

California

Balancing regional sustainability and imported water supplies

Water leaders in Southern California (and the San Francisco Bay Area) will be increasingly challenged to implement a new state policy on regional sustainability and self-sufficiency while reducing the urban dependence on imported water supplies. The future of massive urban water projects is not clear and will be a central part of this public policy debate.

Massive water projects were built in California during the past century to provide urban water needs in the great metropolitan areas of Los Angeles and San Francisco. These metropolitan areas have cast a large urban shadow over California through these import projects, which have reached throughout the State to develop water supplies and then transport this water hundreds of miles to support large-scale urbanisation.

The current practices to provide for urbanisation in California are likely not sustainable, as there will be shifts in precipitation patterns due to climate change, evolving demographic changes, changing values in allocating California's water supplies, and new urban growth policies.

As one of the most geographically diverse and spectacular parts of the world, California's water leaders will be challenged to provide reliable water supplies for: an additional 400,000 people per year as the state is projected to grow from the present 38 million to 51 million by 2040; an unparalleled natural landscape that will require water to support aquatic and terrestrial species; and the increasing local and worldwide demand for high quality food produced by California's farmers and ranchers.

A shifting water policy dynamic

By its sheer magnitude and singular geography, California has always been on the leading edge of the intersection between economic, environmental and

social policies. The solutions to developing sustainable urban supplies in California, particularly in times of shortage, will require balancing complex issues of equity, environmental protection, economics and cultural and social change. California's approach to "water in an urbanising world" offers many lessons to be shared throughout the world, and particularly in areas with similar geopolitical and climatological challenges.

For example, the California Legislature in late 2009 passed a new "policy of the State of California... to meet Califor-

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nia's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency." According to this policy, "each region...shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts." (California Water Code §85021).

This new policy for regional sustainability will be implemented against the backdrop of these large water projects, signifying an important policy shift on how California's urban water needs will be met in the future. The policy tension between regional

sustainability and reliance on imported water supplies will pervade the future water policy debate in California with a focus on the two largest metropolitan areas – Southern California and the San Francisco Bay Area. The following is a glimpse into this dynamic in Southern California.

Balancing imports and sustainability

Southern California continues to depend upon imported water brought into the region by large projects from the Colorado River, Northern California through the Sacramento-San Joaquin Delta, the Owens Valley and Mono Lake.

The primary agency that imports water to Southern California is the Metropolitan Water District (MWD), which was formed in 1928 to import water for urbanisation. Its Board of Directors recently updated its Integrated Resources Plan (IRP), providing a roadmap for maintaining regional water supply reliability over the next 25 years in Southern California. The IRP, through a three-component approach, places an increased emphasis on regional self-sufficiency, but it is still highly dependent upon importing water from the large water projects.

- A core resources strategy represents base line efforts to manage water supply and demand conditions and to stabilise MWD's traditional imports from the Colorado River and the Sacramento San Joaquin Delta. MWD and its member agencies will advance water use efficiency through conservation and recycling, and with further local development such as groundwater recovery and seawater desalination.
- A cost-effective "supply buffer" will help protect the region from possible shortages caused by conditions that exceed the core resources strategy, starting with increased conservation and water-use efficiency on a region-wide basis.

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- Foundational actions guide the region in determining alternative supply options for long-range planning. If future changed conditions – such as climate change or the availability of resources exceed what is covered by MWD’s core resources and supply buffer – these alternatives would provide a greater contribution to water reliability than MWD’s imported water sources or any other single supply.

OWOW: The Santa Ana Watershed Approach

Nested within the MWD service area in Southern California is the Santa Ana Watershed, where local water leaders have coalesced around “One Water – One Watershed” (OWOW). Here, the plan provides a holistic view of the watershed and reflects the watershed moving from a water supplier to a water resource manager mentality. Rather than investing more or working harder on the ways of the 20th century, OWOW seeks a new approach that is lighter on the land, protects habitat and a sustainable future for a robust economy and healthy environment.

The goals for OWOW are a watershed that: 1) is sustainable, drought-proofed and salt-balanced by 2030, where water resources are used efficiently; 2) supports economic and environmental viability; 3) is adaptable to climate change; 4) corrects any environmental justice deficiencies; 5) minimises interruptions to natural hydrology; and 6) instills a new water ethic at the institutional and personal level.

Currently, all types of water, including imported, local surface and groundwater, storm water, and wastewater effluent, are viewed as components of a single water resource, inextricably linked to land use and habitat. This portfolio includes water imported into the region by MWD, as described above. The OWOW leaders, as part of their regional sustainability efforts, are being challenged to reduce their need for imported water and possibly wean the watershed entirely from imported water. It is not clear at this time if this is possible or even prudent.

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