WATER FOR ALL

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TOP TEN REASONS TO OPPOSE OCEAN DESALINATION

Ocean desalination – a process that converts seawater into distilled, drinkable water – is being hailed as the solution to water supply problems. Advocates of desalination claim that this technology would create a reliable, long-term water supply while decreasing pressure on other over-drawn water sources. But so far ocean desalination (desal) is more of a speculative promise than actual water. Here are some reasons why communities are thinking twice before embracing this new technology:

1. **It doesn't work.** The main desalination technology being proposed in the United States is reverse osmosis, a process by which highly pressurized saltwater is pushed through tiny membrane filters in order to produce drinkable water. This technology has yet to work on a large scale in this country. Although there are working projects around the world, they have limited environmental requirements and different site conditions that make it feasible. The Tampa Bay desal plant with a potential capacity of 25 million gallons per day (mgd) has cost over $139 million and has never produced water as promised. Originally a private-public partnership, now the public agency is left with the burden of finishing the project and making it work. But despite the lack of a full-scale working model, plants double the size of Tampa Bay are being proposed in California and other places in the country.

2. **It's expensive**. Ocean desalinated water is the most expensive water supply. To produce ocean desal water it costs at least 5 times what conserved water costs. Conservation can be as little as zero for lifestyle changes to $250 per acre-foot, according to the San Diego County Water Authority, while the full costs of implementing ocean desal including infrastructure could be as high as $3,000 per acre-foot. An acre-foot of water is 326,000 gallons, or approximately a third of a million gallons. An acre-foot is approximately enough water for four families of four for one year. The full cost of operation of desal is still being debated since we have no track record with an operating large-scale plant in the U.S. Ocean desal requires multiple subsidies of both water and electricity to try to break even, as well as high upfront construction, and long-term operation and maintenance costs. Some proponents, such as CAL AM's Coastal Water Project in the Monterey area and Elkhorn Slough, are requesting upfront rate increases to provide for construction of the plant before producing any water.

3. **Fisheries and marine environments will be threatened.** Since the 1970's, the fisheries along California's coast have suffered a sharp decline. Estuaries, the breeding grounds for aquatic life and the nurseries for young fish, have been devastated by over-development and both urban and agricultural runoff. As a result, only 5% of California's coastal wetlands and estuaries remain. Ocean desalination will further harm these sensitive coastal areas because 100% of all marine life, in particular fish larvae, will be sucked into the plant with the ocean water and killed. The brine, or highly concentrated seawater, created from the desalination process can also threaten marine life when discharged into the marine environment, especially rocky habitats, such as near Carlsbad, where fish live.

4. Ocean desal promotes environmental and social injustice. Costs would be disproportionately borne by existing low-income communities, both those living near the plant who will not receive the water and those inland whose rates will increase to support the desal plant, while gaining none of the benefits. The remaining low-income communities near the coast are located near industrial sites such as power plants and would be impacted by air pollution and high-priced water, with no improvement of water quality, limited access to the ocean and potential for subsistence fishing.

5. Alternatives abound. A number of water agencies and districts are making great strides in adopting longer term, economical and sustainable management practices in water conservation and reclamation of wastewater. Ocean desalination hides the growing water supply problem instead of focusing on water management and lowering water usage. The Pacific Institute report Waste Not, Want Not; The Potential for Urban Water Conservation in California (www.pacinst.org) found that California can meet its water needs for the next 30 years by implementing off-the-shelf, cost-effective urban water conservation. Ocean desal is an expensive, speculative supply option that will drain resources away from more practical solutions.

6. Privatization is risky. Ocean desalination turns the ocean, a public resource, into a product available to the highest bidder, such as real estate developers, industry and public water agencies for resale. Markets do not take into consideration environmental and social equity concerns such as the basic need for affordable, clean water. Most water utilities and infrastructure have been built using public funds and are publicly owned in order to guarantee the greatest level of stability and accountability to the public. This could be the beginning of the deregulation of water in California after the fiasco of energy deregulation and Enron.

7. Air pollution and wasted energy. Large amounts of energy are needed to force ocean water through the tiny membrane filters at a high pressure. Even with recent technological innovations, energy costs make up between 33 and 50 percent of the plant's operating costs. As energy costs escalate, so too will the cost of desalinated water. Ocean desalination proponents, such as Poseidon Resources, RWE/CAL AM, would like to place ocean desal plants alongside existing coastal power plants - many of which would have been shutdown a long time ago if not for energy deregulation allowing new national and multinational companies to have an interest in perpetuating the power plants. Currently, these power plant generators operate during peak hours whereas ocean desalination plants will run 24-hours a day. These generators already create air pollution that would only worsen with increased use. In addition, this is a violation of the Federal Clean Water Act's 316(b) rule and new Environmental Protection Agency Phase 2 rulings on ocean water intakes.

8. Questionable water quality. A number of public health experts have expressed concern about using ocean water as drinking water and the effect that new contaminants have on water quality. Some of these new contaminants include boron, algal toxins (red tide) and endocrine disrupters, all of which are concentrated through the desalination process. Another concern is that ocean desal draws water from the same ocean that has been used as a dumping area for not fully-treated sewage and storm water runoff. In Huntington Beach, Calif., for example, the partially-treated sewage discharge is dumped close to the intake area for the proposed desalination plant.

9. Overdevelopment of coastlines. In California, ocean desal plants are being proposed to supply water to some of the last remaining open spaces along the coast: Marin County, the Monterey Bay region, Cambria, southern Orange County, and northern San Diego County. These areas currently have limited or no imported water to grow but the introduction of ocean desalination will allow for increased growth and sprawl while potentially limiting access to the beaches. Pushing desalination does not deal with existing problems like beach pollution.

10. Oceans are a common good – not a private commodity. Ocean desalination proponents view the ocean as a vast, untapped resource with unlimited potential to supply drinking water to thirsty populations. New proposals for desalination are popping up every day, despite the fact that very little research has been completed on the environmental, economical and health impacts of this technology, let alone adequate regulations put into place to ensure consumer and environmental protection. Any harm done to the oceans would affect everyone and damage incurred might not be reversible.