

# THE R4RD NEWSLETTER

## Residents for Responsible Desalination

P.O. Box 5422, Huntington Beach, CA 92615-5422

[www.r4rd.org](http://www.r4rd.org)

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Issue VII

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### R4RD's Mission

#### Educate

the public about seawater desalination;

#### Protect

local control of vital water resources;

#### Advocate

the use of technology and practices that avoid environmental and human health impacts; and,

#### Promote

environmentally preferable alternatives to desalination, such as water conservation, reclamation, retention, and recycling.

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## SIERRA CLUB'S CALIFORNIA COAST GREAT COASTAL PLACES CAMPAIGN

Residents for Responsible Desalination (R4RD) is proud to announce its selection to the **Sierra Club's Great Coastal Places Campaign**. R4RD will be among the network of activist organizations working to protect California's threatened coast for future generations.

California's coast is many things to many people. For some it's a relaxing getaway, a quiet place to take walks, watch the surf, or explore tide pools. For others, it's a place to swim or surf, picnic on the beach with friends and family, play volleyball or fly a kite. California's coast is also a habitat for countless species of marine plants and animals and shorebirds.

Nonetheless, there is little doubt that our coastal places, used by us and the shore and sea creatures, are under siege from the insidious influence of the growth and development industries. Irresponsible seawater desalination is the *poster child*, so to speak, of this threatening siege.

### ***An open letter from Mark Massara, Sierra Club Coastal Program Director:***

"The spectacular California coast is a great place to play, exercise, spend time with family, or seek solace from our urban lives. It's also a vital, yet fragile, habitat that supports endangered species. Unfortunately, our coast is threatened by a constant barrage of proposals to build mansions, subdivisions, golf courses, seawalls and giant commercial venues. (Read "No Day at the Beach: How the Bush Administration is Eroding Coastal Protection.") [[www.sierraclub.org/coastalreport/](http://www.sierraclub.org/coastalreport/)]

"The California Coastal Commission's job is to protect the California coastline—and to review about 1,000 development proposals each year. We at the Sierra Club are asking for something more: Instead of reacting to each development proposal, we want the Coastal Commission to set aside and permanently protect California's unique coastal places—places like the Gaviota Coast, San Simeon Point, Big Sur and other areas.

"From the smallest wetland to the most popular swimming beach, with so much of California's coastline developed, we need to do our part to save what's left. We've had some victories, but we need your help. Join the Sierra Club Great Coastal Places Campaign and do your part to protect our beautiful, yet vulnerable coast." [To join, go to [www.sierraclub.org/ca/coasts/index.asp](http://www.sierraclub.org/ca/coasts/index.asp) and click on "Join the Great Coastal Places Campaign" at the lower-center of the page.]

*Mark Massara*, Director of Coastal Programs

[mark.massara@sierraclub.org](mailto:mark.massara@sierraclub.org)

# PUBLIC INVOLVEMENT USUALLY LEADS TO BETTER ENVIRONMENTAL DECISION MAKING; REPORT OFFERS GUIDANCE TO FEDERAL AGENCIES ON PUBLIC PARTICIPATION

Source: The National Academy of Sciences Press Release dated August 22, 2008

WASHINGTON D.C.-- When done correctly, public participation improves the quality of federal agencies' decisions about the environment, says a new report from the National Research Council. Well-managed public involvement also increases the legitimacy of decisions in the eyes of those affected by them, which makes it more likely that the decisions will be implemented effectively. Agencies should recognize public participation as valuable to their objectives, not just as a formality required by the law, the report says. It details principles and approaches agencies can use to successfully involve the public.

In response to legislation and pressure from citizens' groups over the last three decades, federal agencies have taken steps to include the public in a wide range of environmental decisions, such as how best to clean up Superfund sites or manage federal forest lands. Although some form of public participation is often required by law, agencies usually have broad discretion about the extent of that involvement. Approaches vary widely, from holding public information-gathering meetings to forming advisory groups to actively including citizens in making and implementing decisions.

Proponents of public participation argue that those who must live with the outcome of an environmental decision should have some influence on it. Critics maintain that public participation slows decision-making and can lower its quality by including people unfamiliar with the science involved. The U.S. Environmental Protection Agency, Food and Drug Administration, and departments of

Energy and Agriculture asked the Research Council to assess whether public participation achieves desirable outcomes, and under what conditions.

Substantial evidence indicates that public participation is more likely to improve than to undermine the quality of decisions, the report says. Although scientists are usually in the best position to analyze the effects of environmental processes and actions, good analysis often requires information about local conditions, which is most likely to come from residents. Moreover, public values and concerns are important to frame the scientific questions asked, to ensure that the analyses address all of the issues relevant to those affected.

Studies show that public participation also tends to increase the legitimacy of agency decisions, which in turn raises the likelihood that they can be implemented effectively and efficiently. And the process itself builds citizens' knowledge of the scientific aspects of environmental issues, which increases their ability to engage in future decisions.

The report recommends ways agencies can manage public participation effectively. A key factor in having a good outcome is matching the process to the context; there is no one right way to design public participation for all environmental issues. An agency should make clear at the outset how it intends to use the public's input, and should commit adequate staff and resources to public participation efforts. And agencies and the public should collaborate to identify difficulties that might arise during the participatory process, select ways to

address them, monitor the results, and adjust procedures as needed.

To ensure the quality of the science, the report recommends independent review of official analyses by outside experts who are credible to the parties involved. The process should also allow for the reconsideration of past conclusions in light of new information and analysis.

In some cases, efforts to involve the public have made matters worse, the report notes. Some participatory processes have functioned as a tactic to divert the public's energy away from criticism and into activities considered safe by an agency. This use of public participation, which ignores conflicts on important issues, is counterproductive in the long run, the report says. And participation convened as a superficial formality or without adequate support by decision makers increases public distrust of government.

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The report was sponsored by the **U.S. Environmental Protection Agency, U.S. Department of Energy, Food and Drug Administration, and the U.S. Department of Agriculture.**

The National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council make up the National Academies. They are private, nonprofit institutions that provide science, technology, and health policy advice under a congressional charter. The Research Council is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering.

# IT'S *NOT* "ONLY SALT," VIRGINIA – IT'S HYPERSALINITY!

BY DAVE HAMILTON

**Suppose** my fictional company, *Neptune Priceless Water LLC*, has a permit from the Huntington Beach City Council to dump over **five tons-per-minute** of sea-salts (and "other" by-products) off the end of the Huntington Beach pier. The salts and "other" by-products would be produced as waste from ocean-water desalting processes at Neptune's very local "Water Treatment" plant.

**Five tons of salt per minute** is a lot of salt. To carry that volume of salt to its dump-off point at pier's-end would require a hefty, industrial conveyor system to transport this massive quantity of waste material, day-in and day-out. The permit would allow such dumping of five tons of waste salts every minute, of every hour, of every day—365 days of every year, for 30 years, into Huntington Beach's shallow coastal ocean waters at **a single point!** Five tons-per-minute is 7,250 tons-per-day, 2,646,000 tons-per-year, totaling 79,388,000 tons over 30 years! The marine life and the coastal environment would have to contend with the resulting hypersalinity at pier's-end.

*Neptune Priceless Water, LLC* got its permit after very contentious public hearings in which it, after spending a few million dollars on a public relations (PR) blitz, was able to convince four of seven City Council members that those who opposed Neptune's project were just a bunch of NIMBYs and overwrought, hand-wringing environmentalists. The PR blitz also convinced the same Four members that they, and only they, knew what was best for Huntington Beach's coastal environment. These woefully science-challenged Four were also convinced that dumping very large amounts of waste by-products off-shore could not possibly be harmful, regardless of the testimony of marine biologists. The marine biologists predicted a hypersaline plume would develop that would kill sea-floor dwellers.

"But it's only salt," the Four would say.

**"Absurd!" you say, "the HB City Council would never issue such a permit."**

Well, it most assuredly did just that! The permit was granted to Poseidon Resources, LLC in February 2006 to build and operate a desalination plant to produce 50,000,000 gallons-per-day of potable water and dump its waste by-products at a single point, 1200 feet offshore. The only difference being that the fictitious Neptune's visible industrial conveyor system is replaced by the very real Poseidon Resources' large, underwater discharge pipe.

**"The figure of five tons-per-minute must be an exaggeration," you say? Follow my arithmetic:**

To produce 50 Million gallons-per-day (MG/D) of fresh water from seawater, you must start with approximately 51.8 MG/D of Pacific Ocean water.

The Pacific Ocean coastal water contains a close average of 3.5% dissolved salts, by weight, and a wee bit more by volume. 51.8 Million gallons of seawater weighs about 414.4 Million pounds or 207,200 Tons. 3.5% of that 414.4 Million pounds is 14,504,000 pounds or 7,252 Tons of salts. Dividing that number by 24 (hours), then again by 60 (minutes) gives you **5.035 Tons-per-minute**. Poseidon's production of 50 MG/D of fresh water appears rather innocuous on the surface until you realize it also means they're disposing of 5 tons of by-products every minute, of every day, 365 days a year, for 30 years.

## **Somewhat of a PR slight-of-hand**

Poseidon claims this 5 tons-per-minute of waste by-product will be discharged in the form of a concentrated brine solution. The concentrated brine would be further diluted with 100-to-150 MG/D of additional seawater to lessen the harmful effects on marine life. Supposedly. Poseidon's PR blitz made it appear that, through dilution, the waste by-products would somehow disappear.

Regardless of how Poseidon tries to mask it, the fact of the matter is 5 Tons-per-minute of salts and "other" by-products produced from desalting 50 MG/D of seawater will be dumped at a single point on the sea floor, 1200 feet offshore in shallow water. That's 5 Tons-per-minute, of every hour, of every day, for the 30-year lifespan of what Poseidon euphemistically calls its "Huntington Beach Water Treatment Facility." Little wonder why Poseidon fought so hard against salinity standards set by the Regional Water Quality Control Boards.

R4RD, the Surfrider Foundation, the O.C. Coast-keeper, the Sierra Club, and Food & Water Watch didn't fall for Poseidon's verbal parlor trick. The 5 Tons-per-minute of waste salts emanating from the Poseidon plant will, in short order, create a perpetual plume of hypersaline coastal water. This hypersaline plume will drift on long-shore currents, infecting Huntington Beach's coastline from the Santa Ana River to the sea-entrance of Huntington Harbor, including the Bolsa Chica Ecological Reserve.

**It's *not* "only salt," Virginia – it's hypersalinity.**

# HIGH COURT CASE TESTS POWER PLANTS' WATER RULES

TRANSCRIBED FROM AN NPR REPORT BY NINA TOTENBERG

*NPR Morning Edition, Dec. 2, 2008* · The U.S. Supreme Court hears an important environmental case Tuesday [12/02/08], testing whether utilities must use the best technology available to minimize harm to the nation's waterways. At issue is the physical impact on fish and the financial impact on companies.

The nation's 550 power plants use water—lots of water in some instances—that comes from lakes and rivers. Each day, more than 214 billion gallons of water is sucked into power plants across the country. That's tens of trillions of gallons each year. The water cools the steam used in the electric generating process. And all the fish and aquatic organisms in the water are killed in the process.

**In modern plants, little or no water is needed.** Instead, the cooling is done with air, or sometimes with a different water system that uses small amounts of water and recycles it. The question in this case involves whether older plants must install new technology to minimize the harm to the nation's lakes and rivers.

The companies say installing the best technology is too expensive—the Bush Administration adopted a rule that would allow utilities to get a variance from the Environmental Protection Agency if they can show that the cost of complying is greater than the environmental benefits. Environmentalists contend that Congress specifically rejected the cost-benefit approach because

Congress itself concluded the costs were worth the benefits to the environment. Opponents also say a case-by-case cost-benefit analysis would be too prone to manipulation.

"The Clean Water Act doesn't fare well if it becomes a cost-benefit statute," says Georgetown University law professor Lisa Heinzerling. "Lots of fish aren't really worth that much when it comes down to trying to put a dollar value on them."

Six states and environmental groups challenged the Bush administration's approach, contending that the language of the statute requiring the best technology available is clear and unequivocal. They won in the lower courts, and the utilities appealed to the Supreme Court. The states point out that the utility plants sit on state lakes and rivers and use their water for free. In Rhode Island, for example, the Brayton utility plant takes in a billion gallons of water a day; **"killing every living thing in the water,"** says state Assistant Attorney General Tricia Jedele. "Our fin-fish and winter flounder populations have collapsed, and we've lost a viable commercial and recreational fishing resource that has been used by Rhode Islanders for millennia," Jedele says.

Environmental lawyer Reid Super adds that utility plants are enormously profitable. **"The company never said it couldn't afford it," Super says. "They just said they didn't want to do it."** But the utilities counter that Congress never intended to

impose new technology costs on the industry without weighing costs against benefits.

Carter Phillips, an attorney who represents a number of utilities, says, "If you don't have at least some cost-benefit analysis that's incorporated into this approach, the possibility of having to spend literally hundreds of millions of dollars to save a handful of fish strikes me as palpably absurd." If you say no cost-benefit analysis is appropriate, he adds, "then you end up with this wildly out-of-sync regulatory scheme." Phillips contends that weighing costs and benefits is something federal and state agencies do every day, and he thinks a Democratic Obama administration may weigh costs and benefits quite differently than the Bush administration did.

"Who's running the EPA may make a big difference in terms of what the cost-benefit analysis is going to look like," Phillips says.

So, if the standards for measuring costs and benefits are going to change anyway with a new administration, does it matter what the Supreme Court says in the case? **You bet it does.**

For more than a quarter-century, industry has tried to put a cost-benefit overlay on environmental regulations. In the past, that effort has often become a cropper in the courts. Now, with the Supreme Court's new conservative composition, industry thinks it has a good shot at winning—and winning in a way that will affect all environmental regulations.

## **MESSAGE FROM R4RD's PRESIDENT**

With the distractions of the election year over, it is time for our community to again focus on the future. Poseidon Resources and its deep-pocketed desalination allies have been busy. Poseidon was “conditionally” permitted to build its desalination plant in Carlsbad, California. The hearing by the California Coastal Commission was a travesty. During testimony by the opposition (e.g. R4RD, Surfrider, Sierra Club, San Diego County Coastkeeper, Food & Water Watch, et al.), the Commissioners were busy on their cell phones, or talking to folks seated behind them, or chatting with Poseidon attorneys. The Commissioners were generally disinterested in listening or paying attention to any arguments against the desalination proposal—even those of the Coastal Commission’s own staff.

Since its “conditional” approval for the Carlsbad plant, Poseidon Resources has filed its fourth application with the Coastal Commission for its proposal in Huntington Beach. As R4RD predicted, Poseidon is using the permitting of Carlsbad to try to circumvent requests for information and data from the Commission staff. Carlsbad sets *no* precedent—period! But we will have to fight against this tactic, particularly with the current seating of this Commission. This group of Commissioners has seen few bad batches of black top!

### **R4RD Takes Action:**

In 2006, Residents for Responsible Desalination (R4RD) submitted an appeal to the California Coastal Commission which contended that the City of Huntington Beach violated its own Local Coastal Program (LCP) and the state Coastal Act by granting the CDP to Poseidon. The Commission has agreed unanimously that the appeal has substance and merits formal hearings. That appeal has yet to be heard. Surfrider Foundation and O.C. Coastkeeper have filed similar appeals, which received rulings of merit with the same unanimity from the Coastal Commission. Likewise, their appeals have yet to be heard.

R4RD continues to send representatives to Coastal Commission hearings, State Lands Commission hearings, and environmental meetings up and down the coast to press our issue of responsible desalination. We have sponsored town hall meetings, produced a video for our local television station, published quarterly newsletters, offered testimony at public hearings, and are now ready to publish our own brochure. We have come a long, long way!

### **R4RD needs your help.**

Do you know how many people still think Poseidon is a thing of the past? Or, that the H.B. City Council and the Coastal Commission rejected the plan? *Most* people answer ‘Yes’ to either or both questions. We must continue our efforts to educate the public. R4RD has formed important coalitions with Surfrider, Sierra Club, Environment Now, Huntington Beach Tomorrow, Food & Water Watch, along with other environmental groups. However, our most important “coalition” is with our community. That’s you.

### **Your contribution makes a difference!**

For the sake of a better community and to protect our ocean and precious coastline, join R4RD and/or make a tax-deductible donation by the end of this year. The challenge is before all of us. We want and need your involvement. In fact, we cannot do it without your support.

Sincerely,

*Merle Moshiri*, President

# **SEAWATER DESALINATION INTAKES: WHAT'S THE RULE?**

**BY JOE GEEVER, CA POLICY COORDINATOR, SURFRIDER FOUNDATION**

One major concern of **Residents for Responsible Desalination (R4RD)** has been the preferred type of seawater intake proposed for most seawater desalination facilities. In fact, R4RD and its partners in the **Surfrider Foundation** and other environmental organizations have raised this concern from the very beginning of, and throughout, the public approval and permitting processes. Unfortunately, our requests to local and state agencies to address this concern have been, for the most part, ignored.

## **Using obsolete technology**

From the beginning we have warned that co-locating desalination facilities with coastal power plants to use the “cooling water intakes” as a source for seawater to supply the desalination facility was not sound planning.

The U.S. Environmental Protection Agency (USEPA) was in the midst of major litigation that challenged the “once-through-cooling” processes of coastal and inland power plants. The Clean Water Act mandates the use of “Best Technology Available (BTA)” to minimize aquatic life mortality. There are readily available alternatives to once-through-cooling already being employed by power plants across the nation. So, it was reasonably foreseeable that coastal power plants would be required to phase

out their once-through-cooling systems and retrofit their facilities with “closed-cycle” cooling. “We have repeatedly pointed out that there are practical seawater intake alternatives that eliminate marine life mortality. Our members, and Poseidon, had only to look in Long Beach and Dana Point to see operating examples of “sub-seafloor intakes.”

The prospective desalination providers can't say they weren't warned. About two years ago, the Federal courts ruled on the litigation, which all but prohibited the once-through-cooling practices of power plants. So, the claimed benefits of co-location have all but disappeared.

But this hasn't deterred Poseidon Resources and other desalination project proponents from their plans to utilize the open-ocean intake pipes and pumps of the coastal power generators for their source water.

Now these proponents argue that the rules on power plant cooling-water do not apply to desalination facilities. In effect, the proponents are saying that it doesn't matter that coastal power generators are prohibited from killing marine life—the desalination facility can continue the destruction anyway.

## **Can that be true?**

Isn't there something wrong with a regulatory system that compels one industry (e.g. a power generator) to upgrade its facility to eliminate marine-life mortality,

but simultaneously allows another industry (e.g. desalination) to perpetuate the destruction?

The answer is in California's efforts to protect marine life from all seawater intakes. In California, the law is:

*“For each new or expanded coastal power plant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life”.* **California Water Code, Section 13142.5(b).**

## **What does this mean?**

To R4RD and the Surfrider Foundation, it means that, in California, all seawater intakes are treated equal. It also means that desalination projects need to be located and designed to avoid the intake and mortality of marine life. Even the provision for “feasible mitigation measures” is meant to mitigate the intake and mortality of marine life *before it happens*—not to allow the destruction of marine life and attempt to replace it “after the fact.” That is the rule for cooling water; *and*, that is the only logical interpretation of the California Water Code for desalination intakes.

**(Continued on Page 7)**

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# SEAWATER DESALINATION INTAKES: WHAT'S THE RULE?

(Continued from Page 6)

Again, environmental organizations have repeatedly asked every agency reviewing and permitting these facilities to apply the rule. And again, every agency with a duty to enforce the law has dodged it.

Unfortunately, when government agencies with the duty to restore and protect marine life refuse to enforce the law, or enforce it in a way that is unfairly arbitrary, concerned citizens only have one recourse—a lawsuit! That's where things stand now. **Surfrider Foundation** and the **San Diego Coastkeeper** have filed lawsuits against the California Coastal Commission, the State Lands Commission and the San Diego

Regional Water Quality Control Board. We want an answer!

Many have accused us of interfering with an important water project at a time when freshwater availability has become increasingly limited. Nonsense!

From the beginning we have argued for a responsible approach to seawater desalination and suggested ways to design and locate these facilities in ways to avoid unnecessary environmental degradation.

Furthermore, we have gone the extra mile to research and promote alternatives to seawater desalination that can improve the environment. Local water agencies should fully implement

wastewater recycling, freshwater conservation, and rainwater capture before turning to the most energy-intensive and environmentally destructive alternative.

Believe me, we're not the litigious types. But a healthy coast and ocean environment is too precious to turn our backs on. We hope you agree and will support our efforts to have the courts answer the fundamental question: **"What's the rule?"**

*(About the author: **Joe Geever** is the California Policy Coordinator for The Surfrider Foundation and is based in Playa del Rey, California.)*

## NOTICE TO R4RD MEMBERSHIP

R4RD membership dues (i.e. donations) that are outstanding for R4RD's fiscal year July 1, 2008 through June 30, 2009 are requested. The battle for responsible use of seawater desalting technology in Huntington Beach is about to enter a new phase. This phase will be crucial. It will require both manpower and monetary resources to counter the deep pockets of the multi-national corporate irresponsible desal proponents. You can help by volunteering to attend very important hearings with the State Lands Commission and the Coastal Commission. Also, R4RD requires funds to retain legal services to further its formal appeals before these State Commissions. Your help with these matters will be very much appreciated and of great value to R4RD's cause. Your donations to R4RD are now tax-deductible. Remember to save your canceled checks as the receipt for your donations.

### The R4RD Newsletter

Published quarterly by:

**RESIDENTS FOR RESPONSIBLE DESALINATION**

**Editor:** Dave Hamilton

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Note: R4RD welcomes your articles and letters pertaining to water desalination, sustainable living, conservation, or reclamation. Please include your name, telephone, and e-mail address, if you have one. Important—Please include all applicable attributions, footnotes, and permissions if your submittal is not entirely original.

Submit Articles by the 15<sup>th</sup> day of the months of January, April, July, or October to be considered for the next quarterly publication. **THANK YOU!!**

I want to contribute to or join Residents 4 Responsible Desalination  
to help keep our beaches, air, and ocean clean.

Enclosed is my membership/donation.

\_\_\_\_Renewal      \_\_\_\_New Member

Name: \_\_\_\_\_

\_\_\_\_\$100 Benefactor

Address: \_\_\_\_\_

\_\_\_\_\$50 Honor Roll

City: \_\_\_\_\_ State: \_\_\_\_ Zip: \_\_\_\_\_

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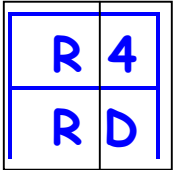
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## Residents for Responsible Desalination

*"Organized for charitable, scientific, and education purposes about desalination of seawater."*

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