

DESALINATION COSTS vs. INTERBASIN WATER TRANSFER

A search of Internet sources produces many examples of real existing major desalination production capacities and cost figures. The Ashkelon plant in Israel claims a record low water production cost of \$0.53 per cubic-meter or \$.002 per gallon. This single plant is capable of producing 110,000,000 cubic meters per year of potable water, which is equivalent to 89,213 acre-feet per year. The first 25 years of the plant operation is covered by contract of 1.5 billion euro (2.06 billion US). A report on the plant gives the total cost of the Asheklon project as \$250 million US. The contract for construction was awarded in September of 2003 and the construction was completed in August of 2005.

Based on the above figures, eleven such plants would produce 1,000,000-acre -feet of water per year at a cost of \$2.75 billion US.

The November issue of Texas Fish & Game reported that the LCRA and Guadalupe Blanco River Authorities claim that desalination is price prohibitive and costs range from \$750 to \$1000 per acre-foot. Using the river authority figures, the cost per gallon ranges between \$.002 and \$.003, corroborating the claimed cost per gallon of the Ashekelon project mentioned above.

The **REGION H WATER MANAGEMENT STRATEGY ANALYSIS TECNICAL MEMORANDUM with Strategy Title: East Texas Water Transfer, 2/22/05** details planning and cost estimates for transfer of surface water from the Sabine and Neches Basins to the Trinity Basin to accommodate the Houston / Conroe metropolis. The total cost estimated for transfer of Sabine water is given as \$568,428,000 and the cost for transfer of Neches Basin water is estimated as \$341,561,000. Remarkably, neither cost estimate includes costs of upgrades to existing conveyances. Note that the lesser Neches cost of \$341,561,000 is about 1.4 times the cost of the Ashkelon plant. Another hooker is the basic assumption of the authorities that surface water has no costs! As a consequence, the only thing considered in their estimate is the cost of the infrastructure required to deliver it. While water may be free to Texas River Authorities, there is an indisputable huge economic and social cost to the citizens of Texas that will result from excessive draw down of existing reservoirs. Local economies cannot be sustained without the attraction of the recreational assets provided by the large East Texas Reservoirs.

Obviously the capital expense for large scale desalination compares favorably with the total costs of major reservoir construction that include land purchases, surveys, environmental studies, and the infra structure required for interbasin transfer. The expensive power demands associated with desalination are always brought forth in arguments opposing desalination. However, the opponents to desalination do not recognize that wise use of desalination would not require continuous operation at plant capacity and associated exorbitant total energy costs. Instead, wise use would employ desalination during the occasional periods of prolonged drought thus augmenting the available resources in E. Texas reservoirs, and avoiding the depletion of water to levels that destroy local economy that are dependent upon maintaining attractive East Texas recreational assets. Texas River Authorities market water to municipalities, industry, and agribusiness. Only a fraction of the total water demand is for municipal supply. For example, only 10% of the total water used by the LNVA customers is provided to municipal (public) interests and 90% to industry and agribusiness. Even so, taxpayer money foots the bill.

When someone tells you water is free you are in danger of being sold down the river.

Walter West