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Sierra Club Releases Report on Desalination

Publication Covers the Pros and Cons of Water Desalination

(Austin) – The Lone Star Chapter of the Sierra Club has released a report on brackish and seawater desalination to help decision-makers and the public evaluate the possible role of desalination in addressing future water demands in Texas and elsewhere. ***Desalination: Is It Worth Its Salt?*** describes desalination as **“one tool in the toolbox for meeting water supply needs”** but points out that the **brine disposal, impingement and entrainment of aquatic and marine life, and increased electrical needs are issues of concern with desalination that need to be addressed in deciding whether to undertake a desalination project.** In addition the Sierra Club notes that if desalination is pursued it should be **“part of a comprehensive water supply program that also includes advanced water conservation and effective drought management measures.”**

Desalination is discussed in the Sierra Club report in a series of questions and answers that highlights how the desalination process works, the environmental concerns about desalination, the dollar costs of desalination, and the status of desalination projects in Texas. The report also includes a number of sources and links for further information about desalination.

One of the major environmental concerns about desalination that must be addressed, according to the Sierra Club report, is the disposal of brine and other concentrated material that is left over from the desalination process. The most common brine disposal method used for desalination facilities along the coast is direct discharge to coastal waters. **“Depending upon where the brine is discharged from a seawater desalination plant, the discharge could increase water salinities by as much as 100%,”** notes Ken Kramer, Director of the Lone Star Chapter. **“These increased salinities can have impacts on local marine populations, especially for non-migratory species such as oysters. It is certainly preferable to dispose of the brine into the open ocean than into a bay or estuary although there could be problems with ocean disposal of brine in localized situations.”**

Another environmental as well as economic consideration regarding desalination is the increased electrical demand required by the process. The report estimates that producing enough desalinated water for a person on an annual basis can require a corresponding 20% increase in per capita energy usage. Because electrical costs may comprise up to one half of the total cost of a desalination project, volatility in electrical rates can have a significant impact on the overall project price tag. For example, the report estimates that a 50% increase in electrical rates could increase the cost of water from a desalination facility by at least 25%.



“The large amounts of electricity required for desalination make the process vulnerable to changes in electrical rates,” notes Kramer. **“These high costs underscore the need for a water supplier to implement much more cost-effective water conservation and drought management strategies prior to pursuing desalination projects.”**

Desalination: Is It Worth Its Salt? A Primer on Brackish and Seawater Desalination may be found on the Lone Star Chapter Sierra Club website at <http://www.texas.sierraclub.org/press/Desalination.pdf>. Single copies of the report may be requested by calling 512-477-1729 or writing to Sierra Club, P. O. Box 1931, Austin, TX 78767.

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