

Climate Action Team, Water-Energy (WET-CAT) SubGroup

May 2011 Progress Report

Sector Description: The Water-Energy Team of the Climate Action Team (WET-CAT) focuses its efforts on both green house gas (GHG) emission reduction and adaptation actions affecting the portion of the energy sector that supports the storage, transport and delivery of water for agricultural, residential, and commercial needs.

Current Participants, Activities and Progress:

1. Contact information for the working group leader(s):

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2. Current roster of group members who regularly participate in group activities:

Air Resources Board	Legislative Analyst's Office
Cal/EPA	Department of Water Resources
California Energy Commission	Natural Resources Agency
CA Dept. of Food and Agriculture	State Water Resources Control Board
CA Department of Public Health	UC Santa Barbara
CA Public Utilities Commission	US Environmental Protection Agency

3. Progress report on items from the group's "CATNIPs" and any other items the group is currently working on:

Strategy 1: *Increase Water Conservation/20x2020 Reduction*

Purpose: Implement strategies to achieve a statewide 20 percent reduction in per capita urban water use by 2020 and measures for increasing agricultural water use efficiency. Reduced water use will improve the resilience of water supply systems (adaptation) and reduce associated GHG emissions (mitigation) while saving money and reducing environmental impacts.

Progress:

- The goal to achieve a 20 percent reduction in urban per capita water use in California by 2020 became law with the passage and signing of SBX7-7 in November 2009.
- The final 20x2020 Water Conservation Plan was prepared in 2010.
- DWR adopted a regulation for industrial process water as required by SBX7-7, developed a report titled Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, and published a guidebook to assist urban water suppliers in preparing Urban Water Management Plans.

Deliverables expected for 2011-2012:

- By July 1, 2011, urban retail water suppliers are required to define their baseline water use, and develop interim and final water use targets.

- DWR will develop a regulation for agricultural water measurement, and will also develop a guidebook to assist agricultural water suppliers in preparing water management plans and comply with SB X7-7.
- Agricultural water suppliers will prepare and adopt agricultural water management plans by December 31, 2012.
- On or before July 31, 2012, agricultural water suppliers must measure the volume of water delivered to their customers, and adopt a pricing structure for water customers based at least, in part, on quantity delivered.
- DWR will award approximately \$15 million grant funding for agricultural water use efficiency, energy use efficiency, and GHG emissions reduction in spring 2012.

Strategy 2: Increase Water Recycling

Purpose: Substantial energy savings could be realized if recycled wastewater was used to replace imported potable water in appropriate applications such as irrigation and industrial uses. In addition to energy savings and the related GHG emissions reductions, increased water recycling improves water supply reliability by diversifying the overall water portfolio.

Progress:

- The State Water Board adopted a Water Recycling Policy to streamline permitting of recycled water projects. The policy established a mandate to increase recycled water use by 500,000 acre-feet per year by 2030 (over 2002 baseline conditions), and requires the Regional Water Boards and/or local stakeholder groups to develop regional salt and nutrient management plans by 2014.
- The State Water Board posted the results of a municipal recycled water survey. The survey estimates that more than 700,000 acre-feet per year of recycled water is currently being used in California.
- The State Water Board awarded over \$500 thousand in water recycling planning grants, and issued over \$400 million in water recycling project construction grants and loans.

Deliverables expected for 2011-2012:

- CPUC opened a year-long rulemaking to set a comprehensive policy framework for promoting the cost effective production and/or retailing of recycled water by investor-owned water and sewer utilities. Once adopted, these policies will pave the way for expanded use of recycled water (deliverable will extend beyond 2012).
- DPH, with support from the State Water Board, will finalize regulations over the next few years for direct injection of recycled water into groundwater and for blending in reservoirs prior to distribution (deliverable will extend beyond 2012).
- Ongoing salt and nutrient management plan development is currently underway throughout the State.
- Improved reporting on the quality and quantity of recycled water being used.

Strategy 3: Low Impact Development

Purpose: To encourage the use of low impact development (LID) techniques to either infiltrate storm water flows, or capture, store or use storm water onsite. Infiltration and/or onsite use of stored storm water is expected to offset the need to import water from remote locations, thus creating energy savings and reductions in GHGs.

Progress:

- The State Water Board prepared a matrix of the existing municipal separate storm sewer system (MS4) permits adopted by the Regional Water Boards, showing adoption/expiration dates and basic information relative to LID and hydromodification requirements.
- The State and Regional Water Boards have taken steps to include LID and hydromodification requirements in all MS4 permits, with some Regions including design standards for LID and hydromodification.
- The State and Regional Water Boards now recognize LID as the technology-based standard of Maximum Extent Practicable (MEP) to protect water quality, so all future permits will include LID requirements.
- The Southern California Stormwater Monitoring Coalition, in cooperation with State Water Board, published a Low Impact Development Manual for Southern California.

Deliverables expected for 2011-2012:

- Develop reporting mechanisms for the quantity and quality of storm water captured, stored, and/or used.
- Efforts are underway at the local and regional level to promote and implement LID.

Strategy 4: Improved Monitoring

Purpose: This measure is linked in part to the passage of SBX7-7 (2009), which calls for development of water use and water diversion measurement reporting, including conservation, water recycling, storm water, and water rights use. The measure also seeks to expand high elevation and wilderness area monitoring of critical variables, such as temperature, precipitation, evapotranspiration, wind, snow level, vegetative cover, soil moisture, and stream flow, to observe and track changes in the rain and snow transition zone.

Progress:

- DWR has convened an agricultural water measurement stakeholder committee and recently develop a proposed draft water measurement regulation.
- The State Water Board has adopted a regulation requiring water right holders to electronically file information on their water diversion and use. Filing these reports online will provide for a more complete data set, and a more accurate picture of overall water availability and use.
- DWR has established an informal California-federal agency climate adaptation working group, which is largely focused on research and data needs.

Deliverables expected for 2011-2012:

- DWR intends to adopt regulations for agricultural water volume measurement by July 31, 2011.
- DWR will work with the US Geological Survey to collect data that can inform water managers of potential changes in watershed yield due to changing climate conditions.
- DWR will develop a pilot project with the US Army Corps of Engineers to determine the potential impact of climate change on Central Valley hydrology.
- DWR will develop hydrologic tools and products, including an updated Bulletin 195 for rainfall-depth-duration-frequency curves, that will include a 20th century trend analysis and methods to monitor for change in extreme precipitation statistics.
- DWR will compile catalogs of past observed atmospheric rivers and determine possible future characteristics of atmospheric rivers.
- Improved data collection is a high priority for recycled water, and storm water capture and use, measures.

Status of Other WET-CAT Measures

Moving forward in FY 2011/20012 the WET-CAT will work to strengthen interagency coordination and focus on strategies that integrate adaptation and mitigation measures. In addition to the near-term implementation plan actions described above, additional progress is being made toward implementing the following WET-CAT scoping plan measures:

Water System Energy Efficiency

- A CPUC pilot study on water leak detection and repair focused on identifying water losses at the retail water agency level, finding the leaks, and fixing them. As a saver of direct energy and water, this program had the highest energy savings among the CPUC pilot efforts. This work demonstrates a significant untapped opportunity for energy and water savings in the future.
- The CPUC will continue working on identifying opportunities for increased participation of water agencies in traditional energy efficiency rebate programs, including motors and process improvement.

Renewable Energy Production

- In a landmark ruling in October 2010, the Federal Energy Regulatory Commission clarified that for states like California that have a Renewable Portfolio Standard or other renewable-energy-procurement requirement, the feed-in tariff may be based solely on an avoided cost calculation for renewable generation. The ruling is expected to help stimulate renewable energy production.

Public Goods Charge for Water

- The Natural Resources Agency is leading efforts to support renewal of the existing Energy Efficiency Public Goods Charge, which is scheduled to sunset in 2012.

- DWR will include a finance plan in the 2013 California Water Plan that will contain recommendations regarding funding priorities, existing and new financial strategies, and revenue sources that can be used, in part, to support integrated water management and sustainability.
- On behalf of the CPUC and the WET-CAT, the UC Berkley Goldman School of Public Policy Analysis prepared a report and recommendations on the use of a Public Goods Charge for water to finance projects to meet the State's targets for water conservation and GHG reduction.