use of a biologically based model, such as the habitat production foregone method, in order to account for all "non-use" impacts to affected biota.

Regarding this last item, the requirement for interim mitigation does not begin until five years after the effective date of the policy. We are concerned with this proposed timeline since it would allow for continued impacts to EFH and potentially to ESA protected species. Please note that no take of ESA protected species is authorized through our support for the draft policy. Although this timeline is understandable as a planning tool, and as an incentive to power companies to give them time to upgrade to a modern cooling system without the added financial burden of undertaking a mitigation project, NMFS would prefer that all interim impacts be mitigated and take of listed species be avoided and minimized. This would seem especially pertinent for those facilities which identify, by the required six month deadline, that their proposed implementation plan will still result in entrainment and impingement impacts.

Furthermore, NMFS recommends that mitigation be required for any impacts to aquatic resources remaining after a facility has upgraded their cooling system to closed-cycle wet

cooling, if the facility continues to draw their make-up water from ambient sources. This recommendation is consistent with our March 19, 2008, letter regarding the Scoping Document for this policy development process. NMFS recommends the use of a habitat equivalency analysis method, such as the habitat production foregone method, to determine the scope of the needed mitigation.

In the Track 2 monitoring provisions of the proposed policy, SWRCB proposes to give the Regional Boards complete discretion in determining if and when additional biological monitoring to determine entrainment and impingement impacts is needed. This follows the initial "baseline" monitoring and monitoring post implementation of Track 2 controls. NMFS disagrees with this approach. Preferably, those facilities which continue to withdraw from ambient water sources for cooling would be required to monitor more frequently to show that they are not impacting the beneficial uses managed by SWRCB. Indeed, increased monitoring is necessary to determine what a "representative" year is and to make sure that it is captured in the monitoring scheme. A more appropriate requirement for facilities that choose to continue utilizing antiquated once-through cooling systems would include long-term sampling in source waters with reference stations to determine impacts to the ecosystem.

At a minimum, NMFS recommends that additional language be added to the policy to ensure that periodic monitoring occurs. We recommend that provision 5.A (3) and 5.B (3) be changed to state, "Impingement (and entrainment) studies shall be required when changing operational or environmental conditions indicate that new studies are needed, but not less than every ten years." In many cases, these studies may be critical in determining if environmental conditions have changed.

Finally, NMFS recommends that the wholly disproportionate demonstration provision be removed from the proposed policy. It is not a requirement that such an exception be offered by the State in this process and the provision, as written, would only apply to three natural gas fired facilities and the two nuclear power plants. However, it seems likely that allowing the demonstration for this handful of facilities will lead to numerous requests by the remaining facilities for the same consideration. This will undercut two of the main goals of the proposed policy – to insure consistency across California and to level the playing field for the dischargers regulated by different Regional Boards. The proposed exception already requires that the facilities reduce the entrainment and impingement impacts to the extent practicable and that the remaining impacts (*i.e.*, as if the intake flow rate had been reduced a minimum 93 percent and the through screen velocity no longer exceeds 0.5 feet per second) be fully mitigated in accordance with the benefits determined through the use of a habitat production foregone (or equivalent) analysis. Therefore, there does not seem to be much benefit to allowing this exception. If the facilities do not upgrade their cooling systems to the best technology available, even though they have already installed modern generating units, they should not be rewarded with a less stringent permitting process.

Should SWRCB disagree with this recommendation, the proposed policy should at least clarify that the use of the Adult Equivalent Loss and Fecundity Hindcast models to determine impacts are not sufficient. These methods have typically only been used for a limited subset of impacted species and the assumptions built into the models contain significant uncertainties, such as the lack of data for California fishes, a lack of site-specific data and inadequate accounting for unknown environmental compensatory or other factors operating on population levels. Please

see the presentations posted on the SWRCB website from the January 2008 Research Results Symposium at the University of California, Davis by Stratus Consulting (presented by Dr. Elizabeth Strange) and by Dr. John Steinbeck (Tenera Environmental) for additional information on this subject. These presentations can be found at:  
[http://www.swrcb.ca.gov/water\\_issues/programs/npdes/cwa316.shtml](http://www.swrcb.ca.gov/water_issues/programs/npdes/cwa316.shtml).

In closing, NMFS wishes to reiterate our support for the draft policy as presented in the scoping document and hope that our recommendations to reduce uncertainties and improve the proposed policy are accepted by SWRCB. We greatly appreciate SWRCB taking this important step to minimize the impacts from once-through cooling to designated beneficial uses including EFH and ESA listed salmonids. This draft policy is the result of several years of discussions and development and represents a feasible and logical step forward. If there are any questions regarding this letter, please contact Joe Dillon of my staff at (707) 575-6093 or [Joseph.J.Dillon@noaa.gov](mailto:Joseph.J.Dillon@noaa.gov).

Sincerely,



Robert S. Hoffman  
Assistant Regional Administrator  
for Habitat Conservation

cc: Rod McInnis, NMFS, Long Beach, CA  
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#### References

- Jones and Stokes. 2008. Electric Grid Reliability Impacts from Once-Through Cooling in California. April 2008. (J&S 041808) Sacramento, CA. 64 p.
- SWRCB 2008. Scoping Document: Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling. State Water Resources Control Board, California Environmental Protection Agency, March 2008. 97 p.
- Tetra Tech 2008. California's Coastal Power Plants: Alternative Cooling System Analysis. February 2008. Golden, CO. 120 p. + appendices.