

Statewide Data Program Needs Assessment

Urban Water Use Efficiency

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Program Description

Peter works on two urban water use efficiency programs:

- Urban water management plans
- 20 by 2020 water use efficiency

In addition, there is the Public Water Systems Surveys program, and a Commercial, Industrial and Institutional Task Force.

The 20 by 2020 water use efficiency program found that a lot of water can be saved from landscape water use. The law sets per capita targets for 2020; each water agency has to reduce water use by 20% from 2010 levels. There are exceptions for the type of water year and economic conditions. There are four ways to calculate water use.

Urban water management plans are required by utilities that have more than 3,000 connections or deliver more than 3,000 acre-feet per year. Plans are submitted once every five years. These plans have to be complete in order for a utility to be eligible for funding.

Public Water Systems Surveys

A voluntary survey sent to public water agencies asking about supplies and uses by month. The surveys were originally piggy-backed on a Department of Public Health survey. Eventually the two surveys diverged. The surveys are sent out annually.

Commercial, Industrial and Institutional Task Force

This task force will develop new water efficiency measures for commercial, industrial and institutional uses. The task force will also try to quantify water used by different industries.

Process Water

Urban water agencies can deduct process water from their 20 by 2020 baseline. This took 2 years to develop and get approved.

Agricultural Water Measurements

Agricultural water utilities will now have to measure deliveries to head gates. This has taken 1.5 years so far. The Office of Administrative Law is reviewing the proposal.

What data does your program need to be successful?

Three methods are identified in the law. DWR has committed to developing a fourth method for water reduction under the law addressing landscape water use. No one knows how much water landscapes use. The urban landscape area by water utility is not known. It is hard to know how much water is used by residential customers indoors vs outdoors. Traditionally, DWR has use the minimum month method as a baseline for indoor use. This method does not work well in Southern California where the climate is mild, and water use does not change much by month.

DWR will work with 52 sample utilities and aerial imagery to quantify the landscape area.

DWR needs service area boundaries for water utilities.

The basic calculation is for urban water use is:

$$\text{Total Use} = (\text{Commercial, Industrial and Institutional Use}) + \\ (70 \text{ gallons per day per person})(\text{Population}) + (\text{System Water Loss}) + \\ (\text{Outdoor Use})$$

If you solve this equation for Outdoor Use, you can estimate how much water is used outdoors. (You need an estimate of System Water Loss.)

If you know the landscape area and the outdoor use, you can calculate the use per acre. This is a value that should be roughly comparable between utilities, if the landscape cover (plants) are roughly the same.

The program could use saturation levels for plumbing fixtures (showerheads and toilets) and appliances (washing machines and dishwashers), not just on a statewide basis but by water utility.

Peter tried to use information from the Public Water Systems Surveys when initially working on the methods for water savings. There is no QA/QC of the data. The data is inconsistent for a single agency from year to year. The regional offices may clean up the data, but if they do it does not get back to headquarters. As a result, there are five versions of the Public Water Systems Surveys in DWR (not a single authoritative data set).

In addition, the information from the Public Water Systems Surveys is not consistent with the urban water management plans.

Peter does not know why we collect the data if we do not use it.

Do you have the data your program needs?

Monthly supply and use data would be helpful.

Consistency between the Public Water Systems Surveys and urban water management plans would also be helpful.

The agricultural water management program has to integrate information from the County Agricultural Commissioners' offices, Pesticide Use Reports and other sources. All of this is difficult to get annual land use estimates.

The program could use more frequent data.

A unique number for water agencies would be nice. Public Water Systems Surveys have their unique identifier, but urban water agencies have no corresponding ID. For that matter, it would be good to have a definitive list of agencies and contact information.

Reporting from urban wastewater treatment systems would be nice. Peter would like feature classes for the wastewater treatment system service areas. It would be good to come up with a per capita wastewater treated number.

It would be nice to have an estimate of runoff from urban areas during the dry season.

Is data managed in a way that meets your program needs?

Peter would like a central system for data collection. This would be the single authoritative source for the Department.

The Water Use Efficiency Office is developing an on-line data submittal system now. Peter has great hopes for this system. This is a centralized system. It should provide an easier review process for DWR than we have had.

The timing of reviews is important, both for the program, as well as the Integrated Regional Water Management Program. DWR has to prioritize the review of those agencies that are applying for financial assistance. About 80 urban water management plans will have to be reviewed quickly.

DWR will look at the entire plan this time around, not just all the individual pieces.

It would be good to understand how the data is used? A lot of data may be collected, but it is never used by the State. The Department needs to review what it collects and why.

Do you have unmet needs

Local water use data would be helpful.

Statewide and regional water balance information (water supply and water use) would be helpful.

There is a lack of water use by urban sector: residential, residential – single family, residential – multi-family, commercial, industrial, institutional.

The program needs resources. There are 18 projects identified in SB7X, with an estimated cost of \$4,000,000 per year. The cost goes to staff and contractors. These projects will implement regulations and methodologies. They are all public processes with stakeholders that will need some level of professional moderation. The projects will have to get approval from the Water Commission.

How are you accountable as a program manager?

The 20 by 2020 has a report to the Legislature in 2015. This is midway to the goal of 2020. Agencies will have to report their progress in the next urban water management plans. If the agency is not on target, then the agency will have to adjust its programs.

The Urban Water Management Plan Program has to report to the Legislature every five years (one year after the plans are due).

Apportioning Costs

No discussion of this item.

Other Issues

Who else to talk to:

Rich Mills about water recycling and storm water runoff