Figure 2-17

Annual Benefits of 100 mg/L Salinity Decrease in Imported Water Supplies ($95 Million)

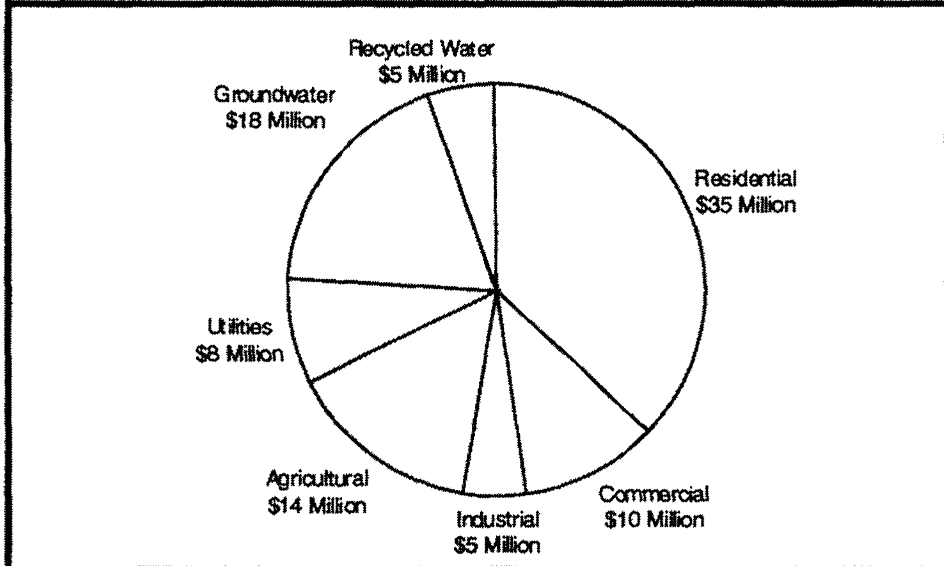

Figure 2-18

Annual Benefits of 100 mg/L Salinity Decrease in Groundwater and Wastewater ($64 Million)

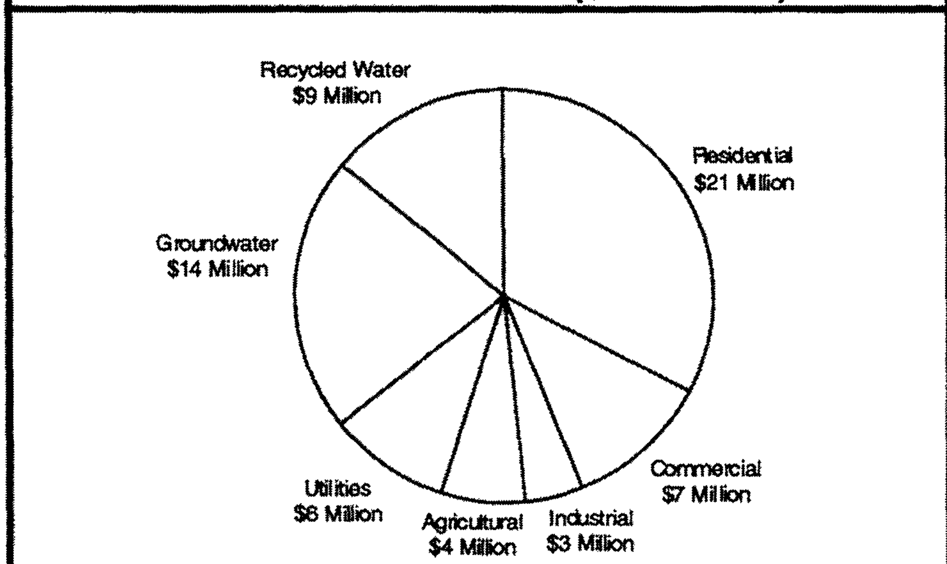

Table 2-5 lists items sensitive to salinity changes.

Table 2-5 Benefit/Impact Categories

RESIDENTIAL Water pipe Water heater Faucet Garbage disposal Clothes washer Dish washer Bottled water purchase Water softener	**COMMERCIAL** Sanitary Cooling Irrigation Kitchen Laundry Miscellaneous **WATER UTILITIES** Water Treatment Water Distribution	**AGRICULTURE** Nursery products Cut Flowers Strawberries Misc. Vegetables Citrus Avocados Pasture/Grain Vineyard Deciduous Field
WATER RECYCLING Direct Groundwater Recharge Indirect Groundwater Recharge (through deep percolation) Irrigation Commercial/Industrial	**INDUSTRIAL** Process Water Cooling Towers Boilers Sanitation Irrigation	**GROUNDWATER** Direct Groundwater Recharge Indirect Groundwater Recharge (through deep percolation) Incidental Recharge through Wastewater Discharge

Metropolitan's economic model divides the service area into 15 subareas to reflect the unique water supply conditions and benefit factors of each (see Figure 2-19).

The salinity model is designed to assess the average annual "regional" benefits or impacts based on demographic data, water deliveries, TDS concentration, and costs for a typical household, agricultural, industrial and commercial water use. It uses mathematical functions which define the relationship between TDS and items in each affected category, such as the useful life of appliances, specific crop yields, and costs to industrial and commercial customers. For example, Figure 2-20 shows the relationship between TDS concentration and the useful life of household water heaters.

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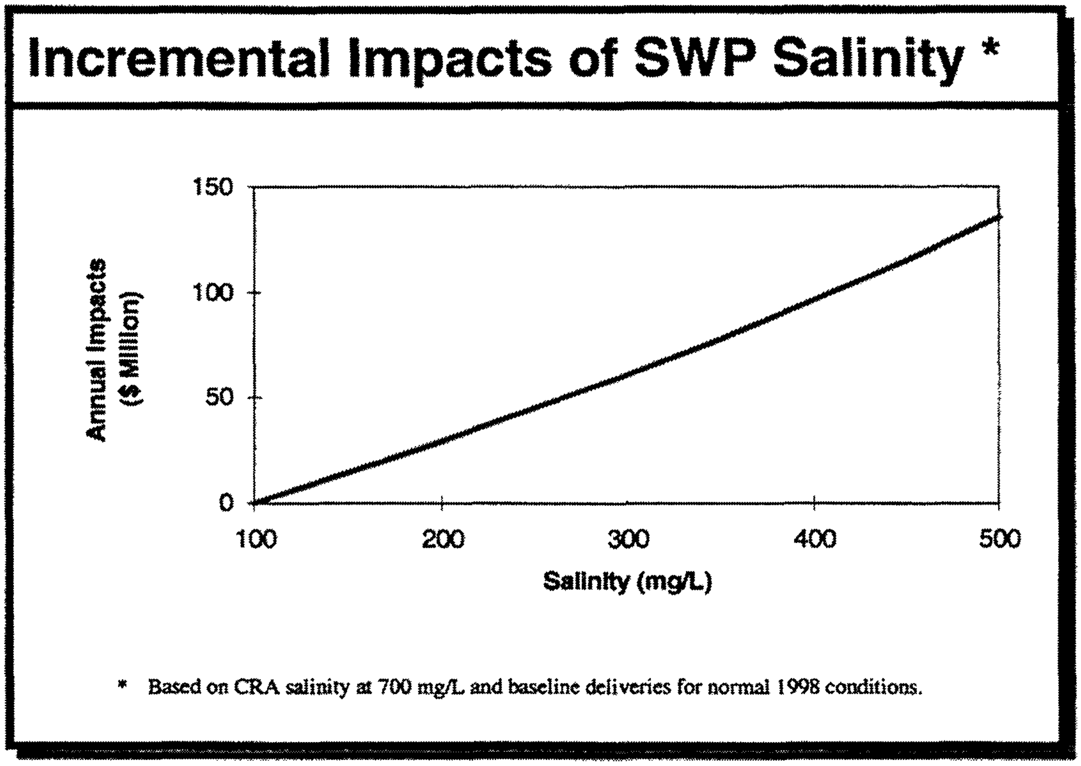
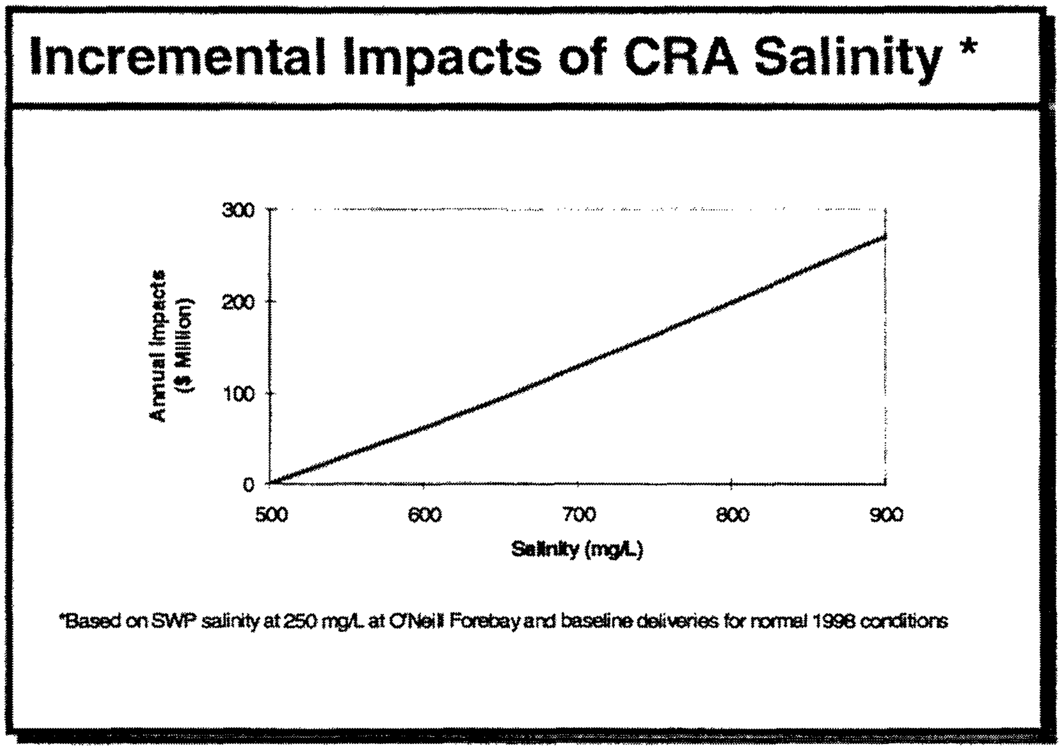
Figure 2-21



CRA BENEFITS AND IMPACTS

Figure 2-22 shows the range of economic consequences of CRA salinity changes when the SWP salinity is fixed at 250 mg/L at O'Neill Forebay. While, there may be economic benefits when CRA salinity is below 500 mg/L, this graph shows the "incremental" impacts of CRA salinity compared to 500 mg/L. Historically, the average annual salinity of CRA has never been below 500 mg/L. See Technical Appendix 5 for additional information on this analysis. Technical Appendix 6 specifically addresses the high-profile issue of the impacts of water softeners.

Figure 2-22



TECHNOLOGY

DESALINATION TECHNOLOGY

Desalination is the ultimate tool to reduce salt accumulation when other methods fails. Desalination can create new potable water supplies from brackish water, thus restoring previously abandoned sources. In addition, membrane desalination technology has the capacity to remove organic carbon, viruses, *cryptosporidium* and other contaminants which are of health concern. There is an increasing number of full-scale projects, which successfully demonstrate the technical capabilities of brackish water desalination. Desalination is a proven technology that has long been applied in the production of high-purity industrial water and domestic bottled water.

When desalination treatment is necessary, the main technological options available include:

- Reverse Osmosis (RO)
- Nanofiltration
- Electrodialysis Reversal (EDR)

Figure 3-7

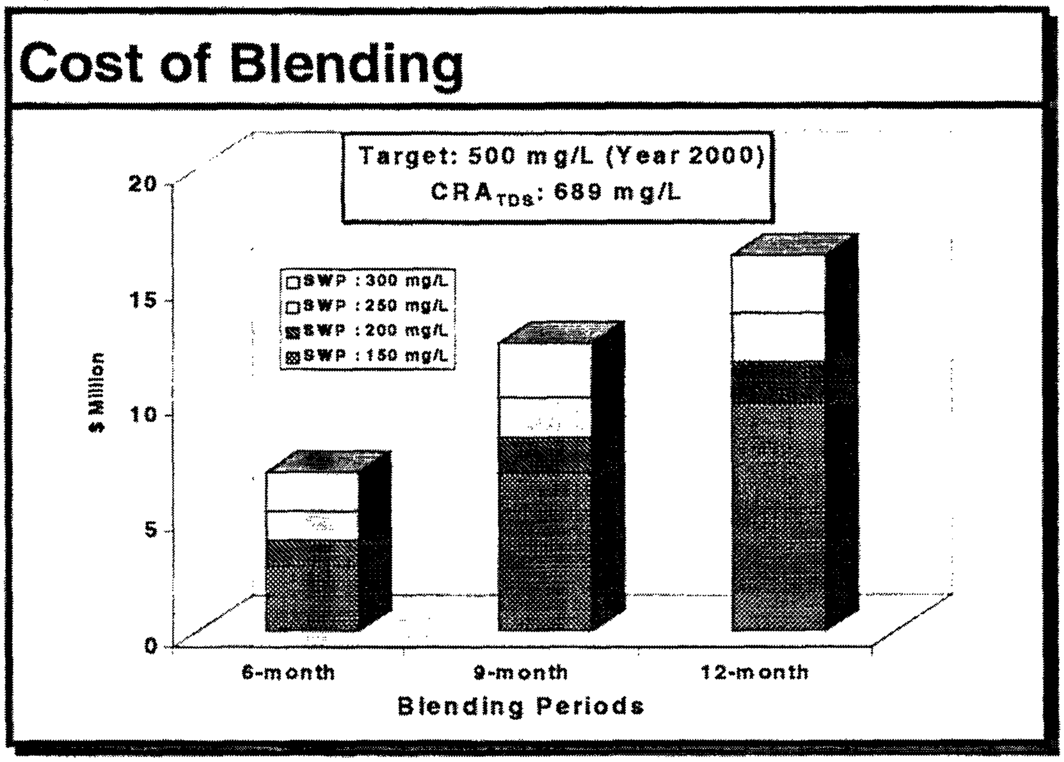


Figure 3-8

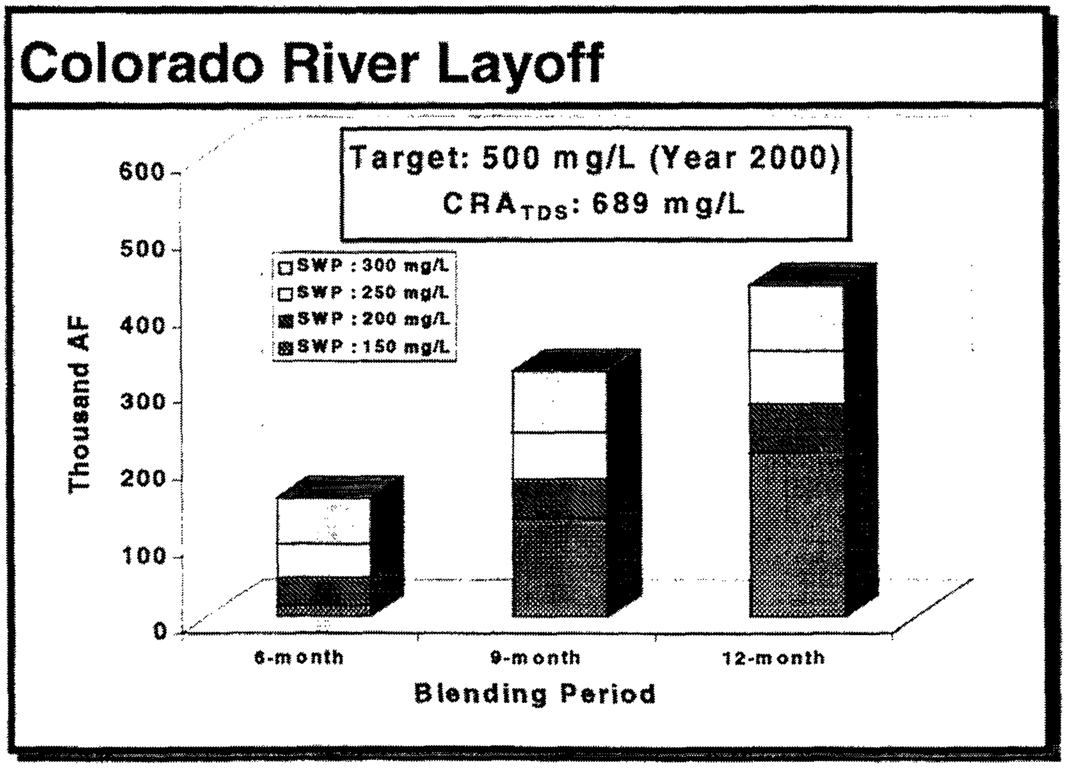
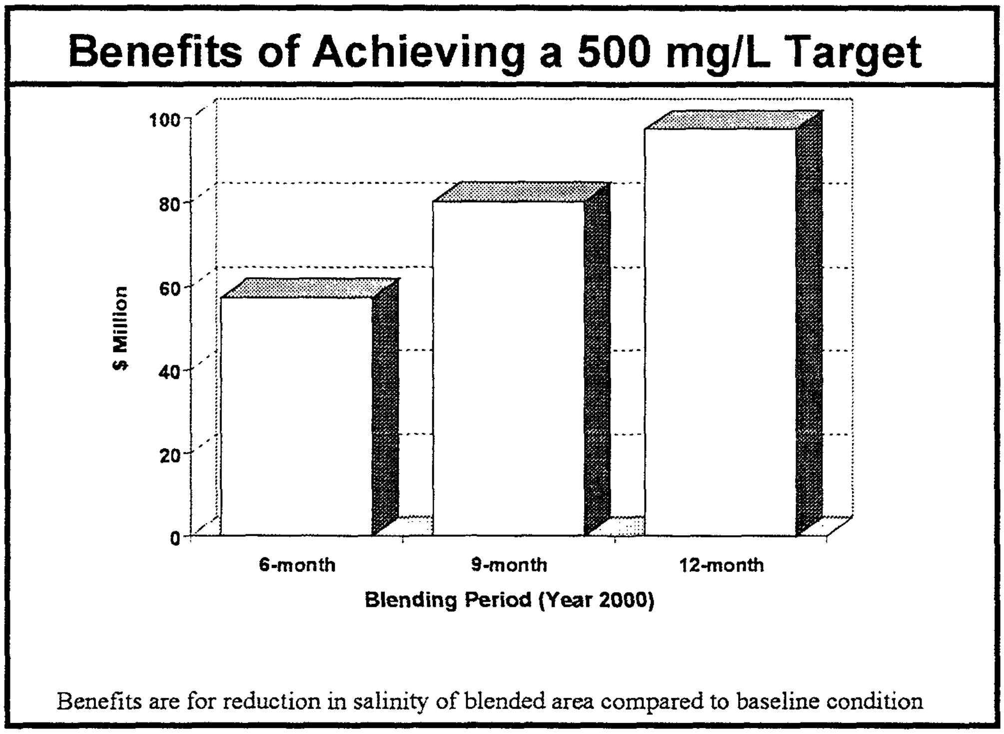


Figure 3-9



DRAFT

EASTSIDE RESERVOIR STORAGE AND CYCLING OF SWP SUPPLIES

Metropolitan could draw down its reservoirs every summer and refill them in the winter when there is a generally surplus flow of low salinity water in the Delta. The ability to cycle stored supplies will greatly increase upon completion of the Eastside Reservoir and the Inland Feeder. There are risks associated with cycling, including inability to refill the drafted storage because of drought conditions, or because of Delta fish-take constraints, or other operational limitations. Comparable operations could be conducted with groundwater replenishment deliveries.

Lake Perris water will be needed at times to achieve summer salinity targets at the Skinner filtration plant. However since the reservoir is subject to nearly six feet of evaporation annually, salinity tends to build up in Lake Perris when water is not exchanged by cycling (see Figure 3-10). For example, February 1998 salinity levels in Lake Perris were about 330 mg/L while the East Branch of the SWP was providing 200 mg/L water. Achieving low salinity levels in Lake Perris is constrained by: