12/14/10 Adoption Hearing Once Through Cooling Deadline: 11/19/10 by 12 noon



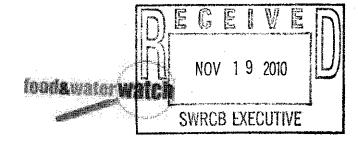














CLEAN WATER ACTION

CALIFORNIA





























November 19, 2010

Charlie Hoppin, Chair and Board Members State Water Resources Control Board 1001 I Street Sacramento, CA 95814

Via electronic mail: commentletters@waterboards.ca.gov

Comment Letter: OTC Policy Amendment Re:

Dear Chair Hoppin and Board Members:

On behalf of the undersigned groups, who have been working vigorously with the State Water Resources Control Board ("State Board") for over the past five years to develop the abovedescribed Policy, and many of whom have been active on this topic nationally for far longer, we submit these comments on the Proposed Amendment ("Amendment") to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling ("Policy"). We link below to, and incorporate by reference, six joint NGO comment letters on this topic, dated April 13, 2010, December 8, 2009, September 30, 2009, May 20, 2008, September 15, 2006, and February 23, 2006. We also incorporate by reference the April 13, 2010 letter to the State Board from the Mills Legal Clinic at Stanford Law School.

The Policy, adopted by the State Board on May 4, 2010 pursuant to Resolution 2010-0020, was a thoroughly debated, long-developed compromise document, based on five years of exhaustive research and extensive public outreach, and designed to result in the carefully scheduled and certain phase-out of this destructive practice.

By contrast, the hastily-drafted Amendment to the Policy was released as the ink was drying on the Policy's approval letter from the Office of Administrative Law. Unlike the clear, independently supported, intensively participated-in analysis underlying the Policy, the Amendment was hurriedly developed (with no new information) after a political attempt to undermine the Policy by AB 1552, a gut-and-amend bill introduced in the waning hours of the legislative session, and by direct legislator pressure on the State Board. As a matter of public policy and consistent governance patterns, the Amendment should be rejected on these grounds alone. This letter, however, does not assume such a result, and instead presents the range of factual and legal issues arising from the Amendment that must lead to its rejection by the Board.

Among other things, the Amendment suffers from the following illegalities and deficiencies:

- The Amendment ignores the fact that, almost 40 years after adoption of Clean Water Act Section 316(b), once-through cooling (OTC) is still being used on a massive scale, causing significant, ongoing environmental impacts.
- The Amendment is an about-face from the current Policy and is unsupported by new information in the Staff Report.
- The Amendment violates administrative law principles and is arbitrary and capricious.

- The Amendment fails to comply with the California Environmental Quality Act (CEQA) by, among other things, failing to adequately analyze the environmental impacts of the reasonably foreseeable means of compliance, and failing to consider a reasonable range of alternatives.
- The Amendment violates the Clean Water Act by: illegally allowing regulated entities to avoid compliance with best technology available" in a time "as short as possible"; proposing an arbitrary "interim mitigation fee" in lieu of BTA, in contravention of Riverkeeper II; proposing participation in a "fine mesh screen feasibility study" in lieu of BTA, again in contravention of Riverkeeper II; effectively and illegally delegating the state's deadline compliance and enforcement authority to the regulated community; and issuing compliance schedules that run afoul of Clean Water Act mandates.
- The Amendment, which makes major changes to the painstakingly developed Policy on the heels of its final approval, severely undermines future efforts at collaboration among stakeholders and the State Board on policies and permits.
- The Amendment is unnecessary to achieving the Policy's goal of compliance with Section 316(b), consistent with ensuring electrical grid reliability using appropriate deadlines.

Each of these points is discussed in more detail below. We urge the Board to reject the proposed Amendment in its entirety, and move forward with full implementation of the Policy immediately. If the State Board believes that it must pursue amendment of the just-adopted and carefully developed Policy, we recommend that action be deferred at a minimum until after the required Implementation Plans are submitted by the April 1, 2011 deadline, which is only a few months away.

There is no harm to the regulated community in simply developing these soon-due Implementation Plans and allowing them to inform the compliance discussion. By contrast, adoption of the Amendment as proposed will cause significant, lasting harm on California's coastal, estuarine, and marine ecosystems. With the Implementation Plans (which under the Policy may include requests for deadline extensions needed to ensure grid reliability) in hand, the State Board may have useful, new information before it to consider any potential adjustments in deadlines. If identified based on such new information, adjustments to the Policy could also be considered in a measured public process that includes proper environmental review and documentation. Preempting that process before it has begun, as is proposed by the Amendment before us, is unsound, unsustainable policymaking that violates numerous state and federal laws.

Finally, at a minimum, the instant Amendment cannot move forward unless the Board completes and circulates an appropriate environmental analysis that complies with CEQA, including an analysis of the required range of alternatives to address any suddenly-perceived deficiencies with a Policy that has only just begun its initial implementation phase.

We provide further detail on these points below, and we look forward to working with you to ensure the protection of California's coast, Delta and ocean ecosystems consistent with the letter and intent of the Clean Water Act.

¹ Riverkeeper, Inc. v. U.S. EPA, 475 F.3d 83, 110 (2d Cir. 2007) ("Riverkeeper II").

ALMOST 40 YEARS AFTER THE CLEAN WATER ACT, ONCE-THROUGH COOLING STILL CAUSES MAJOR IMPACTS ON ESTUARINE, COASTAL, AND OCEAN LIFE AND HABITATS.

Somewhat lost in the scramble to scale back on the freshly-approved state Policy has been the fact that, as the policy wranglings continue, so do the significant impacts on our coastal, estuarine and marine life and habitats. For example, as noted in the SED:

The Marine Life Protection Act Science Advisory Team (SAT), made up of 20 scientists, in 2009 identified three major water quality threats in the Southern California Bight with regard to placement of Marine Protected Areas (MPAs). In order of priority, these were: (1) intakes/discharges from power generating facilities; (2) storm drain effluents; and (3) wastewater effluents. In their guidance on placement of MPAs, the SAT stated: "Intakes from power generating facilities are the greatest threat because they operate year round or over many months and there is virtually complete mortality for any larvae entrained through the cooling water intake system."2

As relayed in the joint NGO comment letter dated April 13, 2010,3 the amount of cooling water power plants may run through facilities using OTC each and every year - killing virtually everything drawn in - is at least 4½ and up to almost 13 times the amount of water running annually through the entire State Water Project, which serves 23 million Californians and irrigates 755,000 acres of farmland.⁴ The State Board notes further in its Substitute Environmental Document (SED) that just the 12 Southern California plants kill up to 30% of the number of fish recreationally caught in the Southern California Bight each and every year. A California Energy Commission study found that the three power plants in the Santa Monica Bay (Scattergood, El Segundo, and Redondo) consume nearly 13% of the nearshore water in the Bay every six weeks.⁵ The threats of OTC are even greater for enclosed bays and estuaries; it is estimated that Alamitos and Haynes Generating Stations together take in the entire volume of Alamitos Bay every five days.⁶

The SED provides significant detail and background citations on these and other statistics of the significant impacts of OTC. For example, the SED provides estimates of annual larval fish entrainment based on average flow at the Los Angeles Department of Water and Power (LAWDP) owned and operated plants from recent entrainment studies: Harbor Generating Station (over 65 million individuals), Haynes Generating Station (over 3.6 billion individuals) and Scattergood (over

² SWRCB, "Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling: Final Substitute Environmental Document," p. 35 (May 4, 2010) ("SED"), citing MLPA Master Plan Science Advisory Team, "Draft Recommendations for Considering Water Quality and MPAs in the MLPA South Coast Study Region" (Draft rev'd May 12, 2009).

³ Letter from Linda Sheehan, CCKA, et al. to Charles Hoppin, SWRCB, Comments on Draft Final Substitute Environmental Document and Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (April 13, 2010) ("joint NGO comment letter").

⁴ DWR, "California State Water Project Overview," http://www.water.ca.gov/swp/.

⁵ California Energy Commission, "Issues and Impacts Associated with Once-Through Cooling at California's Coastal Power Plants: Staff Report," CEC-700-2005-013 (2005).

⁶ Tenera Environmental and MBC Applied Environmental Science, "Summary of Existing Physical and Biological Information and Impingement Mortality and Entrainment Characterization Study Sampling Plan for Haynes Generating Station," p.2 (October 2005).

365 million individuals). If these plants are permitted to operate years beyond the reasonable deadlines outlined in the current policy, billions of marine life individuals would continue to be entrained each year, unnecessarily contributing to the already declining trend in fish populations.

The impacts of OTC also have been well-documented in extensive U.S. EPA analyses pursuant to federal rule development, and through the work of other California agencies. The Amendment would allow these significant impacts—the control of which the regulated community has already successfully avoided for 38 years—to continue for many more, in the name of additional compliance "flexibility" for the regulated community.

THE AMENDMENT IS AN ABOUT-FACE FROM THE JUST-APPROVED OTC POLICY AND IS UNSUPPORTED BY NEW INFORMATION IN THE STAFF REPORT

Our organizations were extensively involved in the comprehensive public process that resulted in the adoption, and OAL approval, of the current OTC Policy. While the Policy did not achieve all of its potential conservation goals, and did not meet all of what the conservation and fishing communities felt was needed and feasible, it was a balanced, thoughtful compromise that was well-supported by extensive studies and public outreach efforts, and by the support of involved government agencies including, signficantly, U.S. EPA. The Policy's adopted implementation schedule was crafted with extensive input from the regulated community and state energy agencies. The schedule also provides the certainty and time that the industry asserted was needed to protect grid reliability while upgrading facilities as needed.⁷ The Policy provides for a clear public process by which the deadlines in the schedule may be carefully reviewed by both the energy regulatory entities and the State Water Board in the event that industry raises specific concerns about newly arising reliability issues. This provision was carefully crafted to resolve concerns raised by power plant operators and energy agencies about ensuring that allowable compliance schedules reflected demonstrated Policy compliance impacts on grid reliability. This defined process for change in the timeline allows flexibility, while preventing constant reshuffling that would cause confusion and uncertainty for plant owners and operators.

Furthermore, it is inexplicable from a reasoned policymaking perspective that the Board would issue such major amendments to a painstakingly developed Policy before it had received new information on the record to justify these substantial changes. Under the Policy, plant owners are required to submit Implementation Plans within six months of final adoption of the Policy, or April 1st (a time frame that the regulated community was aware of at the Policy's adoption on May 4th). Based on the information in those Implementation Plans, it is conceivable that the Board, in consultation with the state energy agencies, may decide to modify the schedule as a result of reliability issues raised in the plans. Without such information or basis, the proposed Amendment – which is far more damaging to the state's coastal waters than any minor alteration to the implementation schedule, and which bears no connection with the state's responsibility to enforce the Clean Water Act – must be dismissed.

With no support in its accompanying Staff Report, the proposed Amendment almost completely reverses course, and steers California *away* from compliance with Section 316(b) in contravention of the law. Its legal and factual flaws are outlined in detail below.

⁷ The Staff Report notes that the current Policy "provides a compliance schedule and the necessary flexibility to meet the goal of final compliance while ensuring grid reliability." Staff Report, p. 7.

The Amendment Would Allow Existing Power Plants with Combined Cycle Power-Generating Units to Permanently Avoid CWA Section 316(b) Compliance during the Life of Those Units, Regardless of Their Impacts

Under the Amendment, existing combined cycle power-generating units⁸ would no longer be required to demonstrate that compliance with "Track 1" Best Technology Available (BTA) is infeasible, and instead would be allowed to use OTC until the end of the unit's useful life, meaning they would be allowed to avoid compliance with the Clean Water Act as long as they operate the unit. These units can easily last at least 50 years or more (many of the units currently using OTC already are this old and still operating for the foreseeable future), and can be modified to continue operating even longer.9 Accordingly, the Amendment would effectively extend the deadline for California's compliance with the Clean Water Act for 80 years, and perhaps up to a century, past the 1972 enactment of Section 316(b).

The only conditions that facilities with existing combined cycle power-generating have to take advantage of this end-run around the CWA are:

(1) a commitment to ending the use of OTC upon repowering the unit at the end of the unit's

(2) performance of "pilot scale feasibility studies" of undefined length that involve "fine mesh screen or equivalent measures" - unless the studies are shown to be "not feasible" (and even these limited "pilot scale" efforts can be bypassed on an undefined "short-term basis");

(3) for those units not participating in these pilot studies, the owner or operator must contribute what the Amendment calls "interim mitigation funds" in the amount of "\$3 per

⁸ The Staff Report on page 2 asserts that the affected units are "Haynes Generating Station (Units 9 and 10), Harbor Generating Station (Unit 8) and Moss Landing Power Plant (Units 1 and 2)." This appears to be incorrect; the Harbor Unit 5 should be at issue. See the description of Harbor the Harbor Generating Station in the independent TetraTech Report. "California's Coastal Power Plants: Alternative Cooling System http://www.opc.ca.gov/webmaster/ftp/project_pages/OTC/engineering%20study/Chapter_7E_Harbor_Gener Analysis," Ch. 7.E. (Feb. 2008), available at:

⁹ Major overhauls are scheduled every 30,000 hours of use (about 4 operating years) to pull out the worn components and drop in rebuilt or upgraded components, which can extend the life of a facility for many decades. See, e.g., GE Energy, "Uprate Options for the MS9001Heavy Duty Gas Turbine" (regarding the MS9001 workhouse heavy duty gas turbine); available at:

http://www.gepower.com/prod_serv/products/tech_docs/en/downloads/ger3928c.pdf. The abstract of this technical brochure and the first pages of the Introduction describe how operational gas turbines are upgraded over time. As parts wear, newer, better parts replace the original parts; this process can go on indefinitely and result in a facility life of many decades.

¹⁰ Note that this condition does not clearly require the "use" of fine mesh screens over any specific length of time. Nor does the Staff Report document whether or not the so-called "fine mesh" screens have any empirical evidence of avoiding adverse impacts to the environment, which the plant is required to do under Section 316(b).

million gallons 11 (actual million gallons of OTC water drawn into a unit or OTC intake without fine mesh screens or equivalent measures) payable annually" for specified activities.

As discussed in more detail below, none of these conditions come close to achieving BTA as required by Section 316(b) and supported by decisions up to the U.S. Supreme Court. At best, the screen studies and fee payments can be characterized as "illegal mitigation in lieu of BTA," though that would be require a fairly loose use of the term "mitigation" given the miniscule fee involved. That the payments would start immediately, rather than five years away, does not change these facts.

The Staff Report describes the "No Action" alternative -i.e., the Policy - as requiring facilities to "show that Track 1 [BTA] was not feasible, and that impingement and entrainment impacts had been reduced to a level comparable with Track 1."12 The Staff Report distinguishes the Amendment from this clear path to 316(b) compliance by stating that under the Policy, "fewer compliance options would be available to facilities with closed-cycle units." While it is true that allowing the regulated entity decades more to comply is not an option under the Policy, we believe that it is good water quality governance to prevent the regulated community from obtaining lifetime passes from the Clean Water Act.

Unfortunately, given the broad scope of these changes and their acceleration away from compliance with Section 316(b), the Staff Report fails to provide even the minimum level of meaningful support for them. Instead, the basic message is simply that the Amendment ostensibly is needed to "provide additional flexibility" of compliance options. The Staff Report attempts in vain to justify the special treatment for combined cycle facilities, for example, by noting that they "generally use less cooling water than the older steam boiler units to produce the same amount of electricity," and that they "produce lower air emissions for most pollutants and carbon dioxide than the older" units. While efficiency of generating operations and reductions in air pollutants are laudable goals, they cannot be cited to "trump" Section 316(b)'s mandated BTA requirement.

In effect, then, the Amendment provides the affected regulated community with the ultimate in desired regulatory flexibility - a self-determined and self-serving "compliance" path that only achieves compliance when the owner/operator decides that the regulated unit is no longer needed.

The Amendment Would Create New Options for Other Power Plants to Extend Noncompliance with the Clean Water Act

The credibility and legality of the Amendment is further undermined by its proposal to allow a similar, lengthy exemption for all other fossil-fueled OTC plants. The Amendment would allow these plants to seek indeterminate compliance deadline schedules, not based on grid reliability, but instead based on compliance "flexibility." This would be allowed in exchange for a nebulous and

¹¹ The fee description does not state the period over which the fee will be determined; rather, it only states how often the fee must be paid (annually). Therefore, the exact amount of annual payment remains indeterminate.

¹² Staff Report, p. 6.

¹³ *Id*.

¹⁴ *Id*. at 4.

¹⁵ Staff Report, p. 4.

distant "commitment" to eliminate the use of OTC upon repowering at some undetermined future date well past the just-adopted Policy schedule. Specifically, the new Amendment language states:

The following conditions apply immediately upon approval of a compliance plan extending beyond December 31, 2020:

(a) The owner or operator commits to eliminating the use of OTC upon repowering the unit. The owner or operator shall specify the date of repowering the unit in plans submitted to the State Water Board pursuant to Section 3.A of this policy. Any NPDES permits issued pursuant to Section 3.C of this policy shall include, as a final compliance date for the elimination of OTC at a unit, the repowering date for a unit permitted to continue using OTC under this subparagraph (b).

The same additional conditions on use of this indeterminate, but presumably lengthy, compliance deadline extension option would apply as for the combined cycle facilities: performance of fine mesh screen or "equivalent measures" feasibility studies of unspecified length, and mitigation payment "in the amount of three dollars (\$3.00) per million gallons of water withdrawn, payable annually and starting immediately."

The Staff Report describes the proposed Section 3.A. changes as "apply[ing] to any fossil-fueled power plant that submits an approved Implementation Plan that extends beyond December 31, 2020" – regardless of its link to expeditious compliance with Section 316(b) or grid reliability. Indeed, the Staff Report acknowledges that this alternative is "less stringent than the current Policy," could allow facilities "longer to reach compliance with Track 1, and "may therefore generate more entrainment and impingement impacts than the current Policy."

Any plant could *already* request a new deadline in its Implementation Plans under the current Policy through a public process, if in order to ensure the stated goal of continued grid reliability. What the Amendment would add is a new priority: *compliance "flexibility*" for those facilities that assert that they will repower and consider the use of closed cycle cooling at some future date past their deadline. The Staff Report itself notes that the Amendment provides more (longer) compliance options and greater (less protective) flexibility, but does not state the relationship between this new compliance flexibility and the intent and mandate of the Policy to achieve Section 316(b) compliance in a time "as short as possible" consistent with grid reliability.

The new "compliance flexibility" in the Amendment is completely inconsistent with both the letter and intent of the rest of the Policy and the law, which focus on 316(b) implementation consistent with ensuring grid reliability. For example:

Section 2.B. of the Policy (unchanged in the Amendment) states that existing power
plants "shall comply with Section 2.A. above, as soon as possible, but no later than,
the dates shown in Table 1." Here, the Policy offers a potential for suspension of
final compliance dates, but only "[b]ased on the need for continued operation of an
existing power plant to maintain the reliability of the electric system."

¹⁶ Id. at 7.

¹⁷ Sec. 3.A.(1).

- Section 3.B.(2) similarly focuses on grid reliaibility, stating that LADWP may seek extensions through a public process if needed to "maintain the reliability of the electric system in the short-term"; the State Board then must conduct a public hearing on the matter. This Section similarly provides a public process for CAISO to seek deadline suspensions of longer than 90 days if "necessary to maintain the reliability of the electric system." Such suspensions must be considered as needed pending a "full evaluation" of the impacts to the other deadlines in the Policy.
- Section 3.C. of the Policy states that NPDES permits "shall incorporate a final compliance schedule that requires compliance no later than the due dates contained in Table 1," which for the fossil plants are all on or before December 31, 2020. Modification of these dates may only be made as "necessary to maintain reliability of the electric system per SACCWIS recommendations" (Section 3.C.(1)).

These Policy boundaries on changing the carefully developed implementation schedules are consistent with the intent of the Policy to protect beneficial uses and ensure an orderly process that protects grid reliability. By contrast, the Amendment could allow multiple entities to stake out distant repower dates unrelated to reliability, thereby potentially leading to a grid-threatening crunch at the end of the collective implementation processes.

The role of the SACCWIS, and its member grid reliability experts, is to review the proposed implementation schedule and then "report to the State Water Board with recommendations." Section 3.B.(5) provides that the State Water Board "shall consider" SACCWIS' recommendations "if appropriate." In light of the entirety of the Policy and its supporting documents, "appropriate" refers to achieving Section 316(b) in a time frame "as short as possible," while ensuring grid reliability. Indeed, grid reliability is the *only* specifically mentioned variable in Section 3.B.(5). No mention or analysis is given on how the new consideration of "compliance flexibility" might fit into this review process. However, the speed and breadth of the proposal of this Amendment certainly leads a reasonable person to believe that many requested deadline extensions would be approved, regardless of whether they were needed for grid reliability.

Without analysis or justification, the Amendment completely undermines this judicious process by allowing Implementation Plans to include deadline extension requests based solely on the desire for "compliance flexibility," regardless of environmental impacts and using a compliance date selected by the regulated entity. More "flexibility" is not justified under the Clean Water Act. The regulated entities have an almost four-decade track record of successfully avoiding compliance with Section 316(b). The inclination of the regulated community is to extend their compliance deadlines as much as possible. This is not a factor that supports Section 316(b) or grid reliability. Indeed, it runs counter to both, because the impacts of OTC will continue essentially unabated, and because grid reliability will be threatened as the carefully constructed schedule is upended, potentially throwing all compliance patterns into disarray.

The Staff Report completely fails to provide any meaningful support for the need for these major changes. Instead, the Staff Report simply cites the above-mentioned desire to achieve more "flexibility" of compliance through the deadline extensions. There is no justification of why this

¹⁸ Indeed, what would be the recourse if at the end of that period the facility decided not to repower but to simply shut down, perhaps as unneeded in the face of a successful solar power program? If no recourse, then what is the purpose of the proposed extensions for "repowering"?

"compliance flexibility" (i.e., deadline extensions of indeterminate length with no showing of grid reliability need) is necessary to further the Policy's goals and mandates.

The Staff Report's Rationale for the Changes Contradicts the Intent of the Policy and the Mandates of the Law

As noted above, the stated intent of the Policy in Section 1.G. remains the same under the Amendment – "to ensure that the beneficial uses of the State's coastal and estuarine waters are protected while also ensuring that the electrical power needs essential for the welfare of the citizens of the State are met." However, the Staff Report asserts that the Amendment is needed to "provide additional flexibility to owners or operators of facilities complying with Track 2 Policy requirements, with special considerations given to facilities with combined-cycle units." This is facially incorrect and legally inadequate on several counts.

First, the Amendment is not "needed" because the Policy provides for feasible alternatives (based on comprehensive, independent studies), as well as a clear process for seeking deadline extensions if grid reliability becomes an issue.

Second, the Amendment does not "provide additional flexibility to owners or operators of facilities complying with Track 2 Policy requirements," because the new "requirements" are not Track 2. They only result in years or decades of delay, with participation in an unproven fine mesh screen pilot feasibility studies or minimal (often illegal) financial payouts as the sole conditions. By contrast, Track 2 requires a "comparable level" of reduction to Track 1, which is defined as the BTA of closed cycle cooling. The Amendment's barebones conditions on delay are not even remotely close to BTA. The Staff Report appears to recognize this on page 5 (Section 5), where it notes that the Amendment would "allow an additional compliance alternative" for combined cycle units. There is no analysis of the ability of this alternative to meet BTA (because delay until the end of the unit's life of course cannot be BTA). There also is no analysis of the environmental impacts of extending OTC use for many decades to come (indeed, most of the combined cycle units are some of the highest volume intake water users). In effect, the inappropriate purpose of "flexibility" has supplanted the original purpose of achieving 316(b)'s mandates in "as short a time as possible" consistent with grid reliability, thereby undermining the analysis necessary to provide the basis of rational decision making and alternatives analysis. Had the original purpose remained, a different set of alternatives would have been developed and considered.

Third, the "special consideration" given to combined cycle units as a result of the fact that they issue less air pollution and are more efficient is irrelevant to achieving BTA. While use of combined cycle technology is consistent with a number of state and federal policy objectives, there is no information in the Staff Report to show that the introduction of combined cycle at plants with once-through cooling caused any reduction in of actual aquatic ecosystem impacts consistent with the purpose of this rulemaking. Fourth, the Staff Report completely ignores the numerous, feasible other alternatives, including retrofit of the units (including the combined cycle units) to include cooling towers.

And finally, the Staff Report ignores the significant impact on public participation in the regulatory process that the Amendment would implicate. By cementing deadline extensions well

¹⁹ Staff Report, p. 4.

past the NPDES permit renewal dates into the permits themselves, the Amendment would prevent the regular public participation that the Clean Water Act envisioned through the NPDES permit five-year renewal process, shutting out the public for potentially decades. Public participation is a cornerstone of the federal Clean Water Act. In fact, public involvement is specifically included as a Congressional goal and policy of the CWA, which requires the Administrator and any authorized State to "provide[] for, encourage[] and assist[]" public participation.²⁰ The opportunity of the public to take part in water quality decisions is unequivocal in issuance and renewal of NPDES permits.²¹ Despite this clear direction, the Amendment effectively circumvents the well-established public processes embedded and mandated in the CWA.

The repeated flaws in the Staff Report are due to the fact that it is trying in vain to support a purpose that has rapidly devolved from "protect waterways and the grid" to "provide maximum flexibility to the regulated community."

THE AMENDMENT VIOLATES ADMINISTRATIVE LAW PRINCIPLES AND IS ARBITRARY AND CAPRICIOUS.

The Amendment contravenes the Clean Water Act and the State Board's own findings in the SED, which support the Policy. It is unsupported in both the record and the law. Accordingly, adoption of this Amendment would be "arbitrary, capricious, or entirely lacking in evidentiary support, or contrary to required legal procedures." Courts apply an even higher standard to the required justification for changes such as the Amendment in question, where an agency revokes its previous rule or makes an about-face change in an existing policy. Thus, the proposed amendment should be denied and the Policy should stand as written and as supported by the public process and administrative record.

The level of deference afforded an administrative agency's rulemaking decision is defined in *Chevron v. Natural Resources Defense Council*, 467 U.S. 837 (1984) ("*Chevron*"). *Chevron* requires that when the State Board is implementing the Clean Water Act pursuant to its delegated authority, it must first ensure that its implementation decisions are not contrary to the clear language of the law. To the extent there is any ambiguity in the statute, the agency must interpret the law in a way that is not arbitrary and capricious or otherwise abuses the discretion afforded agencies by the Legislature:

[I]f the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute. *Id.* at 843.

[I]f, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the

²¹ 33 U.S.C. § 1342(a); 40 C.F.R. §§124.10, 124.11, 124.12.

²⁰ 33 U.S.C. § 1251 (e).

²² Stauffer Chemical Co. v. Air Resources Control Board, 128 Cal. App.3d 789, 796 (1982); see also City of Arcadia v. State Water Resources Control Board 135 Cal. App.4th 1392, 1409 (2006) (applying writ of mandate standard under Cal. Civil Code §1085); see also 5 U.S.C. § 706(2)(A); see also Se. Alaska Conservation Council v. Army Corps of Eng'rs (SEACC), 486 F.3d 638, 643 (9th Cir. 2007).

agency's answer is based on a permissible construction of the statute. Id. If Congress has explicitly left a gap for the agency to fill, there is an express delegation of authority to the agency to elucidate a specific provision of the statute by regulation. Such legislative regulations are given controlling weight unless they are arbitrary, capricious, or manifestly contrary to the statute.Id. at 843-844 (emphasis added).

State Farm²³ adds that, in cases where an agency rescinds a previous decision, there is a heightened duty to provide a reasoned analysis for the abrupt change of mind, and to provide a rational connection between the facts and the decision to undo what was "a settled course." State Farm also cautions against relying on factors not considered by Congress (such as in this case, the regulated entities' desire for "flexibility" in selecting compliance dates). Specifically, an agency's reversal of its prior decision is arbitrary and capricious if "the agency has relied on factors Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."

In State Farm, the U.S. Supreme Court held that:

revocation constitutes a reversal of the agency's former views as to the proper course. A "settled course of behavior embodies the agency's informed judgment that, by pursuing that course, it will carry out the policies committed to it by Congress. There is, then, at least a presumption that those policies will be carried out best if the settled rule is adhered to." [citation omitted] Accordingly, an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance.24

Notably, the Supreme Court held that "the agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made."25

In summary, Chevron requires that when the State Board is implementing the Clean Water Act pursuant to its delegated authority, it must first ensure that its implementation decisions are not contrary to the clear language of the law. Second, to the extent there is any ambiguity in the statute, the agency must interpret the law in a way that is not arbitrary and capricious or otherwise abuses the discretion afforded agencies by the Legislature. State Farm adds to this the situation of a reversal of policy; the decision makes it clear that, in cases where an agency rescinds a previous decision, there is a heightened duty to provide a reasoned analysis for the abrupt change of mind, and to provide a rational connection between the facts and the decision to undo what was "a settled course." State Farm also cautions against relying on factors not considered by Congress (such as in this case, the regulated entities' desire for compliance "flexibility" in selecting compliance dates).

²³ Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29 (1983) ("State

²⁴ State Farm, 463 U.S. at 41-42 (emphasis added).

²⁵ Id. at 43, citing Burlington Truck Lines, Inc. v. United States, 371 U.S. 156, 168 (1962).

Importantly, much of this analysis has already been reviewed in Riverkeeper II,26 which assessed U.S. EPA's proposed OTC rule for existing facilities.²⁷ Congress, in enacting the Clean Water Act section 316(b), mandated environmental protections be implemented through the "best technology available." The Riverkeeper II court clarified two interpretations by the U.S. EPA and that are applicable here. First, Section 316(b) embodies a "technology forcing" policy. Substitutes such as "after the fact restorative measures" are illegal because they are contrary to the clear mandate to employ the technological prevention measures.²⁸

Second, Congress intentionally drafted Section 316(b) to force improvements in technology by requiring the "best technology available" to minimize adverse impacts.²⁹ The Riverkeeper II court held that the use of the term "Best Technology Available" prevents the use of inferior technologies, or what the court referred to as "second best." The sole issue appealed from Riverkeeper II to the U.S. Supreme Court³¹ was the question of using a cost-benefit analysis in determining BTA. The SED explained the decision as follows: "[t]he Entergy decision . . . explicitly noted that a cost-benefit comparison is not required under §316(b); a BTA determination can be made without it. . . ," and "costs may be considered insofar as they can be 'reasonably borne' by the industry or when evaluating the cost-effectiveness of two similarly performing technologies."³² The SED concluded that:

Riverkeeper II at 110; see also SED, p. 59 ("the BTA standard is technology-driven and cannot include restoration, which compensates for an adverse impact after it as occurred rather than minimizing its occurrence in the first place").

²⁶ Riverkeeper II, 475 F.3d at 95-96.

²⁷ The issue was also considered in Riverkeeper, Inc. v. U.S. Envtl. Prot. Agency, 358 F.3d 174 (2d Cir.2004) ("Riverkeeper I"). This case found that if the agency has followed Congress's unambiguously expressed intent or permissibly construed an ambiguous statute, "we measure the regulation against the record developed during the rulemaking, but we 'hold unlawful' the agency's regulation only if it is 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." Riverkeeper I, 358 F.3d at 184 (quoting 5 U.S.C. § 706(2)(A)). "Normally, we must deem arbitrary and capricious an agency rule where 'the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Waterkeeper Alliance, Inc. v. U.S. Envtl. Prot. Agency, 399 F.3d 486, 498 (2d Cir. 2005) (quoting State Farm, 463 U.S. at 43 (internal quotation marks and citations omitted)).

²⁹ Kennecott v. United States EPA, 780 F.2d 445, 448 (4th Cir. 1985) found that it was the intention "of Congress to use the latest scientific research and technology in setting effluent limits, pushing industries toward the goal of zero discharge as quickly as possible."

³⁰ Riverkeeper II at 108. Congress's use of the superlative "best" in the statute cannot be read to mean that a facility that achieves the lower end of the ranges, but could do better, has complied with the law. The statutory directive requiring facilities to adopt the best technology cannot be construed to permit a facility to take measures that produce second-best results, especially given the technology-forcing imperative behind the Act. Natural Res. Def. Council v. U.S. Envtl. Prot. Agency, 822 F.2d 104, 123 (D.C. Cir. 1987). Insofar as U.S. EPA establishes performance standards instead of requiring facilities to adopt particular technologies, it must require facilities to choose the technology that permits them to achieve as much reduction of adverse environmental impacts as is technologically possible. Riverkeeper II, 475 F.3d at 108.

³¹ Entergy Corp. v. Riverkeeper, Inc. et. al., 129 S.Ct. 1498 (April 2009). As the SED remarks, "[n]otably, the Entergy decision does not require US EPA to consider a cost-benefit approach in any future §316(b) rulemaking effort, including a revised Phase II rule." SED, p. 7. ³² SED, p. 59.

Although the Entergy decision authorized cost-benefit as one factor that may be considered under §316(b), State Water Board staff does not believe cost-benefit is appropriate at the programmatic level. Instead, State Water Board staff evaluated whether the costs of compliance under Alternative 1 could be 'reasonably borne' by the affected industry."33

We agree with the State Board's approach in the SED as best representing the letter and intent of Section 316(b) and the Clean Water Act's overarching technology-forcing focus. This approach is also consistent with California's strong public trust doctrine, 34 which protects the affected nearshore habitats. The Amendment fails to reflect the Policy's appropriate implementation of the Clean Water Act's technology-forcing mandate.

Further, the scant Staff Report for the Amendment fails the State Farm rule by not providing the required "reasoned analysis" for the State Board's abrupt and complete change in course, one that abandons the carefully crafted schedule and allows plants to seek deadlines that extend for many years. By contrast with the Amendment, which is unsupported in the Staff Report, the Policy itself provides a "rational connection between the facts and the choices made" through the SED. As the minutes³⁵ to the final adoption of the Policy attest, the State Board members carefully considered each issue in light of the extensive record before them, and in the May adoption hearing deliberately chose an approach contrary to many of the provisions of the Amendment (including but not limited to the requirements for combined cycle facilities). Given that the Policy had already considered the issues purportedly being dealt with in the Amendment, and provided rational provisions to accommodate the choices made that are now being reversed, there is no justification for not adhering to the State Farm court's directive "that those policies will be carried out best if the settled rule is adhered to."

Accordingly, the Staff Report and Amendment should be rejected due to their reliance on "factors Congress has not intended it to consider, [the failure] to consider an important aspect of the problem, [and for] offer[ing] an explanation for its decision that runs counter to the evidence before the agency."36 First, the Amendment purports to consider the regulated entities' need for compliance "flexibility." Nowhere does the CWA include this as a factor in determining compliance with §316(b). On the contrary, Section 316(b) requires the "best technology available for minimizing adverse environmental impact." (Emphasis added.) Moreover, the Policy itself mandates an implementation schedule that is "as short as possible" and prioritizes two objectives: protecting beneficial uses and ensuring grid reliability.³⁷ Second, the Staff Report fails to consider perhaps the most important aspect of the OTC problem - the ongoing devastation of marine life that would occur for an indefinite time period should the Amendment be approved. Lastly, as mentioned above, the Amendment is incongruent with the evidence produced over more than five years of public process and agency deliberation. Instead, the Amendment directly undermines several key findings and imperatives within the Policy.

³⁴ See discussion of the public trust doctrine in the joint NGO comment letter dated April 13, 2010.

³⁵ SWRCB, Board Meeting Minutes (May 4, 2010), available at:

http://www.waterboards.ca.gov/board_info/minutes/2010/may/mins050410.pdf.

³⁶ State Farm, 463 U.S. at 43.

³⁷ Secs. 1.G, 3.A.(1).

Application to Section 2.A.: The Amendment Carves Out an Exemption for Combined Cycle Facilities That Is Patently Illegal

The Staff Report attempts to justify the new "special considerations" for combined cycle facilities in Section 2.A.(2)(d) by noting that they "generally use less cooling water than the older steam boiler units to produce the same amount of electricity" and "produce lower air emissions for most pollutants and carbon dioxide than the older" units. While efficiency of operations and reductions in air pollutants are laudable goals, they are not rationally connected to the Section 316(b) requirement that "[c]ooling water intake structures" reflect the best technology available for minimizing adverse environmental impact." In fact, the efficiency gains are not a "cooling water intake structure," or the equivalent of a "cooling water intake structure," in any logical interpretation of that term.

This is a clear violation of the "Chevron rule," in that there is no ambiguity in Congressional intent to compel improvements in cooling technology. And even though improved electrical generation technology may reduce other (unrelated) adverse environmental impacts, these facilities are still compelled to employ the BTA for cooling water intake technology that is the best available for minimizing entrainment and impingement in affected aquatic environments. Neither the generally greater operational efficiency of combined cycle units mentioned in the Staff Report, nor the other factors associated with these units discussed in the SED, form a rational basis for compliance with CWA Section 316(b)'s mandate for BTA. Granting an exception to BTA under the argument that combined cycle units generally operate more efficiently than other units simply is not proper under the technology-forcing Section 316(b).

The minimal rationale offered in the Staff Report equally fails the *State Farm* test. For example, the current Policy already gives credit to combined-cycle units for the reduction in entrainment and impingement associated with reducing the volume of seawater withdrawn in comparison to the facility's prior, steam boiler units. There is no "reasoned analysis" in the Staff Report on how the Amendment's change in course connects the facts to the action taken without violating the court's finding of a "presumption that those policies will be carried out best if the settled rule is adhered to." Rather, the scant Staff Report for the Amendment, unlike the extensive administrative record for the Policy, attempts to rescind the Policy's thoroughly analyzed provisions and replace them with options specifically rejected by the State Board's decision. Similar to the circumstances in the *State Farm* case, the Amendment in effect is the same as an agency "changing its course by rescinding a rule." Consequently, the State Board "is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance." The Staff Report, however, is completely void of a "reasoned analysis for the change" – much less any more thorough of an analysis beyond what would normally be required under a standard rulemaking decision.

Rather, the Staff report cites only the fact that combined cycle facilities "generally" are able to generate more electricity per unit of cooling water than the older steam boilers. It ignores the fact that these units actually can cause *more* damage overall because they use more water in *total* (rather

³⁸ Staff Report, p. 4 (defining the Rationale for the Amendment as to "provide additional flexibility to owners and operators of facilities complying with Track 2 Policy requirements, with special considerations given to facilities with combined-cycle units").

than proportionately) due to their heavier workload. This issue is discussed at length in the April 13th Stanford University comments, incorporated by reference and cited within this letter.

A review of Table 6 of the SED, "Monthly Median Cooling Water Flows" confirms this fact, which again is conspicuously ignored in the Staff Report. Taking off the two nuclear facilities, 39 the median monthly flows for the fossil fueled plants are 6,612 MG/mo for June through September 2005, and 4,772 MG/mo for October through May 2005. Table 6 shows that the water use of the combined cycle units at Moss Landing is 54% above the median monthly OTC flows statewide for June-September 2005, and 109% above the median for October-May 2005. Haynes' combined cycle water intake rate is 35% above the median in the winter months and 4% over the median in the summer. These figures significantly undercut the argument in the Staff Report that the combined cycle facilities "deserve" a BTA pass because they use less water per unit generated. In fact, their greater efficiency has prompted their increased use and significant water intake, with accompanying (undiscussed) environmental impacts. Here again, the Staff Report ignores the impacts of the Amendment on the aquatic environment that the State Board is supposed to be focused on protecting.

Neither the generally greater operational efficiency of combined cycle units mentioned in the Staff Report, nor the other factors associated with these units discussed in the SED, form a rational basis for compliance with CWA Section 316(b)'s mandate for BTA. Granting an exception to BTA under the argument that combined cycle units operate more efficiently than other units simply is not proper under the technology-forcing Section 316(b). As Table 6 shows, these plants do not automatically result in lower impacts to the environment. Moreover, the Tetra Tech feasibility study cited in the SED specifically found that closed cycle wet cooling is "technically and logistically feasible" for Harbor, Haynes and Moss Landing. 41 The economic analysis on pages 122-123 of the SED further support the economic feasibility of Section 316(b) compliance by these facilities.

BTA cannot be wished away; its mandates must be complied with. This, the Amendment fails to do.

Application to Section 3.A.: The Amendment Effectively Allows Regulated Entities to Dictate the Terms of Their Regulation in Contravention of the Clean Water Act

Again, due to the nature of the quick reversal in path from Policy to Amendment, there is a heightened duty for the State Board to provide a reasoned analysis for the abrupt change of mind, and to provide a rational connection between the facts and the decision to undo what was "a settled course." This action should not be based on factors not considered by Congress, such as the regulated entities' desire for compliance "flexibility" (for example in selecting compliance dates).

As is the case for the combined cycle facilities, the new "compliance-flexible" path in the Amendment's Section 3.A.(1) fails to provide the State Farm-required "reasoned analysis" - or indeed, any analysis - of the sudden change in course from the clear guidance of an adopted

³⁹ "Haynes Units 3&4" was also removed, since there was no 2005 entry for those units in Table 6.

⁴¹ SED, p. 62 (also found feasible for the two nuclear facilities).

schedule,⁴² to the open-ended option of delaying compliance for years in order to retrofit (rather than, for example, taking action to address OTC sooner via cooling towers or other comparable technological adjustments). Moreover, the stated rationale for the change – to "provide additional flexibility to owners and operators of facilities complying with Track 2 Policy requirements" – both violates *Chevron* and is simply incorrect.

First, the core justification for the Amendment language in Section 3.A. relies on "flexibility" as a new critical element of the state's compliance plan for CWA Section 316(b). However, "flexibility" simply is not a factor not considered by Congress in the implementation of this Section. Reliance on "flexibility" is a clear violation of the "Chevron rule," as there is no ambiguity in Congressional intent to compel improvements in cooling technology

And second, it is inaccurate to assert that the new Section 3.A. will "provide additional flexibility to owners and operators of facilities complying with *Track 2* Policy requirements" because the language allows facilities taking advantage of new Section 3.A.(1)(a) to *delay* compliance until an unspecified date of repower. The only actions required in the interim – studies to assess the efficacy (currently unknown, hence the studies) of fine mesh screens and a small amount of fees – cannot possibly be viewed as Track 2, which is defined as "comparable" to Track 1, or "comparable" to close-cycle cooling. This rationale thus cannot be supported in fact or law.

Like the new closed cycle unit language in Section 2.A.(2)(d), the Amendment's new Section 3.A.(1) similarly fails to pass basic administrative law hurdles designed to promote reasoned, supported decisionmaking for the public good.

THE AMENDMENT FAILS TO COMPLY WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

The State Board Fails to Identify the Potentially Significant Environmental Effects of the Amendment

Overarching Requirements for Certified Regulatory Programs

The State Board acts under CEQA pursuant to a certified regulatory program. As such:

[e]nvironmental review documents prepared by certified programs may be used instead of environmental documents that CEQA would otherwise require. Certified regulatory programs remain subject, however, to other CEQA requirements. Documents prepared by certified programs are considered the 'functional equivalent' of documents CEQA would otherwise require. . . . [¶] The document generated pursuant to the agency's regulatory program must include alternatives to the proposed project and mitigation measures to minimize significant adverse environmental effects, and be made available for review by other public agencies and the public. [¶] The guidelines for implementation of CEQA do not directly apply to a certified regulatory program's environmental document. However, "when conducting its environmental review and preparing its documentation, a certified

⁴⁴ Sec. 2.A.(2).

⁴² SED, Table 1.

⁴³ Staff Report, p. 4.

regulatory program is subject to the broad policy goals and substantive standards of CEOA."45

Moreover,

[i]n a certified program, . . . a document used as a substitute for a negative declaration must include a "statement that the agency's review of the project showed that the project would not have any significant or potentially significant effects on the environmental and therefore no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment. This statement shall be supported by a checklist or other documentation to show the possible effects that the agency examined in reaching this conclusion."46

However, "[a] negative declaration may not be based on a "bare bones" approach in a checklist. A 'certified program's statement of no significant impact must be supported by documentation showing the potential environmental impacts that the agency examined in reaching its conclusions,' and 'this documentation would be similar to an initial study." "47

The State Board Fails to Analyze the Environmental Impacts of the Reasonably Foreseeable Means of Compliance with the Amendment

Public Resources Code Section 21159 requires the Board to "perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment . . . an environmental analysis . . . of the reasonably foreseeable environmental impacts of the methods of compliance" with the rule or regulation. The Staff Report similarly declares that:

CEQA imposes specific obligations on the State Water Board when it establishes performance standards. Public Resources Code §21159 requires that an environmental analysis of the reasonably foreseeable methods of compliance be conducted. The environmental analysis must address the reasonably foreseeable environmental impacts of the methods of compliance and reasonably foreseeable alternatives and mitigation measures.48

Despite this reiteration of the State Board's CEQA responsibilities, the Staff Report concludes without support that "[t]he proposed amendment would not affect the identified reasonable foreseeable means of compliance with the Policy."49 This statement is facially incorrect. Adoption of the Amendment will clearly change the "method" by which some of the state's power plants will "compl[y]" with the Policy. For example, the Amendment newly allows the "owner or operator" of a combined cycle facility using OTC to continue using OTC until the unit reaches the

⁴⁵ City of Arcadia v. State Water Resources Control Bd, 135 Cal.App.4th 1392, 1421-22 (2006) (citations omitted).

⁴⁶ Id., citing CEQA Guidelines [14 C.C.R.; "Guidelines"] § 15252(a)(2)(A), (B).

⁴⁷ City of Arcadia, 135 Cal.App.4th at 1424 n. 11, citing Snarled Traffic Obstructs Progress v. City and County of San Francisco, 74 Cal. App. 4th 793, 797, fn. 2 (1999) and 2 Kostka & Zischke, Practice Under the California Environmental Quality Act (Cont. Ed. Bar 2005) § 21.11 (brackets omitted).

⁴⁸ Staff Report, p. 5.

⁴⁹ *Id.* at 7.

end of its useful life, without the formerly-required showing of "infeasibility" of achieving Track 1.50 In other words, it is now "reasonably foreseeable" that additional owner/operators will continue using OTC for an extended period of time, far longer than under the current Policy (which is based on a specific schedule that may be altered only through an extensive public process and the hurdle of showing of Track 1 infeasibility). This course of action was not previously allowed. The "reasonably foreseeable environmental impacts" of this new "reasonably foreseeable method[] of compliance" with the Amendment must be, but were not, disclosed.⁵¹

The Staff Report appears to be contending that since the technical options for compliance have not been expanded (i.e., regulated entities will still use analyzed steps such as dry or wet cooling towers, flow controls, etc.), then no analysis is needed. However, it is not relevant here that the Amendment will arguably not lead to a new "method[] of compliance" with the Policy. What is relevant is that the Amendment will change the "method of compliance" that many facilities will use, and this changed method of compliance will have "reasonably foreseeable environmental impacts."52 In other words, the owner/operators will change the timing and packaging of controls (if any) that that will use under the Amendment, as opposed to the Policy. Rather than put in cooling towers, for example, owner/operators of combined cycle facilities will simply let the life of their units run out over the next several decades. Whether a State Board in 2050 or 2060 holds them to their "commitment" to phase out OTC when they purportedly repower (rather than, for example, simply shut down in favor of modern energy generation) is conjectural at best. The Board must disclose the "reasonably foreseeable environmental impacts" of such changed "method[s] of compliance."53

The Staff Report itself acknowledges the fact that the Amendment provides more compliance options than the Policy, stating that under the Policy, "fewer compliance options would be available ",54 Which means conversely, the Amendment provides additional compliance options not available now. More compliance "flexibility" is the whole purpose for the Amendment. The Staff Report must analyze the environmental impacts of Amendment's additional compliance options, which the Report itself notes are not in the Policy.

The Staff Report further concludes without support that the Amendment would not "in itself cause any additional environmental impacts beyond what has been identified in the SED for the Policy."55 Because the State Board has prepared the functional equivalent of a negative declaration for the Amendment, and because such documents "end[] environmental review," the Board's actions are reviewed under the "fair argument" standard. 56 Under that standard, "if a lead agency is presented with a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare [further environmental documentation] even though it may also be

⁵⁰ Sec. 2.A.(2)(d).

⁵¹ Pub. Res. Code § 21159, subds. (a), (a)(1); see also SED at 11.

⁵² Pub. Res. Code § 21159(a)(1). ⁵³ *Id*.

 ⁵⁴ Staff Report, p. 6.
 55 *Id.* at 7.

⁵⁶ City of Arcadia, 135 Cal.App.4th at 1424, quoting Ocean View Homeowners Ass'n., Inc. v. Montecito Water Dist, 116 Cal.App.4th 396, 399 (2004).

presented with other substantial evidence that the project will not have a significant effect (No Oil, Inc. v. City of Los Angeles (1974) 13 Cal.3d 68)."57

Here, the Board violated CEQA because there is a "fair argument" that adoption of the Policy will have significant environmental effects, but these effects have never been analyzed in an environmental document. As the Staff Report itself admits, the Amendment "is less stringent than the current Policy," could allow facilities "longer to reach compliance with Track 1 [BTA]," and adoption of the Amendment will likely "generate more entrainment and impingement impacts than the current Policy."58 This is because some facilities that would have been required to dramatically reduce impingement and entrainment impacts in the near term now may continue to operate OTC systems for many more years than envisioned in the Policy, and indeed for decades, in exchange for a mere \$3 per million gallons mitigation payment and a few pilot screen studies.⁵⁹ The associated impacts are never divulged in the Appendix B Checklist⁶⁰ accompanying the Staff Report. The State Board has an obligation to fully disclose to the public the reasonably foreseeable environmental impacts that will be caused by entities complying with these policies in reasonably foreseeable ways. 61 The Board simply failed to do this.

The Staff Report attempts to justify the Board's attempt to avoid its CEQA obligations by claiming that: "[t]he environmental baseline for this amendment is . . . the same as described in the SED for the Policy," purportedly because the "Policy . . . has been adopted and approved, but not yet implemented through NPDES permits for the individual facilities." However, this ignores the State Board's mandate under Public Resources Code Section 21159,63 which specifically requires the Board to assess the environmental impacts of the reasonably foreseeable means of compliance with the Amendment. Given that owner/operators will change their compliance behavior significantly under the far more "flexible" regulatory terms of the Amendment than the Policy, this statutory mandate must be acknowledged and complied with.

CEQA's overall purpose is to require agencies to make decisions with their "environmental consequences in mind."64 Here, the Board unfortunately ignored the environmental consequences of its decision to gut the Policy with the Amendment - consequences it was specifically required to

⁵⁷ Guidelines § 15064(f)(1).

⁵⁹ As discussed *infra*, this figure itself is arbitrary and capricious, and mitigation in lieu of BTA is illegal.

⁶⁰ The Checklist (Appendix B to the Staff Report) itself violates CEQA because it is simply a "bare bones" checklist that is per se insufficient to support a negative declaration. City of Arcadia, supra, 135 Cal.App.4th at 1424 n. 11.

⁶¹ Pub. Res. Code § 21159.

⁶³ Pub. Res. Code § 21159(a). An agency listed in Section 21159.4 shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance. In the preparation of this analysis, the agency may utilize numerical ranges or averages where specific data is not available; however, the agency shall not be required to engage in speculation or conjecture. The environmental analysis shall, at minimum, include, all of the following:

⁽¹⁾ An analysis of the reasonably foreseeable environmental impacts of the methods of compliance.

⁽²⁾ An analysis of reasonably foreseeable feasible mitigation measures.

⁽³⁾ An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation.

⁶⁴ Laurel Heights Imp. Ass'n v. Regents, 47 Cal.3d 376, 393 (1988).

consider by Public Resources Code Sec. 21159. Because the Board failed to adequately analyze in the Staff Report the reasonably foreseeable environmental consequences of its proposed actions, this analysis must be done, and the State Board must release a legally adequate Substitute Environmental Document, before it can consider a decision on the Amendment. The Board must also recirculate the new document for public comment. 65

The SED and Related Studies Demonstrate That the Amendment Will Result in Potentially Significant Environmental Impacts, Contrary to the Unsupported Conclusions of the Staff Report

As required by CEQA and as reflected in the Staff Report, the State Board must: inform the decision makers and public about the potential significant environmental effects of a proposed project; identify ways that environmental damage may be mitigated; and prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternative or mitigation measures when feasible. Again, if the State Board is presented with a *fair argument* that a project *may* have a significant effect on the environment, it must prepare legally adequate environmental documentation, even if it may also be presented with other substantial evidence that the project will not have a significant effect.

Aquatic Life and Aquatic Ecosystem Impacts Associated with OTC

The Amendment would allow several combined cycle units to continue operating without BTA until the end of their useful lives; *i.e.* decades from now. It also would allow other fossil-fueled plants to extend their deadlines an indeterminate amount, but presumably well past the years of compliance time that are already approved (again, based on no new information). Such openended extensions would result in the significant impacts of OTC – articulated in the SED and other reports – continuing for each and every year that the unit continues to operate with OTC. However, the documentation accompanying the proposed Amendment is void of any consideration of the numerous impacts that will result from the lengthy new delays in implementation built into the Amendment, with no adequate mitigation of these impacts.

"OTC systems . . . contribute[] to declining fisheries and impaired coastal habitats through the intake of large volumes of water and the discharge of elevated-temperature wastewater." U.S. EPA has "concluded that it is reasonable to interpret adverse environmental impact as 'including impingement and entrainment, diminishment of compensatory reserves, stresses to the population or ecosystem, harm to threatened or endangered species, and impairment of State...water quality standards."

The Table below provides a simple illustration of how the State Board might begin to calculate the potentially significant impacts from the reasonably foreseeable extension of the timeline for compliance as a result of the proposed Amendment. It presents examples of estimated larval fish entrainment over a 10-year and 20-year delay for randomly selected power plants, based on the estimated average entrainment presented in Table 2 of the SED. (Note that most of the

^{65 23} C.C.R. § 3777(b); Pub. Res. Code § 21092.1.

⁶⁶ Staff Report, p. 5. SED, p. 29.

⁶⁸ SED, p. 9.

combined cycle units may have at least a 40-year delay in compliance if their units mirror unit life patterns to date.) This simple example is only offered to illustrate one element of an analysis that the State Board should have done to determine the reasonably foreseeable significant environmental impacts of the Amendment. It is not inclusive of, or even an illustration of, analysis of the all of the impacts; indeed, the SED warns that "[i]t is important to note that these figures are based on ichthyoplankton, and do not account for invertebrates."

Estimated average larval fish entrainment for select power plants, based on average larval fish concentration and average flow. <u>Source</u>: SED, Table 2, p. 33.

| Power Plant | Estimated Average Annual Entrainment | Estimated Average Entrainment with a 10-year Delay in Compliance | Estimated Average Entrainment with a 20-year Delay in Compliance |
|---------------------|--|--|--|
| Alamitos (Units | 2.21.002.212 | 29,549,825,460 | 59,099,650,920 |
| 1, 2, 3, 4, 5, & 6) | 2,954,982,546 | 31,626,481,180 | 63,252,962,360 |
| Encina | 3,162,648,118 | 854,476,340 | 1,708,952,680 |
| Harbor | 85,447,634 | 11,596,620,850 | 23,193,241,700 |
| Haynes | 1,159,662,085 | 11,390,020,030 | |
| Moss Landing | | | |
| (Units 1, 2, 6 & | -20,002,000 | 7,298,879,280 | 14,597,758,560 |
| 7) | 729,887,928 | | 0 (0 100 |
| Portrero | 252,843,159 | | |
| Scattergood | 315,634,578 | | |
| South Bay | 1,667,406,878 | 16,674,068,780 | 33,310,221, |

The SED and supporting documents by independent experts, other state agencies, and U.S. EPA contain information readily available to the State Board, information that should have been used to prepare an adequate environmental analysis of the reasonably foreseeable implementation delays that will result from the Amendment. For example:

• Listed species, already threatened with extinction by numerous stressors, will face ongoing injury and death due to years to decades of continued use of once-through cooling. "Impingement at power plants has the potential to directly cause mortality or takes of endangered species. For example, tidewater gobies (*Eucyclogobius newberryi*), federally listed as endangered, are native to coastal lagoons, estuaries, and marshes64; these gobies have been known historically to inhabit Humboldt Bay, San Francisco Bay and the Sacramento/San Joaquin Delta, Morro Bay, Los Angeles Harbor and Agua Hedionda Lagoon." In addition, "The Contra Costa Power Plant has been known to entrain Chinook salmon. The Contra Costa Power Plant has also been shown to entrain and the Delta smelt *Hypomesus transpacificus* and the Longfin smelt *Spirinchus thaleichthys* (about 35862 and 9233 per year, respectively). The Pittsburg Power Plant has been shown to entrain Delta smelt and Longfin smelt (about 13510 and 20148 per year, respectively). The Pittsburg Power Plant also has been shown to impinge Delta

⁶⁹ SED, p. 32.

- smelt and Longfin smelt (about 48 and 12 per year, respectively). Delta smelt are listed as threatened under both federal and California Endangered Species Acts, and the Longfin smelt is listed under the California Endangered Species Act."70
- As noted above, the three power plants in Santa Monica Bay (Scattergood, El Segundo, and Redondo) consume nearly 13% of the nearshore water in the Bay every six weeks. The threats of OTC are even greater for enclosed bays and estuaries; it is estimated that Alamitos and Haynes Generating Stations together take in the entire volume of Alamitos Bay every five days. 72
- As determined by CEC in their review of the Moss Landing Power Project, when built out and operating, the expanded MLPP would "suck through its cooling water intake system" up to 1.224 billion gallons of saltwater per day, or 28 percent of the entire water volume of Moss Landing Harbor and Elkhorn Slough/Moro Cojo Slough on a daily, annual and life-of-the-facility basis. Because essentially all floating organisms in the entrained water will be carried to their death, it is estimated that the two new units alone will result in the loss of 13 percent of all fish larvae in Moss Landing Harbor and Elkhorn Slough, as well as the unquantified number of crab, clam and other pelagic eggs and larvae; when all units are operating, the percentage loss "would be several times greater."74 It is undisputed that such utter decimation of the lower levels of the food web which serve as the biological building blocks for the Elkhorn Slough ecosystem, "constitutes a significant adverse impact" to the watershed. 75

Again, not only does the Staff Report fail to analyze these environmental impacts, it fails to even acknowledge them, stating with no support that "[t]he proposed amendment would not affect the identified reasonable foreseeable means of compliance with the Policy . . . \P [n]or would the amendment in itself cause any additional environmental impacts beyond what has been identified in the SED for the Policy." The Staff Report attempts to justify this conclusion by stating that "[t]he existing policy allows an adaptive management approach for implementation of BTA."77 However, the Amendment creates an entirely different set of conditions than the Policy in that delays are built into the new language - delays that will most certainly continue these impacts decades into the

Impacts on Coastal Wetlands

⁷¹ California Energy Commission, "Issues and Impacts Associated with Once-Through Cooling at California's Coastal Power Plants: Staff Report," CEC-700-2005-013 (2005).

73 See CEC, "Moss Landing Power Plant Project," http://www.energy.ca.gov/sitingcases/mosslanding/. ⁷⁴ CEC, Moss Landing Power Plant Project, Commission Decision (Docket 99-AFC-4), p. 180 (Nov. 3,

⁷⁷ *Id*.

⁷⁰ SED, p. 38.

⁷² Tenera Environmental and MBC Applied Environmental Science, "Summary of Existing Physical and Biological Information and Impingement Mortality and Entrainment Characterization Study Sampling Plan for Haynes Generating Station," p.2 (October 2005).

⁷⁵ CEC, "Final Staff Assessment Moss Landing Power Plant Project," Part III, p. 31 (Docket No. 99-AFC-4) (2000a). See also CEC, Moss Landing Power Plant Project, Commission Decision (Docket 99-AFC-4) (Nov. 3, 2000) ("The loss of this amount of productivity is significant"). ⁷⁶ Staff Report, p. 7.

Southern California⁷⁸

Another significant set of environmental impacts that must be considered is the continued degradation of coastal wetlands in and around the area of many of these coastal plants using OTC. Many of the units were built before the Coastal Act and the Clean Water Act, in almost complete disregard for the destruction of habitat they caused. Many were also built in the middle of coastal wetlands and their associated rare dune complexes. Most are still surrounded by degraded wetland and dune habitat; it is unlikely that any of them would be allowed in those locations today. The environmental health of these sensitive areas and the water that flows from them into the ocean is greatly impacted by (1) the destruction of the coastal wetlands by the power plants when they were built, (2) the continuing impact in the form of water, air, and noise pollution that the plants have on the surrounding wetlands and dunes, and (3) the impacts of their current operations in preventing the full restoration and healthy, self-sustaining functions of these coastal wetlands.

The Coastal Conservancy is involved in and funding the planning, design and restoration of many of these remnant areas that are impacted by the OTC plants, and has extensive information on the environmental costs of the continued operation of coastal plants, particularly in areas surrounded by or formerly wetland habitat. For example, the Ormond Beach site in Oxnard is surrounded by 1,100 acres of remaining open space, and sits on land that prior to the plant was the last of the series of coastal lagoons that stretched from the Santa Clara River to Mugu Lagoon on the Ventura coast. Recent studies by wetland experts of the historical ecology of the coast conclude that these lagoons were a unique wetland archetype in southern California. The Coastal Conservancy has developed plans for restoring the lagoons and associated habitat in this area, considered by many to be the most significant wetland restoration opportunity in southern California. However, the costs associated with this effort are inflated due to the infrastructure, physical protections and buffering that would be needed in and around the plant. Also, the plant's presence prevents the flow of water and all the biological connections that would otherwise happen in a continuous, functioning and self-sustaining system.

Elkhorn Slough⁷⁹

The Moss Landing Power Project is located at the mouth of Elkhorn Slough, one of the last relatively large coastal wetlands remaining in California, and one that supports one of the state's most threatened ecosystems, the coastal estuary. Moss Landing's operations draw cooling water from an intake structure located at the conjunction of the Slough and adjacent Moss Landing Harbor. The main channel of the Slough, which winds inland seven miles, is flanked by a broad salt marsh that drains a watershed of approximately 43,000 acres. The "wetted" marshes and mudflats of Elkhorn Slough cover approximately 3,000 acres, and represent a "particularly valuable" resource because California has lost more than 75 percent of its coastal marshes to human development.

Considered an "ecological gem," Elkhorn Slough is "an estuary of great habitat diversity and species richness." It provides habitat for hundreds of resident and migratory bird species and supports a "great diversity of rare plants and animals." Altogether, 400 species of invertebrates, 80

⁷⁸ Communication with Peter Brand, Senior Project Manager, State Coastal Conservancy (Nov. 16, 2010).

⁷⁹ See CEC, "Moss Landing Power Plant Project," http://www.energy.ca.gov/sitingcases/mosslanding/.

species of fish, and 260 species of birds have been identified in the Slough, including the commercially important Dungeness crab and the endangered tidewater goby. In addition, Elkhorn Slough is home to significant numbers of marine mammals, including harbor seals, southern sea otters and sea lions. It also serves as an important nursery and source of nutrients for Monterey Bay and functions as a filter for sediment and pollution runoff from surrounding upland uses. These functions are particularly significant because the Slough opens into one of the deepest and most productive oceanic resources along the California coast, the Monterey Submarine Canyon.

The significance and uniqueness of Elkhorn Slough have been widely recognized. The State of California has designated the Slough as an ecological preserve. NOAA has included Elkhorn Slough's tidal waters as part of the Monterey Bay National Marine Sanctuary and established a National Estuarine Research Reserve on its shores, the only one in California north of San Diego. The American Bird Conservancy has designated the Slough as a "Globally Important Bird Area" because it harbors significant breeding and wintering populations of the threatened western snowy plover, as well as a host of other migrant and wintering shorebirds, including the endangered brown pelican. And the U.S. Fish and Wildlife Service has designated Elkhorn Slough as "critical habitat" for the western snowy plover pursuant to the Endangered Species Act, 16 U.S.C. § 1531 et seq. In short, as the California Energy Commission concluded, "Elkhorn Slough is considered a significant

Despite the unique biological significance of Elkhorn Slough and its adjacent habitats surrounding the Moss Landing facility, the Amendment completely fails to even consider the impacts on this incredibly sensitive area of 40-50 more years (the life of the combined cycle units) of pulling up to 28% of the entire water volume of Elkhorn Slough/Moro Cojo Slough and Moss Landing Harbor on a daily, annual and life-of-the-facility basis. These readily foreseeable, significant impacts must be identified and analyzed so that the State Board and the public may make

Fine Mesh Screen Studies and Payments Do Not Mitigate for the Potentially Significant Impacts

While the Staff Report summarily (and incorrectly) concludes that the Amendment poses no significant impacts beyond those identified in the SED, it adds that the Amendment "would provide an approach to addressing interim mitigation measures."80 In fact, as discussed in more detail in the Clean Water Act section below, neither the fine mesh screen pilot feasibility studies, nor the illegal and arbitrary payments in lieu of BTA, can remotely be termed mitigation for the extensive impacts associated with the Amendment, which will extend for decades to come.

Cumulative Impacts Must Be Assessed

CEQA requires that environmental documents address cumulative impacts "when the project's incremental effect is cumulatively considerable." "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."82 CEQA Guideline 15130(b)(4) further provides that the following is necessary "to an adequate discussion of

81 CEQA Guidelines § 15130; see also CEQA Guidelines § 15355.

82 CEQA Guidelines § 15355(b).

⁸⁰ Staff Report, p. 7.

significant cumulative impacts (4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available" The policy supporting Section 15130(b)(4) is that decision makers need to know, in deciding whether to approve a project, what the expected impacts will be on the ground as a result of all of the projects identified as cumulative impacts.

In addition to failing to identify readily foreseeable impacts due to the Amendment's application by individual facilities, the Staff Report further fails to consider the cumulative impacts of the Amendment. This is particularly true in areas with closely-sited plants. It is certainly reasonably foreseeable, for example, that all owner/operators of existing combined-cycle units would take advantage of the Policy's proposed decades-long delay in complying with Section 316(b); at a minimum, the State Board must fully analyze the cumulative impacts of these expected actions.

The State Board Fails to Consider a Reasonable Range of Alternatives to the Amendment

The State Board is required by CEQA and its own regulations to identify and carefully consider alternatives to the Amendment of the Policy, including a "No Action" alternative. 83 In conducting a CEQA analysis, a public agency must consider a "reasonable range" of alternatives, which is determined by a "rule of reason." While there is no set number that constitutes a "reasonable range," the range should be sufficient to permit a reasonable choice of potentially feasible alternatives that present possible environmental advantages. 85 The rule of reason requires that the environmental documents set forth the alternatives necessary to permit this reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decisionmaking, as well as informed public participation. 86 The scope of alternatives reviewed must be considered in light of the nature of the project, the project's impacts, relevant agency policies, and other material facts. 87

The Amendment fails to include a reasonable range of alternatives. Instead, it provides and summarily dismisses only a required "No Action" alternative and a cursory "Delay Action" alternative, in addition to the proposed Amendment. A host of potentially reasonable alternatives were not analyzed. This is in part because the inappropriate purpose of "flexibility" appears to have supplanted the original Policy's purpose of achieving 316(b)'s mandates in "as short a time as possible," consistent with grid reliability. This new goal has undermined the analysis necessary to provide the basis of rational decision making and alternatives analysis. Had the original purpose remained, a different set of alternatives would likely have been developed; alternatives advancing "more protection rather than less" would have been considered more consistent with the project goals. Instead, the Amendment's goal-shift makes alternatives involving "more protection" appear to be less of a fit than required by law and the current Policy. In fact, "more protection" should be a key element of an alternatives analysis for a Policy that is supposed to lead the state, finally, to

⁸³ Pub. Res. Code § 21159(a)(3); 23 C.C.R. § 3777(a)(2); see also SED at 10.

⁸⁴ Guidelines § 15126.6(a); Village Laguna of Laguna Beach, Inc. v. Board of Supervisors 134 Cal. App.3d 1022, 1028 (1982); Foundation for San Francisco's Architectural Heritage v. City & County of San Francisco, 106 Cal.App.3d 893, 910 (1980).

⁸⁵ San Bernardino Valley Audubon Soc'y v. County of San Bernardino, 155 Cal.App.3d 738, 750 (1984).

⁸⁶ Mann v. Cmty. Redevelopment Agency, 233 Cal. App. 3d 1143, 1150 (1991).

⁸⁷ Mira Mar Mobile Community v. City of Oceanside, 119 Cal.App.4th 477, 487 (2004).

compliance with Section 316(b) of the Clean Water Act. Accordingly, the Board should have considered alternatives that would *strengthen* the Policy instead of only ones that eviscerate it.

Examples of potentially feasible alternatives that present possible environmental advantages, and that foster informed decisionmaking as well as informed public participation, include but are not limited to the following:

- Requiring immediate and greater interim mitigation for all plants, and requiring clear criteria for any decision to allow delay of implementation at the nuclear facilities;
- Requiring a short timeline for implementation of cooling-tower retrofits, the BTA
 technology that can be put in place more expeditiously than eliminating OTC through a
 full repower and that may involve less interaction with grid reliability;
- Adopting explicit criteria for the showing in Implementation Plans to obtain a compliance deadline extension due to grid reliability issues, and providing specific requirements for how SACCWIS and the State Board will review deadline extension requests, including criteria that rank extension requests based on demonstrated net benefit to the environment affected by the OTC system and that limit the granting of such requests only to those proposals that clearly substantiate a significant net benefit to that affected environment;
- Adding a process whereby the State Board works with energy agencies to seek
 incentives for specific plants to transition swiftly (ahead of the existing Table 1 schedule
 in the Policy) to closure or repower.

Any of these and many other alternatives that could be reasonably devised would be environmentally preferable to the damage that will be caused under the Amendment. Because the Board failed to consider a reasonable range of alternatives, it must remand the Amendment for further consideration in light of these clearly reasonable potential alternatives.

THE AMENDMENT VIOLATES THE CLEAN WATER ACT

The Amendment Illegally Allows Regulated Entities to Bypass Best Technology Available

In 1972 Congress recognized the serious impacts of once-through cooling and consequently enacted CWA section 316(b):

33 U.S.C. § 1326(b). Cooling water intake structures

Any standard established pursuant to section 1311 of this title or section 1316 of this title and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the *best technology available* for minimizing adverse environmental impact.

(Emphasis added.)

"[T]he most salient characteristic of th[e CWA], articulated time and again by its architects and embedded in the statutory language, is that it is technology-forcing." As discussed earlier, the

⁸⁸ Natural Resource Def. Council v. Envtl. Prot. Agency, 822 F.2d 104, 123 (D.C. Cir. 1987).

Riverkeeper II court held that the use of the term "Best Technology Available" prevents the use of inferior technologies, or what the court referred to as "second best." On appeal, the Supreme Court held in 2009 that a cost-benefit test, while not expressly authorized in the §316(b) statute, is not prohibited either. 90 The SED appropriately concluded that:

Although the Entergy decision authorized cost-benefit as one factor that may be considered under §316(b), State Water Board staff does not believe cost-benefit is appropriate at the programmatic level. Instead, State Water Board staff evaluated whether the costs of compliance under Alternative 1 could be 'reasonably borne' by the affected industry."91

This conclusion is echoed in the introductory text to the SED, which states that "a permitted facility with a cooling water intake structure must comply with the technology-based standard for minimizing impingement and entrainment impacts."92

The language of the Amendment that permits regulated entities to ignore the mandate of Clean Water Act Section 316(b), and instead pick their own deadline for compliance that may be many more years or decades in the future, cannot be called BTA or even "comparable to" BTA. Mitigation also is not BTA, and is not an appropriate measure to take in place of swift deadlines. The SED clearly recognizes that "the BTA standard is technology driven and cannot include restoration, which compensates for an adverse impact after it [has] occurred rather than minimizing its occurrence in the first place."93 And even if it is not illegal, there is no evidence in the record that participation in a fine mesh screen study or payment of a small amount of funds would result in anything on par with addressing the impacts of BTA closed cycle cooling.

The Proposed "Interim Mitigation Fee" Is Illegal Mitigation in Lieu of BTA and Is Arbitrary and Capricious

As discussed at length in detail in the joint NGO comment letter to the State Board on the draft Policy and summarized here, Riverkeeper II holds that:

Restoration measures are not part of the location, design, construction, or capacity of cooling water intake structures, . . . and a rule permitting compliance with the statute through restoration measures allows facilities to avoid adopting any cooling water intake structure technology at all, in contravention of the Act's clear language as well as its technology-forcing principle. As we noted in Riverkeeper I, restoration measures substitute after-the-fact compensation for adverse environmental impacts that have already occurred

⁸⁹ Riverkeeper II at 108. Congress's use of the superlative "best" in the statute cannot be read to mean that a facility that achieves the lower end of the ranges, but could do better, has complied with the law. The statutory directive requiring facilities to adopt the best technology cannot be construed to permit a facility to take measures that produce second-best results, especially given the technology-forcing imperative behind the Act. Natural Res. Def. Council v. U.S. Envtl. Prot. Agency, 822 F.2d 104, 123 (D.C. Cir. 1987). Insofar as U.S. EPA establishes performance standards instead of requiring facilities to adopt particular technologies, it must require facilities to choose the technology that permits them to achieve as much reduction of adverse environmental impacts as is technologically possible. Riverkeeper II, 475 F.3d at 108. 90 Entergy Corp. v. Riverkeeper, Inc. et. al., 129 S.Ct. 1498 (April 2009).

⁹¹ SED, p. 63

⁹² SED, p. 2. ⁹³ SED, p. 59.

for the minimization of those impacts in the first instance. . . . The Agency's attempt to define the word "minimize" to include "compensati[on] ... after the fact," . . . is simply inconsistent with that word's dictionary definition: "to reduce to the smallest possible extent," Webster's Third New Int'l Dictionary 1438 (1986). . . . Accordingly, the EPA impermissibly construed the statute by allowing compliance with section 316(b) via restoration measures. 94

This holding was not appealed to the U.S. Supreme Court remains the law of the land.

The Second Circuit's decision regarding disallowance of the use of mitigation and restoration in lieu of BTA applies here with respect to the new "interim mitigation fee." Facilities taking advantage of the new "flexibility" provisions in the Amendment can acquire new compliance deadlines that reach out many additional years, potentially decades more. For many facilities it may now be the case that "interim" mitigation is in fact long-term mitigation with no BTA implementation in sight – in other words, *de facto* illegal use of mitigation and restoration in lieu of BTA. The combined cycle unit option is particularly applicable, as it allows OTC to continue without a semblance of adherence to BTA for the life of the facility (*i.e.*, decades) in direct contravention to Section 316(b).

While we support interim mitigation measures that are written into those permits that have clear, enforceable, effective interim and final BTA-focused deadlines which demonstrably lead to compliance "as soon as possible," we do not support the illegal use of mitigation in place of BTA. The proposed "interim mitigation fee" in Section 2.A. of the Amendment illegally props up an avoidance of BTA for the life of the unit, a provision that has no place in the Policy. Section 3.A. also allows extended avoidance of compliance with BTA with mitigation as a justification, for an untold time but potentially at least a decade. The State Board's SED already described a 10-year compliance period as "lengthy". 95 years on top of that shifts from an implementation schedule to noncompliance. "Mitigation" cannot be used to justify extended avoidance of BTA.

Even if the new fee could be termed "interim" mitigation (a conclusion we vigorously dispute), there is no rational basis – or indeed, *any basis whatsoever* – provided in the Staff Report for public review for this apparently randomly selected figure of \$3/MG.⁹⁶ Examples of such fees for the combined cycle units – calculated assuming that the \$3/MG is assessed on an annual basis and using median cooling water flows in SED Table 6 – are: up to \$360,804/yr for Moss Landing, sample \$236,820/yr for Haynes, and \$56,160/yr for Harbor. An example of a simple-cycle fossil-fueled plant is \$331,686/yr for Scattergood. By comparison with this proposed fee figure, Table 28 of the

⁹⁴ Riverkeeper II, 475 F.3d at 110 (emphasis added).

⁹⁵ SED, p. 83.

Moreover, the figure itself fails to provide a time frame over which the funds will be assessed (\$3 per MG water used per day? MG/month? MG/year?). Both the Staff Report and the Amendment state that the fee would be "payable annually," but provide no hints as to the time frame over which it would be assessed. This basic gap, combined with a complete lack of substantiating information in the Staff Report, together point to a rushed and arbitrary decision that bears no rational relationship to the thoughtful decisionmaking called for by the Clean Water Act and administrative law.

⁹⁷ The Amendment does not specify the period of assessment; only the frequency of billing. Fees assessed based on daily or monthly flows will of course be less.

This estimate is for Moss Landing Units 1-4. SED, Table 6, p. 42.

⁹⁹ "Haynes Units 9&10." SED, Table 6, p. 42.

SED presents a summary of annual facility costs for the plants analyzed by TetraTech; 100 "the TetraTech study evaluated each facility with respect to technologies that can achieve a 90-95% reduction if IM/E impacts as discussed in the 2006 Ocean Protection Council resolution."101 Examples of 20-year annualized compliance costs reported in Table 28 for the combined cycle units are: \$11,900,000/yr for Moss Landing, 102 \$6,000,000/yr for Haynes, and \$2,700,00/yr for Harbor. An example of 20-year annualized costs reported for a simple cycle fossil-fueled plant is \$18,600,000/yr for Scattergood. BTA will never be a natural selection for regulated entities if their alternative is delay with (often illegal) fees that are well below the actual costs associated with preventing the devastating impacts of OTC on the environment.

Section 316(b) requires the "adverse environmental impact" resulting from "cooling water intake structures" to be "minimized" via the "location, design, construction, and capacity" of those structures. In other words, Section 316(b) requires agencies to "reduce" environmental impacts from OTC facilities "to the smallest possible extent," by regulating the technology used by those facilities. 103 A strategy of avoiding BTA through post-hoc payment for restoration of affected environments is not permitted by the statute. "Restoration measures are not part of the location, design, construction, or capacity of cooling water intake structures . . . , and a rule permitting compliance with the statute through restoration measures allows facilities to avoid adopting any cooling water intake structure technology at all, in contravention of the Act's clear language as well as its technology-forcing principle."104

Contrary to the plain language of Section 316(b), the Amendment allows certain facility operators to indefinitely pay a token mitigation fee in lieu of adopting the "best technology available for adverse minimizing environmental impact[s],"105 with the mitigation funding to be used for restoration projects. 106 The Board's decision to allow facility operators to "correct for the adverse environmental impacts" of their operations indefinitely, rather than instead "minimizing" those impacts, violates the CWA.

In sum, the Amendment's proposed "interim mitigation fee" is an arbitrarily selected number, with no support, explanation or basis in the public environmental documents. It also is not "interim" for the facilities to which it is being applied, and thus is in fact illegal under Riverkeeper II's prohibition against mitigation or restoration in lieu of BTA.

Participation in a "Fine Mesh Screen Feasibility Study" Does Not Achieve Track 1 or 2 BTA and Is Not Appropriate "Interim Mitigation"

¹⁰⁰ See TetraTech, "California's Coastal Power Plants: Alternative Cooling System Analysis," p. ES-4 (Feb.

^{2008). &}lt;sup>101</sup> SED, p. 121. ¹⁰² Note that this figure is significantly lower than the \$21,700,000/yr annualized costs for Moss Landing's two simple cycle units, calling again into question the rational basis for giving combined cycle units an extension until the end of their useful lives (see also the costs for the Haynes combined cycle versus simple cycle units).

¹⁶³ Riverkeeper, supra, 475 F.3d at 110.

¹⁰⁴ Id. "Restoration measures correct for the adverse environmental impacts of impingement and entrainment . . . but they do not minimize those impacts in the first place." Id. at 109 (quoting Riverkeeper, Inc. v. Environmental Prot. Agency, 358 F.3d 174, 189 (2d Cir. 2004)) (emphasis added). ¹⁰⁵ Sec. 2.A.(2)(d)(ii)(3).

¹⁰⁶ Sec. 2.A.(2)(d)(ii)(3), Sec. 2.C.(3)(a)-(d), (e).

The Amendment conditions use of the new "compliance-flexible" path in Sections 2.A. and 3.A. by calling on the owner/operator to conduct "pilot scale feasibility studies" on the use of "fine mesh screens" or other, undefined "equivalent measures." These options for conducting pilot studies illegally undermine achievement of BTA.

First and most importantly, given the potentially extremely lengthy delays allowed under the Amendment, any such "interim mitigation" is most likely an illegal bypass of BTA as described in Riverkeeper II (see above citations in the context of interim mitigation fees). This is particularly true for the combined cycle units.

Even if a feasibility study were an allowable interim mitigation measure, such studies are further flawed in that they do not specifically require the units to actually employ fine mesh screens or (unidentified) "equivalent measures" for any specific length of time, creating significant uncertainty as to actual compliance with required mitigation activities. The Amendment language simply requires a pilot scale study of these technologies unless the screens "are shown to be not feasible" (no guidance is provided on how to assess that owner/operator finding). Any benefits associated with study of the screens are thus indeterminate at best. Given that these are the only actual mitigation measures proposed for facilities that may be delaying compliance for decades (other than, perhaps, the above-described oft-illegal and minimal fees), this is a major gap.

The Staff Report itself demonstrates this confusion and lack of support for the proposed "mitigation measure." On the one hand, both the Staff Report and the Amendment characterize the use of the screens as "feasibility studies." On the other hand, the Staff Report appears to assume (incorrectly) that the screens' efficacy is known, stating that the screens actually do "mitigate harmful effects." The Staff Report's failure to provide – or even cite to – any information on the efficacy of these screens as mitigation, or even elucidate the extent to which owner/operators must use the screens (are they short-term studies? are they longer-term mitigation?), emphasizes the arbitrary nature of this selected condition for delaying compliance deadlines many years into the future. Further, the Amendment's failure to define the associated reference to the use of "equivalent measures" to fine mesh screens creates additional ambiguity and is arguably further evidence of a quickly-drafted and poorly-considered Amendment.

Finally, the Amendment provides a further loophole for the owner/operators, allowing "[a]ny fine mesh screen or equivalent measures implemented ...[to] be bypassed on short-term basis" Problems with the use of these screens are in fact readily foreseeable; that is the reason their use is being generally termed a "feasibility study." Solutions have not been developed to date, and regular "bypassing" is predictable. Given that there is no described oversight in the amended Policy

Staff Report, p. 5. By contrast to this claim that the screens provide mitigation, the SED at page 86 states that "Few technologies are available that would be practical and cost-effective on an interim basis, particularly those designed to reduce entrainment (e.g. fine mesh screens)." See also SED pp. 101-102 on the lack of information on the efficacy of wedgewire screens in coastal environments. This is consistent with the finding of the TetraTech Report that use of fine mesh screens in coastal waters "has not been evaluated in detail, although further research into different design configurations may allow for their deployment in coastal waters at some point in the future." TetraTech, "California's Coastal Power Plants: Alternative Cooling System Analysis" (February 2008).

on the use of this bypass provision, its utility as potential interim mitigation is extremely limited at best.

In conclusion, there is no reasoned analysis or support for this condition, either in the SED, the complete Administrative Record, or most notably the Staff Report. These provisions further illustrate that Amendment as drafted must be rejected by the State Board.

The State Board Has Effectively and Illegally Delegated Its Deadline Compliance and Enforcement Authority to the Regulated Community

The Clean Water Act allows for delegation of water pollution control responsibility to the states. Federal regulations at 40 CFR §§ 123.1 et seq. establish procedures for approving a state program and the responsibilities of that program. Provisions for withdrawal of that authority are found at 40 CFR §123.63, which articulates that U.S. EPA "may withdraw [Clean Water Act] program approval when a State program no longer complies with the requirements of this part, and the State fails to take corrective action." Such circumstances include "[f]ailure to exercise control over activities required to be regulated under this part," "[r]epeated issuance of permits which do not conform to the requirements of this part," and "[f]ailure to comply with the public participation requirements of this part." The state Porter-Cologne Water Quality Control Act at Water Code Section 13160 similarly reflects that "[t]he state board is designated as the state water pollution control agency for all purposes stated in the Federal Water Pollution Control Act and any other federal act"

The Amendment grants unprecedented authority to the regulated community to select their own compliance dates, in contravention of U.S. EPA's delegation of authority to the state of California. First, the Amendment as drafted would allow an owner/operator of a combined cycle facility, with *no* showing of that compliance with BTA is "infeasible," to simply inform the State Board of its new compliance deadline. Specifically, the Amendment states that OTC may be used "until the unit reaches the end of its useful life." This deadline is then left up to the regulated entity "until the unit reaches the end of the useful life in plans submitted to the State ("[t]he owner or operators shall specify the end of the useful life in plans submitted to the State Water Board"). This abdication of responsibility calls into question California's role as the delegated program authority in light of the 40 CFR §123.63 factors outlined above, such as:

• Failure to exercise control over activities required to be regulated under this part. By effectively ceding control over the date of the end of the combined cycle unit's useful life to the regulated entity, the Amendment would illegally delegate the Board's responsibility to control the regulated entity's path. Formerly, the Policy drove compliance in a time "as short as possible"; now, the Amendment allows industry to identify when their units' lives are expected to end, and to incorporate that into the regulatory process.

¹⁰⁸ 40 CFR §123.63(a)(1).

¹⁰⁹ Sec. 2.A.(1)(d)(ii)(1). While the State Board must approve these plans, the lack of a process in the Policy for specifically vetting these industry-driven estimates, combined with the speed at which this just-adopted Policy's goals specifically vetting these industry-driven estimates, combined with the speed at which this just-adopted Policy's goals have been reversed through the Amendment, point toward a similarly swift approval of industry-proposed compliance dates.

- Repeated issuance of permits which do not conform to the requirements of this part.

 Adoption in NPDES permits of the deadline selection that has been illegally delegated to the regulated entity further compounds the state's delegation of its authority.
- Failure to comply with the public participation requirements of this part. The fact that these new deadlines will be cemented into NPDES permits for decades to come prevents access by the public to the regulatory process that is required by the Clean Water Act. 110

Second, the Amendment similarly would allow owner/operators of non-combined cycle units to set their own deadlines under the new "compliance-flexible" path in Amendment Section 3.A.(1). Specifically, the changes state that:

The owner or operator shall specify the date of repowering the unit ... Any NPDES permits issued pursuant to Section 3.C. of this policy shall include, as a final compliance date for the elimination of OTC at a unit, the reporting date¹¹¹

For the reasons described above for combined cycle facilities, this abdication of State Board responsibility in the name of providing the regulated community even more "flexibility" than their current, 38-year deadline extension, plus the years of additional time to comply embedded in the Policy, violates the state's mandated Clean Water Act responsibilities and jeopardizes its status as a delegated authority.

Compliance Schedules in the Amendment Run Afoul of Clean Water Act Mandates

As discussed in detail in the joint NGO comment letter and summarized here, the Clean Water Act is clear on the need for demonstrated, specific, measureable, reported and *actual* compliance by regulated entities towards meeting the Act's mandates. Section 316(b) calls for "the location, design, construction, and capacity of cooling water intake structures [to] reflect the best technology available for minimizing adverse environmental impacts." It does not say BTA "at some indefinite point in the future, at a time that the regulated community will define later." Clean Water Act implementing regulations do acknowledge the time necessary for industry to implement compliance responses, but these are narrowly tailored to ensure compliance "as soon as possible" (as reflected in the Policy and undermined by the Amendment). Accountability for meeting such compliance schedules, moreover, must be clearly established.

CWA implementing regulations at 40 C.F.R. § 122.2 define "schedule of compliance" as a "schedule of remedial measures included in a 'permit,' including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the CWA and regulations." Regulations at 40 C.F.R. § 122.47 further describe the specific mandates for such schedules of compliance. The State Board's Resolution adopting its "Policy for Compliance Schedules in NPDES Permits" similarly states unequivocally that a compliance

¹¹⁰ See 33 U.S.C. §1251(e); 33 U.S.C. § 1342; 40 C.F.R. §§ 124.10, 124.11, 124.12. ¹¹¹ Sec. 3.A.(1)(a).

^{112 40} C.F.R. § 122.47(a)(1).

schedule must include an "enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitations, prohibition, or standard." ¹¹³

U.S. EPA has been paying increasing attention to the adequacy of California's compliance schedule documentation and adherence. ¹¹⁴ In a relatively recent California permit audit, EPA specifically concluded that none of the randomly-selected permits required compliance with final effluent limits "as soon as possible" as required by 40 C.F.R. § 122.47(a)(1), and *none* of them contained adequate justification for the specific length of the compliance schedule. ¹¹⁵

EPA's emphasis on the need for specific interim requirements in permits that achieve compliance with Clean Water Act mandates "as soon as possible" is particularly relevant here. Given the almost four decades of delays to date in implementing Section 316(b), the additional years for compliance already provided in the Policy, and the need for facilities to take action to protect increasingly threatened coastal and estuarine life and habitats, the Amendment's proposal to extend delays for many years or decades more contradicts the clear mandate of the Clean Water Act, and its implementing regulations, to act swiftly.

Through its recent NPDES permit audit, U.S. EPA has put California clearly on notice that the state's use of compliance schedules will be closely scrutinized to ensure compliance "as soon as possible" and to avoid continued delays. This is particularly true for the proposed Amendment, which could add decades more to the over 38 years of waiting for compliance to date.

MAJOR NEW CHANGES TO THE POLICY UNDERMINE FUTURE EFFORTS AT COLLABORATION ON POLICIES AND PERMITS.

As we discussed in the joint NGO comment letter to the State Board on the draft Policy, multiple federal and state agencies, including U.S. EPA, the California Energy Commission, the Ocean Protection Council, and the State Lands Commission, have studied, analyzed, recognized, commented on, and passed resolutions related to the significant impacts of OTC over the past five years. The Legislature has also expressed significant interest in this issue, with a letter from

SWRCB, Resolution No. 2008-0025, "Policy for Compliance Schedules in NPDES Permits," para. 1(a), p. 2 (April 15, 2008); available at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2008/rs2008_0025.pdf.

http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2008/rs2008_0025.pdf.

See U.S. EPA Region IX and Office of Water, "California Permit Quality Review Report on Compliance Schedules" (Oct. 31, 2007).

This mandate is echoed in the current Policy's direction to the State Board to ensure an implementation schedule that is "as short as possible." Sec. 3.A.(1). However, it is contravened by the proposed Amendment, which would extend deadlines for potentially decades.

Clean Water Act Section 316(b); California Energy Commission, "Issues and Environmental Impacts Associated with Once-Through Cooling at California's Coastal Power Plants: Staff Report" (2005), available at: www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013.PDF; California State Lands Commission, Resolution of the California State Lands Commission Regarding Once-Through Cooling in California Power Plants (adopted April 17, 2006), available at

http://www.cacoastkeeper.org/document/resolution-on-otc.pdf; California Ocean Protection Council, Resolution Regarding the Use of Once-Through Cooling Technologies in Coastal Waters (adopted April 20, 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/.

Senate pro Tem Steinberg and other Senate leaders in June 2009 calling for a strong Policy, ¹¹⁸ and a letter this year similarly calling for a protective Policy from nine Senators and Assembly Members. ¹¹⁹ NGOs have provided numerous sets of detailed, formal written comments to the State Board alone, along with significant oral testimony. NGOs moreover have worked extensively in other venues (*e.g.*, with the OPC, SLC, SLC, CAISO, the Legislature and other lawmakers and decisionmakers) to ensure a sound, workable Policy.

NGOs have also alerted the interested public to the Policy's developments, with significant responses consistently directed to the State Board in favor of a strong Policy that phases out OTC expeditiously. A total of almost 9,000 letters in support of a protective OTC Policy were sent to the Board this spring, and thousands more are being provided in opposition to the Amendment.

In light of these years of public input, as well as the input of detailed, independent, state-commissioned studies showing that the vast majority of power plants using OTC could feasibly comply with the Policy, the unsupported and extensive changes in the Amendment threaten to fatally undermine future efforts at collaboration. The public and other state agencies spent their own time and funds on years of thorough, public, collaborative process and on studies supporting a sound implementation path for Section 316(b). They may be unlikely to respond quickly to future State Board outreach efforts that may similarly be undermined with a post-adoption overhaul that steps well away from years of prior effort.

CONCLUSIONS

After five years of significant effort, numerous studies, state agency Resolutions to phase out OTC, an adopted Policy that was a vigorously and publicly developed compromise approach to achieving the mandates and goals of the Clean Water Act within a time certain, and approval of that Policy by the Office of Administrative Law, the speed with which the State Board has reversed course in the face of industry complaints is unprecedented. The proposed Amendment moves the state further away from compliance with Section 316(b), from associated and long-overdue protection of the affected ecosystems, and from a reliable process for maintaining grid integrity (which will be compromised by an increasingly uncertain scheduling process). The Amendment also raises significant questions regarding compliance with key administrative law requirements and CEQA, as well as compliance with the State Board's overarching responsibility to implement fully the Clean Water Act and protect the public trust resources of the people of California.

Moreover, these major changes are unnecessary even to address the claim of needed "flexibility." The Policy already provides the regulated community with a clear process for moving forward with proposed deadline extensions needed to ensure grid reliability, while at the same time achieving compliance with Section 316(b) in a time frame that is "as short as possible." The regulated community has pushed back on the Policy not because it does not provide for deadline extensions. Rather, they have pushed back because it does not provide for deadline extensions that allow owner/operators to identify their own compliance deadlines, regardless of grid considerations or ecosystem impacts. It is not proper for the State Board, as the delegated authority implementing

¹¹⁹ Letter from Senator Ellen Corbett *et al* to Charlie Hoppin, Chair and Board Members, SWRCB, "State Policy Governing Use of Coastal and Estuarine Waters for Once-Through Cooling" (April 12, 2010).

¹¹⁸ Letter from Senator Darrell Steinberg et al to Charlie Hoppin, Chair and Board Members, SWRCB, "State Policy Governing Once-Through Cooling at Coastal Power Plants" (June 22, 2009).

the Clean Water Act, to cede this determination to industry. Indeed, adoption of the Amendment would send a clear message to the regulated community that compliance deadlines may be extended indefinitely with the right amount and type of pressure, a message that severely undermines the state's mandated commitment to meeting the requirements of the Clean Water Act overall.

If in fact the regulated community has such significant concerns with the ability of the Policy to address their personal compliance variables, the place to consider and address those concerns is the review of the Implementation Plans that are due on April 1st, just over four short months away. Without the information that will be provided in these plans, the State Board cannot conduct a rational analysis or make a reasoned decision on issues of such importance as deadline extensions that could span generations. Careful consideration of all the facts – rather than simply industry assertions of a need for "flexibility" – is also essential to avoiding a situation whereby a critical mass of plants wait until the end of the compliance period under shared deadlines, thereby building in the potential for new grid reliability issues.

For these reasons, we urge the State Board to reject the proposed Amendment, and instead seek development of the Implementation Plans required under the Policy by April 1st. There is no harm to the regulated community in simply developing these soon-due plans and allowing them to inform the compliance discussion. By contrast, adoption of the Amendment as proposed will cause significant, lasting harm to California's coastal, estuarine, and marine ecosystems. After the plans are received on April 1st, the State Board, the regulated community, other affected agencies, and the public can examine the information and decide the best course of action for achieving Section 316(b)'s mandates in a time frame that is "as short as possible."

We look forward to working with you to ensure the swift, sure implementation of Clean Water Act mandates to protect the health and viability of California's coast, Delta and ocean ecosystems.

Sincerely,

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NGO Comments to SWRCB incorporated by reference:

April 13, 2010:

http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/cwa316may2010/comments041310/linda sheehan att.pdf December 8, 2009:

http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/cwa316_2009dec/joe_geever_etal..pdf September 30, 2009:

http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/cwa316_2009sept/comments/angela_kell_ ey.pdf

May 20, 2008:

http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/cwa316_may08/comments/angela_haren.

September 15, 2006:

http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/cwa316b/comments/linda_sheehan.pdf February 23, 2006:

http://www.cacoastkeeper.org/document/ccka-comments-to-swrcb-on-otc-feb-2006.pdf

Mills Legal Clinic at Stanford Law School Comments to SWRCB (April 13, 2010), incorporated by reference:

http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/cwa316may2010/comments041310/jacob russell.pdf