

Sound Solutions to Meet California's Water Needs: Alternatives to increased reliance on pumping from the Bay-Delta Estuary

California can meet the needs of our population, economy and environment without increasing our reliance on the fragile Bay-Delta Estuary. However, the current efforts to increase water exports from Northern California and the Bay-Delta Estuary are not sound.

Global warming, land subsidence, neglected levees and ecosystem degradation already threaten the Bay-Delta Estuary. Scientists at the recent CALFED Science Conference confirmed that the Bay-Delta Estuary is in poor condition and likely to fail under pressures from sea level rise, flooding and earthquake. Yet state and federal agencies are moving forward with plans to increase exports from the Estuary.

The *Investment Strategy for California Water*, recently developed by Water For California and the Planning and Conservation League, outlines a strategy for meeting California's needs without further degrading our environment or increasing dependence on the Bay-Delta Estuary.

This draft *Strategy* recognizes that by 2030, demand for water will increase by 3.0-3.4 million acre feet. This is based on population estimates from the Department of Finance and estimates of water needed for environmental restoration.

The draft *Strategy* identifies politically, socially and economically feasible priorities for meeting these needs and improving water supply reliability.

Urban Water Conservation – 2.0 to 2.3 million acre feet

In a detailed report, the Pacific Institute estimated the potential savings from urban conservation as 2.0 to 2.3 million acre feet.ⁱ Over half of that savings can be achieved at a cost of \$200 per acre foot or less and at least 85 percent of the total potential can be realized for less than \$600 per acre foot.ⁱⁱ

Agricultural Water Conservation – Very conservatively 300,000 to 600,000 acre feet

An extremely conservative estimate is that by the year 2030 farmers will continue to conserve another 300,000 to 600,000 acre feet.ⁱⁱⁱ That is less than a 2 percent total increase in efficiency over 25 years.

Water Recycling – 1.5 million acre feet

The Department of Water Resources has recently identified 1.5 million acre feet of additional recycling potential at an average unit cost of about \$600 per acre foot.^{iv}

Groundwater Treatment including Groundwater Desalination – 290,000 acre feet just for groundwater desalination

The State of California Desalination Task Force found that there is a potential for 290,000 acre feet of additional groundwater desalination at costs that range from \$130 to \$1,250 per acre foot.^v

The following chart from the *Investment Strategy for California Water* demonstrates that California can more than meet our additional needs with cost-effective and environmentally friendly conservation, recycling and groundwater desalination and treatment. Federal, state, and local investments should focus on these programs, rather than on programs that increase reliance on the Bay-Delta Estuary.

Additional Needs	
	million acre-feet
Additional Population	2.0-2.4
Environmental Restoration	1.0
Total additional needs	3.0-3.4
First Priority Management Options	
	million acre-feet
Urban Water Conservation ^{vi}	2.0-2.3
Agricultural Water Conservation ^{vii}	At least 0.3-0.6
Recycled Water ^{viii}	1.5
Groundwater Treatment and Desalination ^{ix}	At least 0.29
Total First Priority Potential	At least 4.09-4.69

Greater detail on viable, cost-effective and environmentally sound alternatives to increasing pumping from the Bay-Delta Estuary can be found in the *Investment Strategy for California Water*.

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ⁱ Waste Not, Want Not: The Potential for Urban Water Conservation in California, Pacific Institute, 2003 http://www.pacinst.org/reports/urban_usage/

ⁱⁱ Waste Not, Want Not: The Potential for Urban Water Conservation in California, Pacific Institute, 2003 http://www.pacinst.org/reports/urban_usage/

ⁱⁱⁱ Draft California Water Plan Update 2003, California Dept. of Water Resources, June 7, 2004 <http://www.waterplan.water.ca.gov/b160/workgroups/chapterreviewgroup.htm>

^{iv} Water Recycling 2030, California Dept. Of Water Resources, 2003 <http://www.owue.water.ca.gov/recycle/docs/TaskForceReport.htm>

^v Desalination Task force, California Department of Water Resources, 2003 <http://www.owue.water.ca.gov/recycle/desal/desal.cfm>

^{vi} Waste Not, Want Not: The Potential for Urban Water Conservation in California, Pacific Institute, 2003 http://www.pacinst.org/reports/urban_usage/

^{vii} Draft California Water Plan Update 2003, California Dept. of Water Resources, June 7, 2004 <http://www.waterplan.water.ca.gov/b160/workgroups/chapterreviewgroup.htm>

^{viii} Water Recycling 2030, California Dept. Of Water Resources, 2003 <http://www.owue.water.ca.gov/recycle/docs/TaskForceReport.htm>

^{ix} 290,000 acre-feet represents the potential of groundwater desalination only, the potential for groundwater treatment is currently unknown. Desalination Task force, California Department of Water Resources, 2003 <http://www.owue.water.ca.gov/recycle/desal/desal.cfm>