





August 19, 2014

Chair Felicia Marcus and Board Members  
c/o Jeanine Townsend, Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24<sup>th</sup> Floor  
Sacramento, CA 95814

Sent via electronic mail to: [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)

**RE: Comment Letter – Desalination Amendment**

On behalf of the undersigned organizations, we appreciate the opportunity to provide comments on the State Water Resources Control Board’s (“State Board”) July 2014 draft Desalination Amendment (“Amendment”).

Desalination permits should require the best available site and design to accommodate the best available technology in order to: minimize the intake and mortality of marine life; minimize the brine discharge’s adverse impacts to the marine environment; and avoid conflict with ecosystem-based management activities, especially ongoing implementation of the Marine Life Protection Act, and climate change and disaster preparedness. It is critical that the State Board develop statewide standards for desalination that minimize the intake and mortality of all forms of marine life and maintain ecosystem functions. Substantial changes need to be made to the Amendment in order to achieve the intent of the Clean Water Act (CWA) and Porter-Cologne Act, uphold the OTC Policy, and protect and restore California’s marine ecosystems.

**The State Board should be explicit that the “best available” standard is required for each 13142.5(b) factor and include guidance on how regional boards shall combine all factors.** Generally speaking, we agree with the Amendment’s intent of identifying the “best site”, “best design” and “best technology” available for “minimizing the intake and mortality of all forms of marine life.” These three elements should be fully enforced before turning to mitigation. And mitigation, to the extent it includes after-the-fact restoration, is still required to be “best.” It is also a reasonable interpretation of the language to include an analysis of all the three primary elements in combination to ensure that, collectively, those elements of a facility meet the standard of “best” and “minimization” of the intake and mortality of all forms of marine life.

**The State Board should make a finding that subsurface infiltration galleries are the best available technology.** Subsurface infiltration galleries offer flexibility to desalination proponents, and are considered “highly feasible” because they are designed to replace the natural substrate with an engineered substrate that allows for high design capacity. The State Board should consider galleries and wells as two separate technologies with different performance standards. While galleries and wells have the same operational impacts, they have different construction impacts – thus each has different performance standards for minimizing marine life mortality. Finding galleries to be the best available technology provides the State and Regional Boards flexibility, while achieving the legal requirements under 13142.5(b).

**Screens are not the best available technology.** In its OTC Policy, the Water Board already considered the efficacy of screened intakes for minimizing the intake and mortality of marine life, and found them inferior. In fact, the OTC Policy only allowed the use of screens if, in combination with other measures, they could meet the performance standards established by the “best available technology.” Nothing has changed since adoption of the OTC Policy. If anything, recent studies have only confirmed that the efficacy of screened surface intakes is still questionable and likely less than what was assumed when the OTC Policy was adopted. The consideration of screen efficacy in the Amendment needs to be consistent with the adopted approach in the OTC Policy, and the State Board needs to be explicit that surface intakes with fine mesh screens are not the “best available technology” – far from it.

**When determining the feasibility of the best available technology, cost should not be a factor.** The federal courts have determined that “[j]ust as the Agency cannot determine BTA on the basis of cost-benefit analysis; it cannot authorize site-specific determinations of BTA based on cost-benefit analysis.”<sup>1</sup> There is no legislative intent to include a cost-benefit analysis in the Clean Water Act section 316(b), nor is any such intent evident in Porter-Cologne Act section 13142.5(b). They are similar and must be applied similarly. The State Board cannot authorize a site-specific determination of whether BTA is feasible using a cost-benefit analysis.

**The State Board should properly define “not feasible” under the best available technology analysis.** Given the California Water Code does not define “feasible”, the State Board should use the OTC Policy and CWA Section 316(b) as guidance. The proposed Amendment does not contain a definition of “not feasible”, but rather a laundry list of criteria to be evaluated by regional boards. These eight factors are not only vague and open-ended, allowing project proponents to excuse themselves from the best available technology standard, but they do not provide an actual definition. Black’s Law Dictionary defines feasible as “capable of being accomplished.”<sup>2</sup> Therefore, we believe the definition of “not feasible” in the Amendment should be: “Cannot be constructed or operated given geotechnical data, hydrogeology, benthic topography, or oceanographic conditions. Cannot be accomplished because of the inability to obtain necessary permits due to unacceptable environmental impacts, local ordinances, State or local regulations, etc. Cost is not a factor to be considered when determining feasibility. Flow Augmentation for brine dilution is not a factor to be considered when determining feasibility.”

**The State Board should determine design capacity to be the “best available design.”** It is critical that the State Board include design capacity as a factor to be considered under the best available design analysis, because designing a facility with a production design capacity to accommodate subsurface intakes is the best available design. We request the State Board define design capacity as the maximum amount of capacity achieved using the best available intake technology at the best available site for that technology.

**The State Board should revise the best available site analysis to accommodate the best available technology and minimize impacts to Marine Protected Areas and other important ecological areas.** Desalination plants with infrastructure sited in or near MPAs would likely result in significant impacts from intakes and brine discharge to marine life and ecosystem functions, similar to impacts from power plant intake and discharge sites. Desalination plants sited in proximity to MPAs may reduce larval connectivity between protected areas through entrainment and impingement, thereby compromising the effectiveness of the broader network of MPAs. We therefore fully support the clear directive in section L.2.b.6 of the draft policy that intake and discharge structures for desalination facilities shall not be located within MPAs or State Water Quality Protected Areas (SWQPAs). We also support the statement that discharges should be sited at a sufficient distance as to have no impacts on MPAs or SWQPAs. It is equally critical, as stated above, that the best available site accommodate the best available technology, and that siting, design and technology each fully minimize the intake and mortality of marine life --

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<sup>1</sup> *Riverkeeper, Inc. et al. v. U.S. Environmental Protection Agency*, Nos. 04-6692 et al. (2d Cir. Jan. 25, 2007).

<sup>2</sup> Black’s Law Dictionary, available at <http://thelawdictionary.org/feasible/>.

especially potential impacts to MPAs and other ecologically important sites.

**The State Board should prohibit after-the-fact restoration as in-lieu mitigation for the best available technology; it should revise the mitigation fee calculation; and ensure mitigation fees are spent to minimize the intake and mortality of marine life.** We agree that the best available mitigation should be implemented after minimizing marine life mortality through site, design, and technology measures. However, replacing marine life that is lost due to the activity of a desalination facility as a substitute for best available technology is illegal. Federal courts have concluded that after-the-fact restoration cannot be used “in-lieu” of the best technology available. Moreover, the mitigation fee calculation must include a “multiplier” to ensure that, if the restoration project replaces habitats that are not proportional to the species lost to the intake, the indirect benefits are reasonably “discounted” – that is, not credited. It should be clarified in the Amendment that the purpose of any habitat restoration project is to fully replace “all forms of marine life.” We support including a broad list of potential mitigation projects as identified in section III.L.2.e.(3)(b)i, along with clear performance standards and measurement requirements. Having a broad list may help provide the flexibility needed to increase the prospects for a proportional and successful mix of restoration projects to fully replace “all forms of marine life” lost to the intake. The State Board should also include a preference for mitigation projects in the geographic vicinity of the proposed project, to help match replacement production as closely as possible to marine life losses.

**The State Board should determine that spray-brine diffusers are the best available discharge technology; and prohibit flow augmentation for brine dilution.** The Brine Expert Panel could not cite any studies disproving that spray brine diffusers would cause the mortality of marine life. Until there is some empirical evidence, or at a minimum laboratory tests, showing the degree of mortality in a spray brine plume, properly designed and sited diffusers should be considered the best available technology for brine dilution. Flow augmentation (increased intake volume) is illegal and should not be an allowable technology or practice for discharging brine. As the State Board admits, withdrawing “additional seawater through surface intakes for the purpose of diluting brine effluent to meet water quality standards (referred to as “flow augmentation”) can significantly increase entrainment and impingement.” Moreover, even if a technology can reduce entrainment through “low turbulence intakes” “[a]dditional mortality may occur through brine exposure in the mixing process and through predation in conveyance pipes.” Spray-brine diffusers are the best available discharge technology and flow augmentation to dilute brine is illegal.

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The undersigned groups want a desalination policy that requires seawater desalination facilities to be built in a manner that protects fish and marine life, and to be located in sites that minimize harm to the coast and ocean. We look forward to working with you to ensure sufficient clean water for California.

Sincerely,

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