

Our Vision for the California Delta

The Delta is in crisis, and each day brings us closer to a major disaster. What the nation learned from New Orleans and Hurricane Katrina is the terrible price of waiting. The Delta's problems can wait no longer:

The health of its ecosystem is not sustainable over the long-term and regional climate change of even one meter above current sea level promises to inundate many Delta towns and its infrastructure of highways, energy corridors, railroads, wildlife resources and its economic base of agriculture and tourism. (See [Figure 2](#))

A two-in-three chance of a major earthquake within the next few years in or near the Delta make its levees vulnerable to sudden collapse. In addition, increased urbanization poses an imminent threat to the Delta by placing more residents and their property in a floodplain.

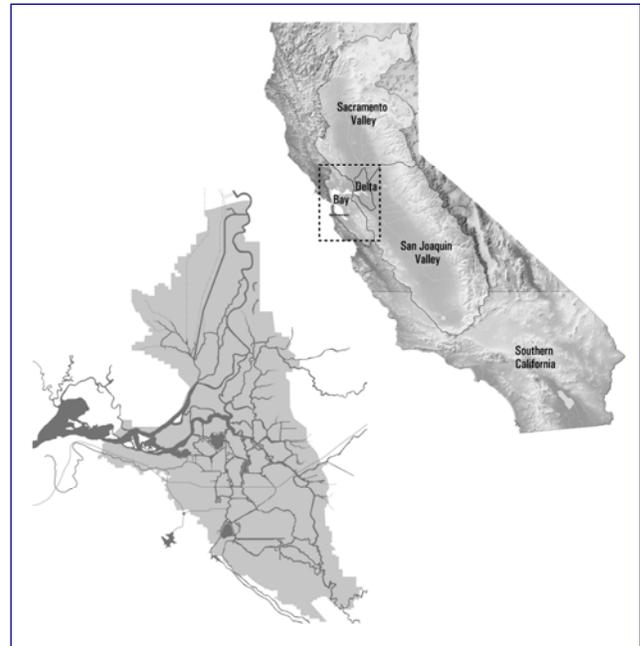
The vision's recommendations are designed to be implemented together as an integrated solution and then work together in an interdependent fashion to achieve success.

An integrated solution is vital as the Delta cannot be "fixed" by any single action. Nor can California's water needs be met by any single action. No matter what policy choices are made, Californians must also change their relationship toward the environment and water. Conservation must become the next great cause toward quality of life, following in the footsteps of energy conservation. Delay in any of the important areas discussed in this vision will only make California's water problems and the Delta's ecosystem woes worsen over the next decades. (See [Figures 10 and 11](#))

For those who rush to discuss Delta water conveyance as if no other issue is of importance, the Task Force cautions that decisions about storage and conveyance flow from all 12 recommendations in their vision, and cannot be decided by themselves.

Established by Governor Schwarzenegger's Executive Order S-17-06, the Delta Vision Blue Ribbon Task Force was to "develop a durable vision for sustainable management of the Delta" with the goal of "...managing the Delta over the long term to restore and maintain identified functions and values that are determined to be important to the environmental quality of the Delta and the economic and social well-being of the people of the state."

It also directed the Task Force to develop a Strategic Implementation Plan by October 2008.



The Delta formed by the Sacramento and San Joaquin Rivers is a critical habitat for more than 500 species, hub of the state's major water conveyance system, and crossed by major transportation and utility corridors.

Delta Vision's 12 Integrated and Linked Recommendations

1. Delta ecosystem and a reliable water supply for California are the primary, co-equal goals for sustainable management of the Delta.
2. The California Delta is a unique and valued area, warranting recognition and special legal status from the State of California.
3. The Delta ecosystem must function as an integral part of a healthy estuary.
4. California's water supply is limited and must be managed with significantly more efficiency to be adequate for its future population, growing economy and vital environment. (See [Figure 5](#))
5. The foundation for policy making about California water resources must be the longstanding constitutional principles of "reasonable use" and "public trust;" these principles are particularly important and applicable to the Delta.
6. The goals of conservation, efficiency and sustainable use must drive California water policies.

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12 Recommendations (cont.)

7. A revitalized Delta ecosystem will require reduced diversions, or changes in patterns and timing of those diversions, upstream, within the Delta and exported from the Delta at critical times. (See Figures 7a, 7b and 8)
8. New facilities for conveyance and storage, and better linkage between the two, are needed to better manage California's water resources the estuary and exports. (See Figure 9)
9. Major investments in the California Delta and the statewide water management system must be consistent with, and integrate specific policies in this vision. In particular, these strategic investments must strengthen selected levees, improve floodplain management and improve water circulation and quality.
10. The current boundaries and governance system of the Delta must be changed. It is essential to have an independent body with authority to achieve the

This vision was developed over 14 days of public Task Force meetings since March. A 43-member Stakeholder Coordination Group met publicly for 15 days. Task Force recommendations were informed by advice of Delta Science Advisors, by efforts of departments and agencies of the State of California and public comments.

Chaired by Phil Isenberg, other Task Force members are Monica Florian, Richard M. Frank, Thomas McKernan, Sunne Wright McPeak, William K. Reilly and Raymond Seed.

co-equal goals of ecosystem revitalization and adequate water supply for California while also recognizing the importance of the Delta as a unique and valued area. This body must have secure funding and the ability to approve spending, planning and water export levels.

11. Discouraging inappropriate urbanization of the Delta is critical both to preserve the Delta's unique character and to ensure adequate public safety.
12. Institutions and policies for the Delta should be designed for resiliency and adaptation.

Near-Term Actions to Protect the Delta

The Task Force also identified Near-Term Actions that must be taken in the very near future because threats to the Delta and Suisun Marsh are so serious. These focus on preparing for disasters in or around the Delta, protecting its ecosystem and water supply system from urban encroachment, and starting work soon on short-term improvements to both the ecosystem and the water supply system.

These proposed actions should be initiated quickly with an attempt to build upon existing organizations and authorities, but not be bound by existing shortcomings. They are:

1. State government should immediately begin acquiring title or easements to floodplains, establish flood bypasses where feasible and discourage residential building in flood-prone areas. Land that could provide flood protection is being threatened by urban development as this report is being written.
2. The Governor should immediately issue an Executive Order that provides guidance consistent with this vision on inappropriate land development in the Delta.
3. State government should promptly set appropriate standards for all levee improvements to protect

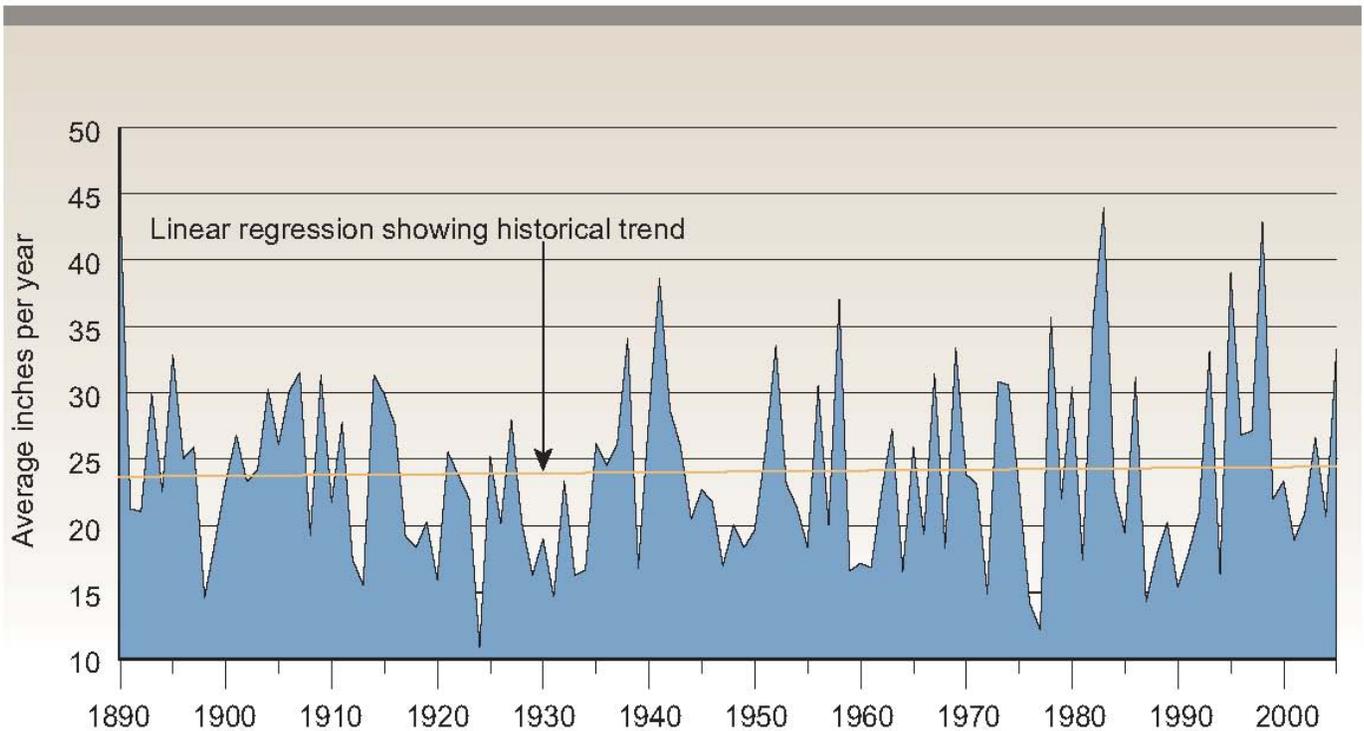
heavily populated areas and key parts of the water delivery system and other infrastructure. The State of California should also use available bond funds to address strategic levee and floodplain improvements.

4. State government should embark upon a comprehensive series of emergency management and preparation actions within a few months. California cannot wait for a flood before planning a response.
5. State government should promptly incorporate expected sea level increases into decision-making and improve knowledge of constructing more secure and affordable levees.
6. High priority ecosystem revitalization projects should be pursued aggressively by the responsible agencies and departments, upon direction by the Governor.
7. Improvements in the current water conveyance and groundwater surface water storage systems should be pursued as rapidly as possible by the responsible agencies and departments, upon direction by the Governor.

The Task Force urges the Governor and the Legislature to incorporate these immediate steps in executive actions, upcoming bond measures or related legislation.

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Figure 5. California Precipitation History



116 year average: 23.88 inches

Driest 30 years (1908-1937): 21.28 inches

Wettest 30 years (1977-2006): 24.88 inches

Yearly precipitation calculated from average of 95 stations spread across California. Data collected by Jim Goodridge, state climatologist formerly with DWR.

Source: California Department of Water Resources

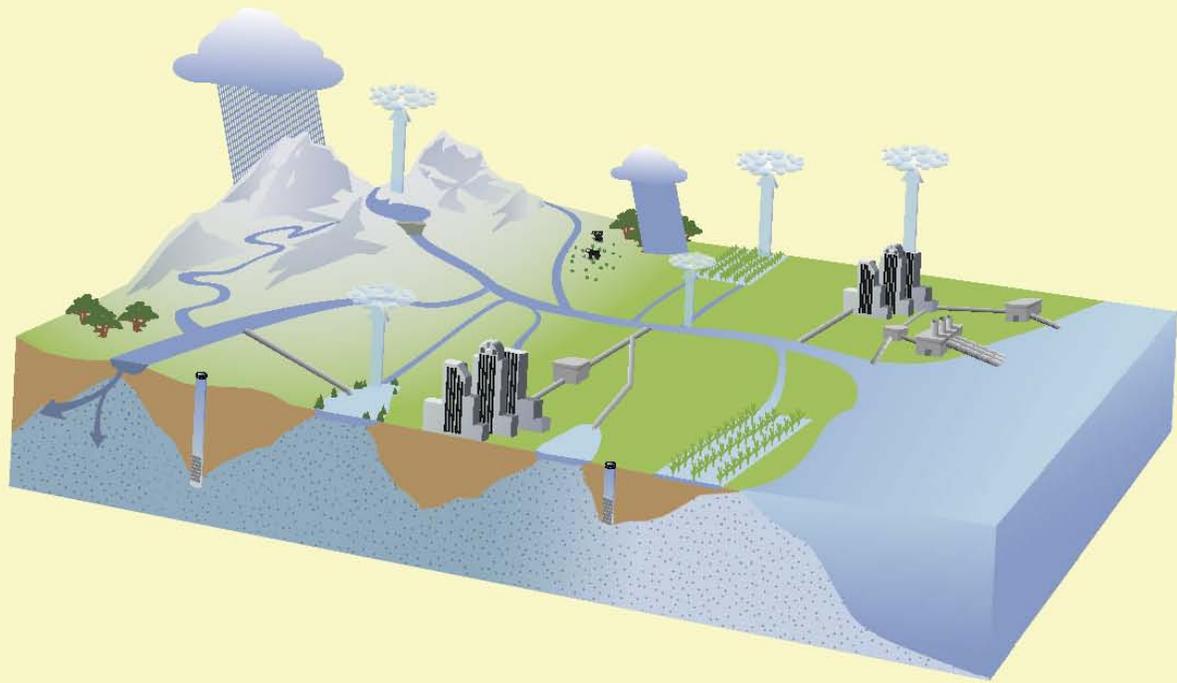
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California Water Supplies and Uses (MAF)

	1998 (171% of normal) ^a	2000 (97% of normal) ^a	2001 (72% of normal) ^a
Total supply (precipitation & imports)	336.9	194.7	145.5
Total uses, outflows, & evaporation	331.5	200.4	159.9
Net storage changes in state	5.5	-5.7	-14.3
Distribution of dedicated supply (includes reuse) to various applied water uses			
Urban uses	7.8 (8%)	8.9 (11%)	8.6 (13%)
Agricultural uses	27.3 (29%)	34.2 (41%)	33.7 (52%)
Environmental water ^b	59.4 (63%)	39.4 (48%)	22.5 (35%)
Total dedicated supply	94.5	82.5	64.8

MAF = million acre-feet

- a. Percent of normal precipitation. Water year 1998 represents a wet year; 2000, average water year; 2001, drier water year.
- b. Environmental water includes instream flows, wild and scenic flows, required Delta outflow, and managed wetlands water use. Some environmental water is reused by agricultural and urban water users.

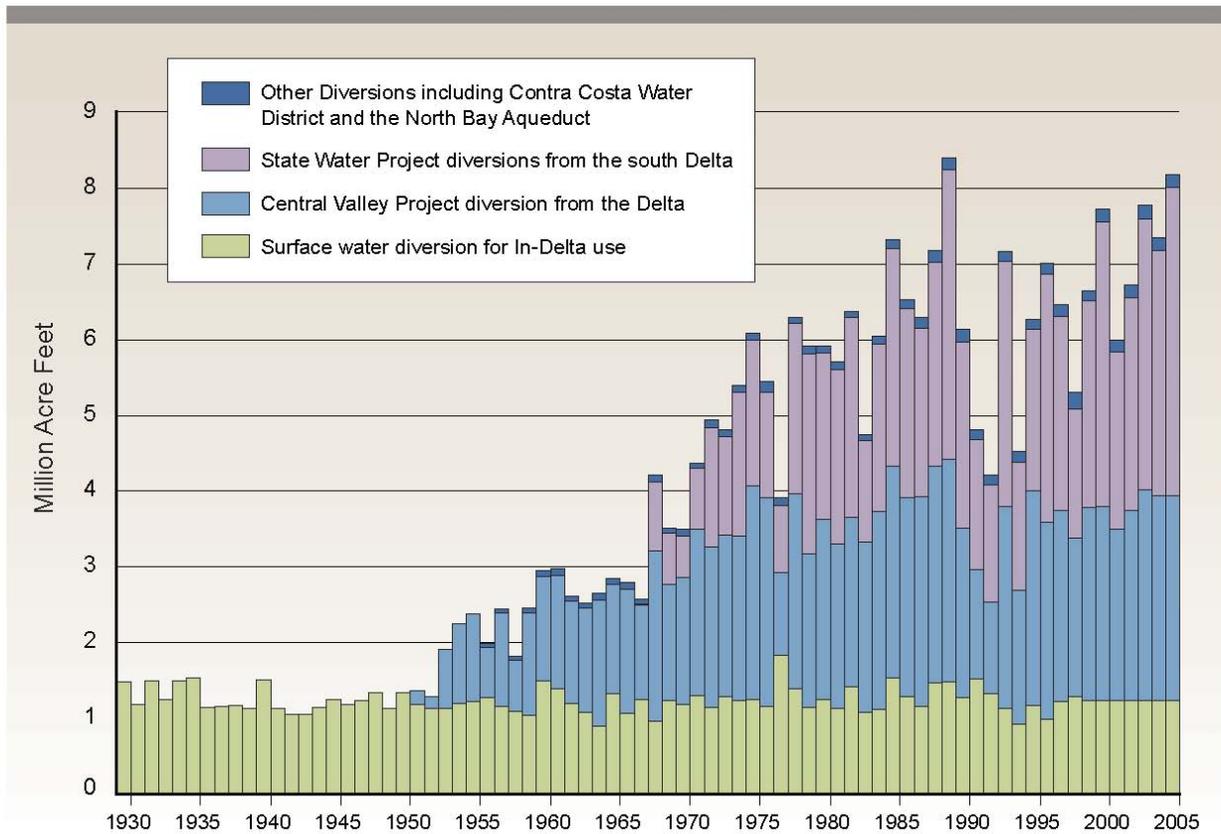


Key components of the illustrated flow diagram are shown as characteristic elements of the hydrologic cycle. Volume 3 Regional Reports has flow diagrams for statewide water summary (in Chapter 1) and for regional water summaries in their respective chapters.

Source: California Department of Water Resources, California Water Plan Update 2005

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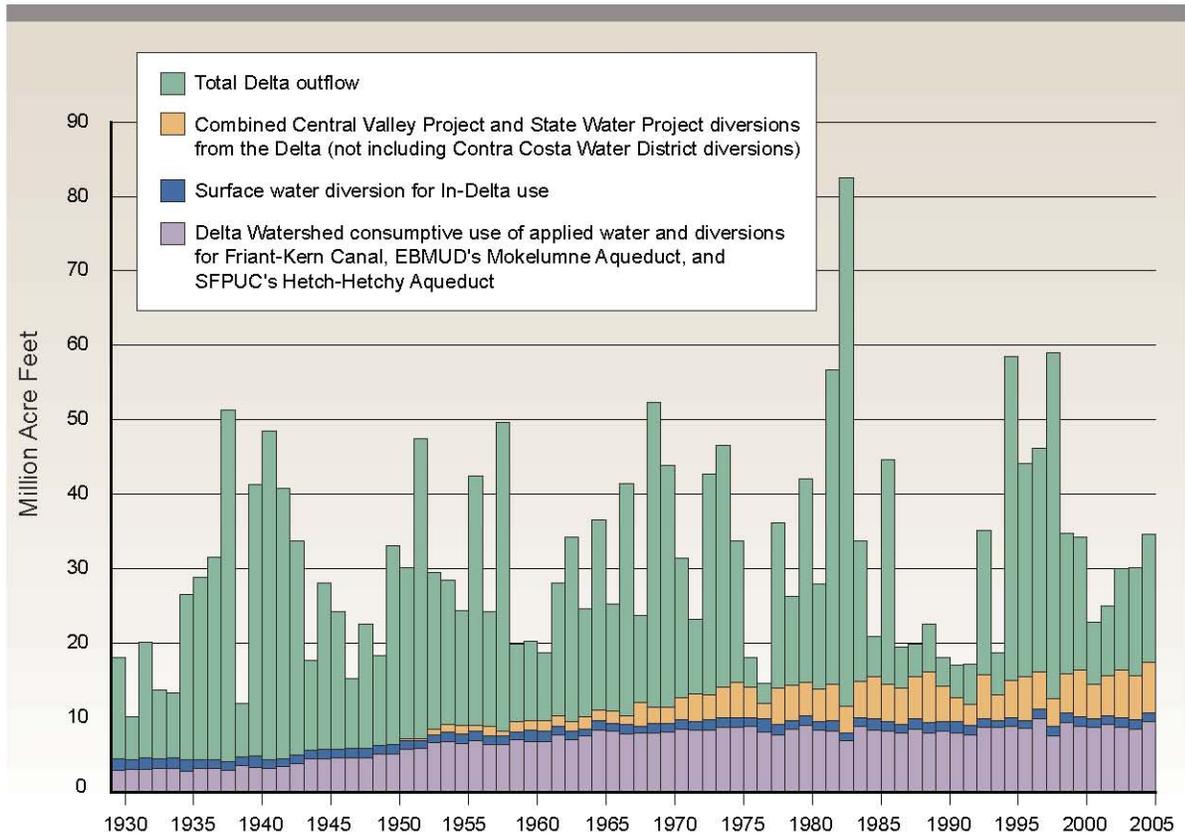
Figure 7a. Historic Diversions from within the Delta



Source: Measured, calculated and modeled from an array of data sources as compiled by Tully & Young, Inc.

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Figure 7b. Historic Diversions before the Delta, in-Delta Uses and Exports from the Delta, plus Outflows



Trends in Destinations and Uses

Period	Average Annual Total (MAF)	Outflow	in-Delta	Exports	Delta Watershed
1930 to 1949	25.80	81%	5%	0%	14%
1950 to 1969	31.71	67%	4%	4%	24%
1970 to 1989	34.34	51%	5%	15%	29%
1990 to 2005	32.85	48%	4%	17%	31%

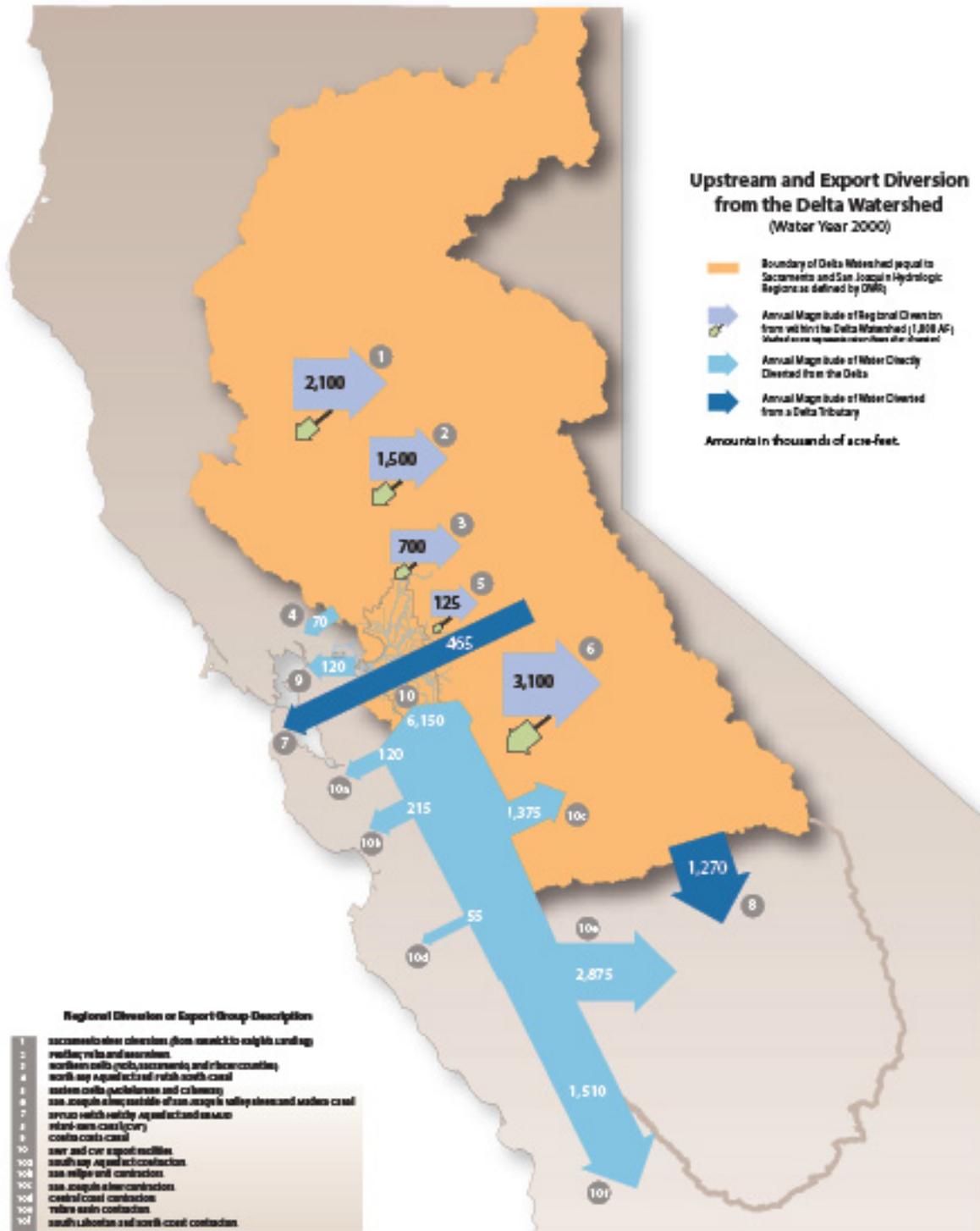
When the averages of 20-year periods are compared, these data show:

- Outflows to the ocean go down from 81% to 48% of total flows;
- In-Delta uses are essentially constant at 4% to 5% of total flows;
- Exports of water taken in the Delta but conveyed elsewhere go up, from zero to 17% of total flows; and
- In-Delta watershed (before reaching Delta) uses also go up, from 14% to 31% of total flows (some of these are exported from the Delta watershed).

Source: Measured, calculated and modeled data from an array of sources as compiled by Tully & Young, Inc. with data and assistance from DWR, the Bay Institute and the State Water Contractors.

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Figure 8. Upstream and Export Diversions from the Delta Watershed

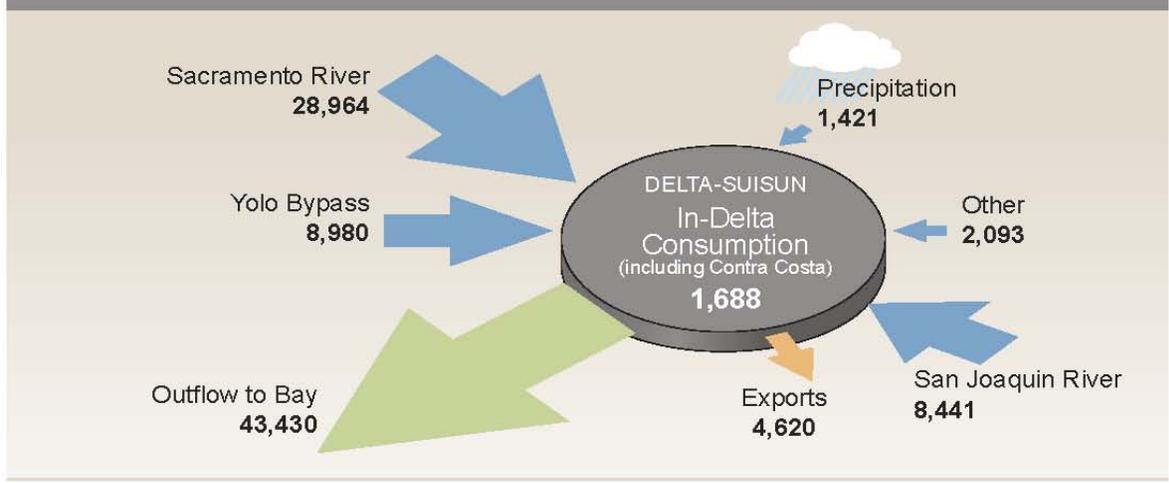


Source: Greg Young, Tully & Young, Inc.

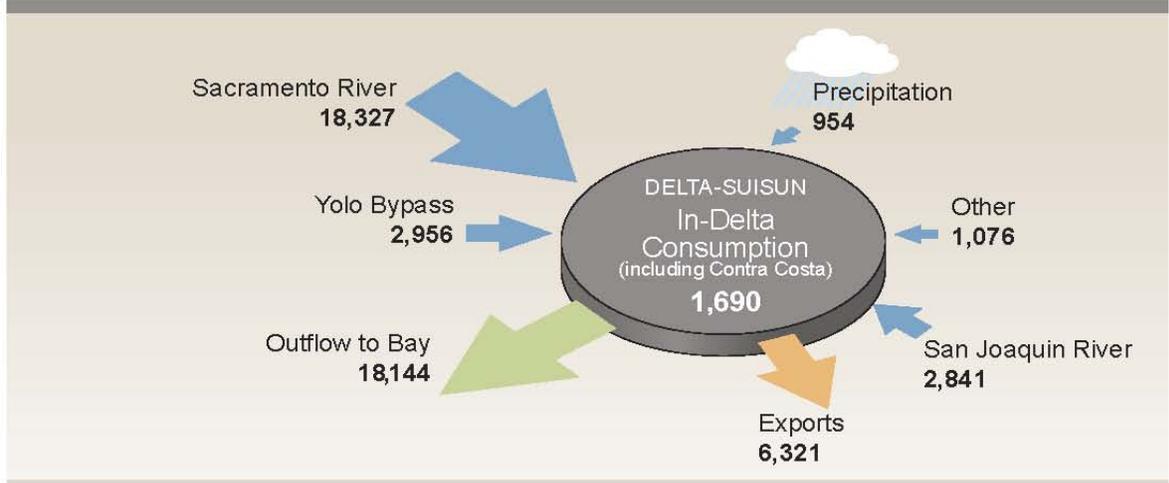
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Figure 9. Delta Water Balance by Water Year Type

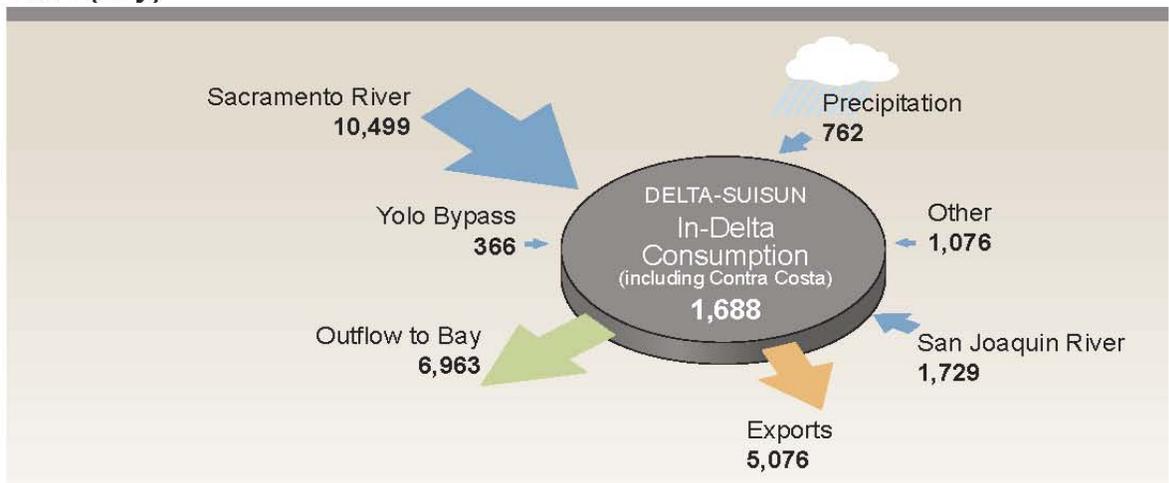
1998 (Wet) (Amounts in thousands of acre-feet)



2000 (Average)



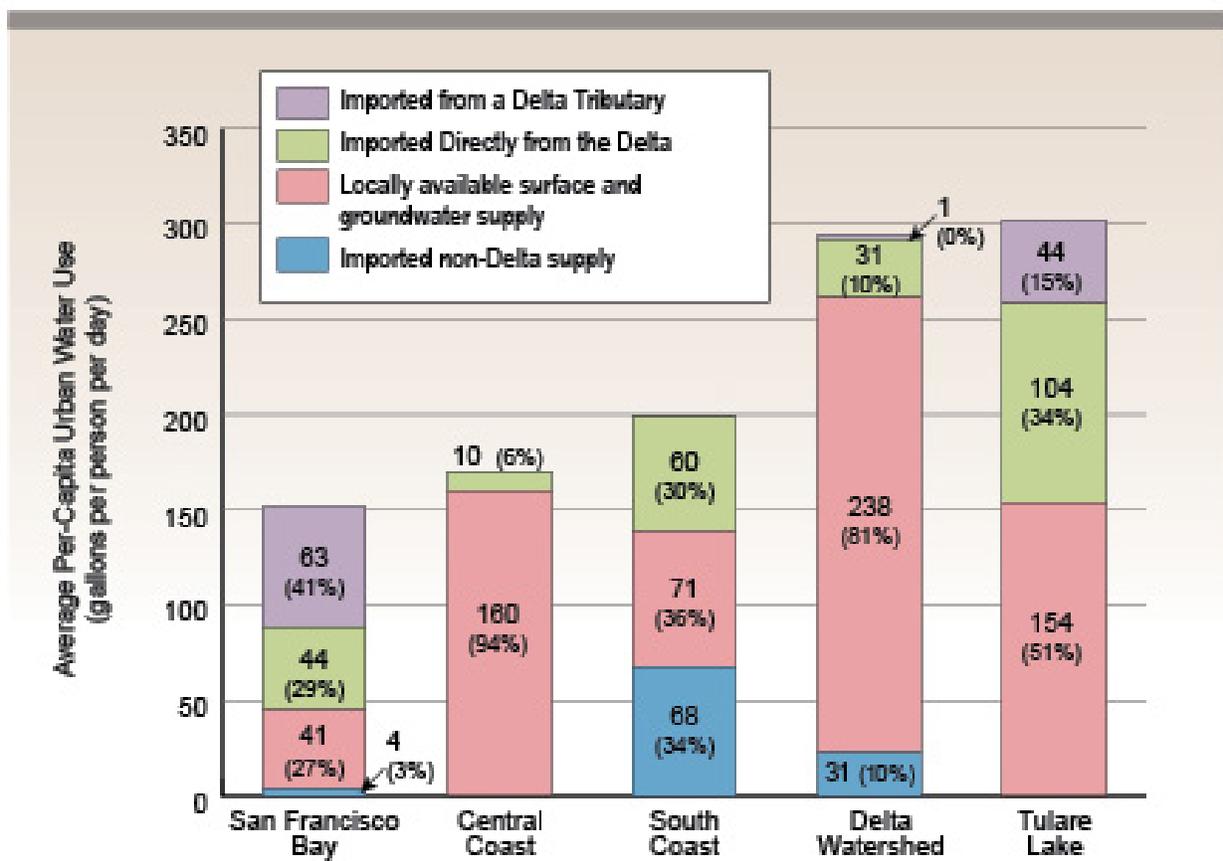
2001 (Dry)



Source: Status and Trends of Delta-Suisun Services, URS Corporation 2007

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Figure 10. Estimated Distribution of Water Sources used to Meet Daily Urban Water Demand (Water Year 2000)

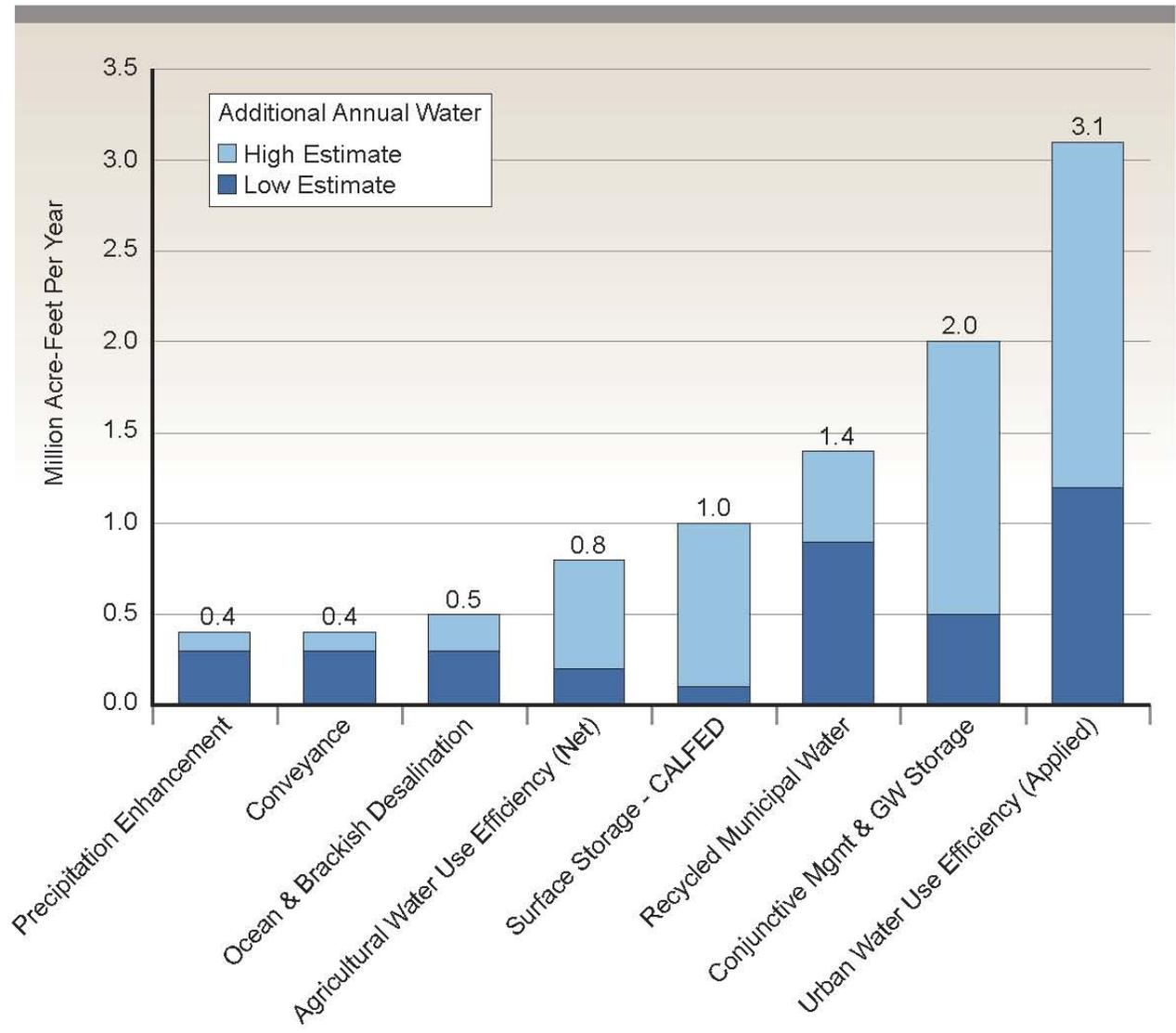


Using data from the 2005 California Water Plan Update, v.3, this graphic shows an estimated representation of how various sources of water available to a region may have been used to meet a region's urban per-capita water use. However, because data is not distinguished to separate the destination of source water, some of the water available to a region may have gone exclusively to agricultural uses or urban uses, thus skewing what is represented here.

Source: Department of Water Resources

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Figure 11. Strategies to Reduce Demand for/or Increase Supply of Water

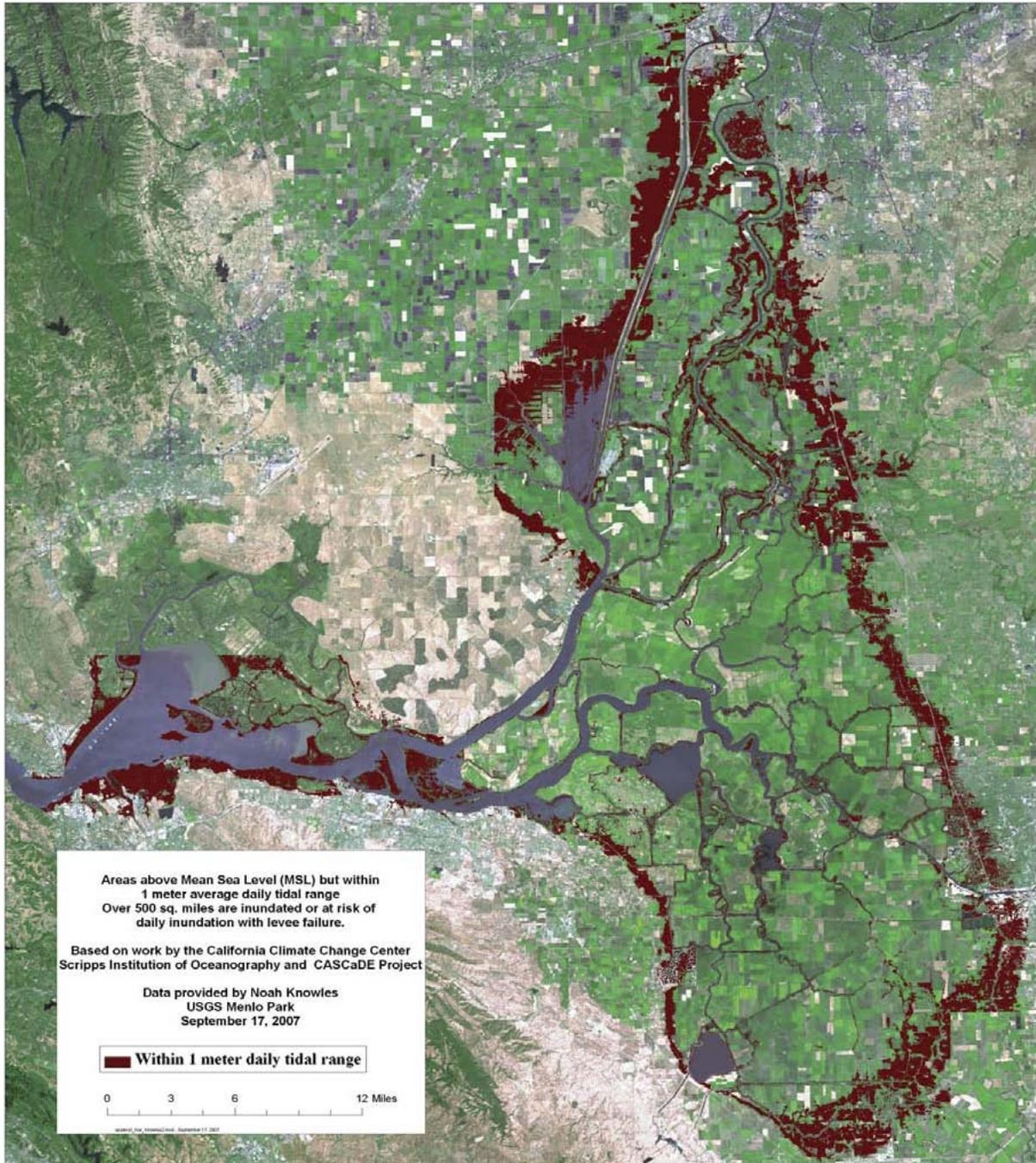


This graph shows the potential range of more water demand reduction and supply augmentation each year for eight resource management strategies. Low estimates are shown in the lower (dark blue) section of each bar. The water supply benefits of the resource management strategies are not additive. As presented here, urban water use efficiency includes reduction in both consumptive and nonconsumptive uses (or applied water), whereas agricultural water use efficiency only includes reduction in consumptive uses (or net water).

Source: California Department of Water Resources, California Water Plan Update, 2005, v.3.

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Figure 2. Area of Potential Inundation from a One Meter Rise in Sea Level



Source: U.S. Geological Survey