



● **Board of Directors**
Communications and Legislation Committee

April 14, 2009 Board Meeting

8-12

Subject

Express opposition to SB 42 (Corbett-D-San Leandro) – Coastal resources: seawater intakes

Description

Senate Bill 42 would ban open seawater intakes for once-through cooling at power plants and prohibit seawater desalination projects from using open seawater intakes unless a state agency makes certain findings. Several planned or proposed seawater desalination projects in Metropolitan's service area could be affected by the bill (Attachment 1). The bill would also impose a fee on each gallon of seawater collected through an open seawater intake. The bill takes an overly conservative approach to protecting marine life that appears to give little consideration to technological advances. Staff recommends the Board express opposition to SB 42, because the bill has no provisions for new technologies. The bill would also preempt the current State Water Resources Control Board's administrative process to develop appropriate regulations.

Background

Intake systems are essential and potentially costly components of seawater desalination facilities. Some proposed seawater desalination projects in Metropolitan's service area are being sited adjacent to coastal power plants to take advantage of existing seawater intakes used for cooling. Alternative intake systems such as beach wells or subsurface infiltration galleries are being considered by some agencies at geologically favorable locations.

Open seawater intakes are currently regulated by state Regional Water Quality Control Boards to protect marine life under the authority of the federal Clean Water Act and state Porter Cologne Act. The State Water Resources Control Board is in the process of updating statewide policy that all Regional Boards would enforce. As a result of litigation currently pending before the federal courts (*Riverkeeper v. EPA*), the U.S. Environmental Protection Agency suspended a set of regulations implementing Section 316(b) of the federal Clean Water Act regarding open water intakes for power plant cooling. The federal Clean Water Act sets the minimum requirements for state regulations to follow.

SB 42 Provisions

The requirements of SB 42 (Attachment 2) would supersede the suspended federal regulations in California. State agencies would be prohibited from approving use of a new, existing, or expanded open seawater intake for seawater desalination unless the agencies make certain findings after a public hearing. The key findings, not yet specified in the bill, would have to be supported by substantial evidence. The bill would also impose an unspecified fee on every gallon of seawater withdrawn by an open seawater intake. Proceeds from the fee would be used to fund environmental mitigation and power plant retrofit projects.

The bill defines open ocean intakes as any intake structure resting above the ocean floor regardless of design. It is unclear if the legislation applies to bays and estuaries with fluctuating tidally-induced salt gradients.

Analysis

Staff recommends the Board express opposition to SB 42 in order to support local seawater desalination projects that would use state-of-the-art seawater intake designs to protect marine life. The bill's yet unspecified conditions for seawater desalination could preclude use of new intake technologies such as wedge-wire screens and other

passive screening mechanisms for use in above-surface intakes. Desalination plants in other countries such as Australia and Japan are demonstrating improved sea life protection through the operation of specially designed intake structures. Member agencies are investigating these technologies in order to minimize potential environmental impacts. Under existing practice, California agencies with approval authority are already being attentive to sea life protection through highly visible public workshops and hearings. The fee imposed by the bill would also increase the per-acre-foot cost for seawater desalination projects that would use open seawater intakes. Water supply organizations currently opposing this bill include the San Diego County Water Authority, West Basin Municipal Water District, Association of California Water Agencies, and California Municipal Utilities Association.

As an alternative, the Board may wish to adopt an oppose unless amended position. For example, the legislation could provide for case-specific exceptions if a Regional Board determines new technologies are available for a particular site that meet performance criteria set forth in applicable federal regulations (currently suspended by the Supreme Court). By developing a set of findings seawater desalination projects must meet in order to use open seawater intakes, SB 42 could foreclose application of performance-based criteria that EPA may enact in the wake of the Supreme Court's decision. In addition, the Board may wish to recommend that the author hold the bill pending the federal courts' final determinations in the *Riverkeeper* case.

Policy

By Minute Item 46491, dated December 13, 2005, the Board adopted the CEQA determination and approved Metropolitan's role of regional facilitator to address seawater desalination and other local projects.

By Minute Item 44578, dated August 20, 2001, the Board approved the Seawater Desalination Program and administrative guidelines.

By Minute Item 44356, dated February 13, 2001, the Board adopted updated policy principles for brackish water and seawater desalination.

California Environmental Quality Act (CEQA)

CEQA determination for Options #1 and 2:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, where it can be seen with certainty that there is no possibility that the proposed action in question may have a significant effect on the environment, the proposed action is not subject to CEQA (Section 15061(b)(3) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not subject to CEQA pursuant to Sections 15378(b)(2) and 15061(b)(3) of the State CEQA Guidelines.

CEQA determination for Option #3:

None required

Board Options

Option #1

Adopt the CEQA determination and express an oppose position on SB 42.

Fiscal Impact: No fiscal impact to Metropolitan

Business Analysis: Expressing an oppose position on SB 42 may preserve member agency options for using open seawater intakes and help meet the region's goal of 150,000 acre-feet of seawater desalination by 2025.

Option #2

Adopt the CEQA determination and oppose SB 42 unless amended

Fiscal Impact: No fiscal impact to Metropolitan

Business Analysis: Expressing an oppose unless amended position on SB 42 may preserve member agency options for using open ocean intakes.

Option #3

Do not take a position on SB 42.

Fiscal Impact: No fiscal impact to Metropolitan

Business Analysis: If SB 42 passes as proposed, the region's ability to meet the Integrated Resources Plan goal of 150,000 acre-feet of new seawater desalination supplies could be impaired, and Metropolitan could need to find other new supply alternatives.

Staff Recommendation

Option #1



Linda Waade
Deputy General Manager, External Affairs

4/7/2009

Date



Jeffrey Kightlinger
General Manager

4/7/2009

Date

Attachment 1 – Seawater Desalination Projects in Metropolitan's Service Area

Attachment 2 – Amended Senate Bill 42

BLA #6638

Seawater Desalination Projects in Metropolitan’s Service Area

Metropolitan’s Integrated Resources Plan calls for the development of 150,000 acre-feet of seawater desalination as part of the region’s water resource portfolio. Metropolitan supports the development of seawater desalination with incentives of up to \$250 per acre-foot for projects within Metropolitan’s Seawater Desalination Program, and through regional facilitation of regulatory and permitting issues in partnership with the member agencies.

The following table summarizes the status of seawater desalination projects in Metropolitan’s service area, and whether they would be affected by SB 42.

Projects within Metropolitan’s Seawater Desalination Program

| Project | Member Agency Service Area | Acre-Feet | Status | Affected by SB 42 |
|---|---|-----------|----------------------------|-------------------|
| Long Beach Seawater Desalination Project | Long Beach | 10,000 | Pilot study | No |
| Los Angeles Seawater Desalination Project | Los Angeles Department of Water and Power | 28,000 | On hold | Yes |
| South Orange County Seawater Desalination Project | Municipal Water District of Orange County | 28,000 | Pilot study | No |
| Carlsbad Seawater Desalination Project | San Diego County Water Authority | 56,000 | Permitting nearly complete | Yes |
| West Basin Seawater Desalination Project | West Basin Municipal Water District | 20,000 | Pilot study | Yes |

Other Potential Seawater Desalination Projects in Metropolitan’s Service Area

| Project | Member Agency Service Area | Acre-Feet | Status | Affected by SB 42 |
|--|---|-------------------|-------------------|-------------------|
| Huntington Beach Seawater Desalination Project | Municipal Water District of Orange County | 56,000 | Permitting | Yes |
| Camp Pendleton Seawater Desalination Project Feasibility Study | San Diego County Water Authority | 56,000 to 168,000 | Feasibility study | Possibly |
| South San Diego County Seawater Desalination Feasibility Study | San Diego County Water Authority | 28,000 to 56,000 | Feasibility study | Possibly |

AMENDED IN SENATE MARCH 18, 2009

SENATE BILL

No. 42

Introduced by Senator Corbett

January 6, 2009

An act to add Division 20.6 (commencing with Section 30970) to the Public Resources Code, relating to coastal resources, ~~and making an appropriation therefor.~~

LEGISLATIVE COUNSEL'S DIGEST

SB 42, as amended, Corbett. Coastal resources: seawater intake.

(1) Under the Warren-Alquist State Energy Resources Conservation and Development Act, the State Energy Resources Conservation and Development Commission (energy commission) has the exclusive authority to certify a site for the construction of a new thermal powerplant or the modification of an existing thermal powerplant and related facilities.

The California Coastal Act of 1976 provides for the planning and regulation of development, under a coastal development permit process, within the coastal zone, as defined. The act regulates various types of developments within the coastal zone, including industrial developments and thermal electric generating plants.

This bill would prohibit a state agency, as defined, from authorizing, approving, or certifying a new powerplant or industrial facility, as defined, that uses ~~an open-ocean intake~~ *once-through cooling*, as defined, ~~a new open-ocean intake~~, or the expansion of an existing open-ocean *seawater intake at a powerplant that uses a once-through cooling system unless necessary to connect to an alternative system*. The bill ~~also~~ would, on and after January 1, 2015, prohibit a powerplant from using once-through cooling, as defined. *The bill would also prohibit a state*

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agency from authorizing, approving, or certifying the use of a new, expanded, or existing open seawater intake for the purpose of desalination, unless certain findings are made during a public hearing. The bill would require the State Water Resources Control Board (state board) to adopt and implement a schedule to phase out once-through cooling at all powerplants other than those specified. The bill would also require each regional water board to review and issue a powerplant's national pollutant discharge elimination system (NPDES) permit for its once-through cooling system within 6 months of the expiration of that permit.

(2) Under existing law, the ~~State Water Resources Control Board (state board)~~ state board and the 9 California regional water quality control boards regulate water quality in accordance with the Porter-Cologne Water Quality Control Act (act) and the federal Clean Water Act. Under the act, the state board is required to adopt specified state policies with respect to water quality as it relates to the coastal marine environment, including a policy requiring coastal powerplants and other industrial installations using seawater for cooling, heating, or industrial processing to use the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life.

Existing law establishes the State Coastal Conservancy in the *Natural Resources Agency* and authorizes the conservancy to acquire, manage, direct the management of, and conserve specified coastal lands and wetlands in the state. Existing law establishes the Coastal Trust Fund (*fund*) in the State Treasury to receive and disburse funds paid to the conservancy in trust. Existing law authorizes the conservancy to expend the moneys in the fund for purposes of the San Francisco Bay Area Conservancy Program and for other specified purposes.

This bill would require, ~~from January 1, 2011, to December 31, 2014,~~ a powerplant that uses once-through cooling, as defined, to pay a specified fee. *The bill would also require an industrial facility that uses open seawater intake to pay a fee.* The bill would require the state board to collect the fee and to deposit the revenues from the fee in the Marine Life Restoration Account, which the bill would establish in the fund. The bill would require the conservancy to administer the account and ~~would continuously appropriate the moneys in the account~~ *expend the money in the account only upon appropriation by the Legislature* to the conservancy and the state board to reimburse their costs of administering the fee, and to the conservancy for specified projects and activities that

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address the impacts of once-through cooling processes, ~~thereby making an appropriation~~, and to the state board to provide grants to powerplants currently using once-through cooling, as specified.

Vote: majority. Appropriation: ~~yes~~-no. Fiscal committee: yes. State-mandated local program: no.

The people of the State of California do enact as follows:

- 1 SECTION 1. The Legislature finds and declares all of the
- 2 following:
- 3 (a) Nineteen coastal powerplants located in California use
- 4 once-through cooling water intake systems. The majority of those
- 5 powerplants are located on bays and estuaries where there are
- 6 sensitive fish nurseries and populations of many important species,
- 7 including species important to the commercial and recreational
- 8 fishing industries.
- 9 (b) Coastal powerplants in California collectively withdraw up
- 10 to 16.3 billion gallons of water per day.
- 11 (c) The United States Environmental Protection Agency has
- 12 determined that there are multiple undesirable and unacceptable
- 13 environmental impacts associated with once-through cooling
- 14 technology.
- 15 (d) The Ocean Protection Council and the State Lands
- 16 Commission have passed resolutions expressing concern about
- 17 the devastating impacts of the once-through cooling process on
- 18 California's aquatic ecosystems and calling for *an* expeditious
- 19 ~~phaseout~~ *phasing out* of once-through cooling systems.
- 20 (e) Various studies have documented the harm caused by
- 21 once-through cooling processes, and it is estimated that
- 22 once-through cooling systems kill over 79 billion fish and other
- 23 marine organisms annually in California waters.
- 24 (f) Once-through cooling systems needlessly kill fish, larvae,
- 25 plankton, and other marine organisms as they are drawn into
- 26 once-through cooling water intake structures. Once-through cooling
- 27 systems also kill larger marine species such as sea lions, seals, and
- 28 turtles as they become trapped by those structures.
- 29 (g) In enclosed bays and estuaries, such as Alamitos, Santa
- 30 Monica, San Diego, and Elkhorn Slough, the environmental harm
- 31 of once-through cooling systems is often more pronounced due to

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1 the cumulative impacts caused by the concentration of several
2 powerplants in biologically critical areas.

3 (h) The environmental devastation caused by once-through
4 cooling systems is counterproductive to the California Ocean
5 Protection Act (Division 25 (commencing with Section 35500) of
6 the Public Resources Code), the Marine Life Protection Act
7 (Chapter 10.5 (commencing with Section 2850) of Division 3 of
8 the Fish and Game Code), and other state efforts to ensure healthy
9 aquatic ecosystems and productive fisheries.

10 (i) Steam boiler plants using once-through cooling systems tend
11 to be less efficient and have higher rates of greenhouse gas
12 emissions than new generation sources.

13 (j) Protection of marine life in California's coastal waters,
14 ~~prompt phaseout~~ *phasing out* of once-through cooling systems,
15 and restoration of damage caused to California's aquatic
16 environment ~~is~~ *are* in the best interest of the state.

17 SEC. 2. Division 20.6 (commencing with Section 30970) is
18 added to the Public Resources Code, to read:

19

20 DIVISION 20.6. SEAWATER INTAKE

21

22 CHAPTER 1. DEFINITIONS

23

24 30970. The following definitions govern the interpretation of
25 this division:

26 (a) "Account" means the Marine Life Restoration Account
27 established pursuant to subdivision (c) of Section 30972.

28 (b) "*Capacity utilization rate*" means the ratio between the
29 average annual net generation of power, in megawatthours, and
30 the total net capability of the facility to generate power, in
31 megawatts, multiplied by the number of hours during the year.

32 ~~(b)~~

33 (c) "Conservancy" means the State Coastal Conservancy
34 established pursuant to Section 31100.

35 ~~(e)~~

36 (d) "Fund" means the Coastal Trust Fund established pursuant
37 to subdivision (a) of Section 31012.

38 ~~(d)~~

39 (e) "Industrial facility" includes, but is not limited to, a
40 desalination facility. "Industrial facility" does not include a

1 scientific research facility or a recreational facility, *such as an*
2 *aquarium.*

3 (e)

4 (f) “Once-through cooling” means a system that uses an open
5 ~~ocean~~ *seawater* intake to pump seawater from an ocean, *estuary*,
6 or bay and then discharges the water after only one cycle of
7 cooling.

8 (f)

9 (g) “Open ~~ocean~~ *seawater* intake” means a conduit for seawater
10 intake that is above the seafloor. “Open ~~ocean~~ *seawater* intake”
11 does not include a well, gallery, or any other subseafloor seawater
12 intake.

13 (g)

14 (h) “Powerplant” means an electrical generating facility,
15 including a nuclear thermal powerplant.

16 (h)

17 (i) “Seawater” means saltwater that resides in the ocean, *an*
18 *estuary*, or a bay within the waters of the state.

19 (i)

20 (j) “State agency” means the state or any agency or department
21 of the state.

22 (j)

23 (k) “State board” means the State Water Resources Control
24 Board established pursuant to Section 175 of the Water Code.

25

26 CHAPTER 2. OPEN ~~OCEAN~~ SEAWATER INTAKE

27

28 30971. Notwithstanding any other provision of law, a state
29 agency shall not authorize, approve, or certify any of the following:

30 (a) A new powerplant or a new industrial facility that first
31 commences operation on and after January 1, 2010, if that
32 powerplant or industrial facility would use ~~an open ocean~~ intake.

33 ~~(b) A new open ocean intake that first commences operation on~~
34 ~~and after January 1, 2010.~~

35 ~~(c) The expansion of an existing open ocean intake.~~
36 ~~once-through cooling.~~

37 (b) *The expansion of an existing open seawater intake at a*
38 *powerplant, unless the expansion is necessary to convert a*
39 *once-through cooling system to an alternative cooling system.*

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1 30971.1. A state agency shall not authorize, approve, or certify
2 the use of a new, expanded, or existing open seawater intake for
3 the purpose of desalination unless it has made, during a public
4 hearing, supported by substantial evidence in the record, the
5 following findings: ____.

6 ~~30971.5. (a) On and after January 1, 2015, a powerplant shall~~
7 ~~not use a once-through cooling system that uses an open ocean~~
8 ~~intake.~~

9 ~~(b) An open ocean intake, the use of which is prohibited pursuant~~
10 ~~to subdivision (a), shall not be used for any other purpose,~~
11 ~~including desalination.~~

12 30971.5. (a) On and after January 1, 2015, a powerplant with
13 an average annual capacity utilization rate of 20 percent or less
14 from the year 2006 to the year 2008, inclusive, shall not use a
15 once-through cooling system.

16 (b) The state board shall expeditiously, and no later than March
17 1, 2010, adopt and implement a schedule to phase out once-through
18 cooling at all powerplants other than those described in subdivision
19 (a).

20 (c) Each regional water board shall review and reissue a
21 powerplant's national pollutant discharge elimination system
22 (NPDES) permit for that powerplant's once-through cooling system
23 within six months of the expiration of that permit, or by July 1,
24 2010, for those permits expired as of January 1, 2010. The permit
25 shall address only the following:

26 (1) The use of open seawater intake for cooling purposes by a
27 powerplant.

28 (2) The incorporation of the phaseout dates for once-through
29 cooling pursuant to this section.

30 (3) The full implementation of cooling water intake structure
31 requirements in Section 316(b) of the federal Clean Water Act (33
32 U.S.C. Sec. 1344 et. seq.), as that section read on October 18,
33 1972, and consistent with the best professional judgment of the
34 regional water boards, until applicable final regulations are
35 adopted and implemented by the United States Environmental
36 Protection Agency.

CHAPTER 3. SEAWATER INTAKE FEE

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~~30972. (a) From January 1, 2011, to December 31, 2014, inclusive, each~~ Each operator of a powerplant or industrial facility using a once-through cooling system shall pay to the state board a fee that is based on the amount of seawater, as determined by the state board, that is removed by the powerplant or industrial facility for purposes of once-through cooling.

(b) An industrial facility, approved by a state agency after January 1, 2010, using an open seawater intake shall pay to the state board a fee that is based on the amount of seawater, as determined by the state board, that is removed by that facility's open seawater intake.

~~(b)~~
(c) The fee for seawater taken by an open seawater intake or used for once-through cooling shall be—fifteen one-hundred-thousandths dollars (\$0.000015) _____ (\$_____) per gallon.

~~(e)~~
(d) The state board shall collect the fee in a manner determined by the state board and, after payment of its administrative costs of collection, deposit the revenue from the fee in the Marine Life Restoration Account, which is hereby created in the fund.

(e) The fees required pursuant to this division shall not be considered as a mitigation for the impact associated with once-through cooling or open seawater intake, and shall not diminish an obligation to account for or mitigate the impact pursuant to any other law.

30973. (a) The account shall be administered by the conservancy.

~~(b) Notwithstanding Section 13340 of the Government Code, the~~ The moneys in the account are continuously appropriated, without regard to fiscal year, shall be expended, only upon appropriation by the Legislature in the annual Budget Act, as follows:

- ~~(1) To~~ By the conservancy and the state board, to reimburse the costs of administration and implementation of this division.
- ~~(2) To~~ By the conservancy, for direct expenditure and award of grants for projects and activities, as authorized by the Ocean Protection Council, that address the negative impacts of

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1 once-through cooling systems on the mortality of all forms of
2 marine life and marine habitat.

3 *(3) By the state board to provide grants to powerplants currently*
4 *using once-through cooling if the powerplant can certify that it is*
5 *repowering for more efficient, cleaner generating equipment that*
6 *does not use once-through cooling.*

O