

**Statewide Water Analysis Network
Workshop**
California Water Plan Water Portfolios
**Methods Describing Current Water
Conditions in California**

Monday September 24th, 2007
9:30 a.m. – 3:30 p.m.
LOCATION
Bonderson Building, 1st Floor Hearing Room
901 P Street, Sacramento, CA 95814

California Urban Water Use

1. Current Methods

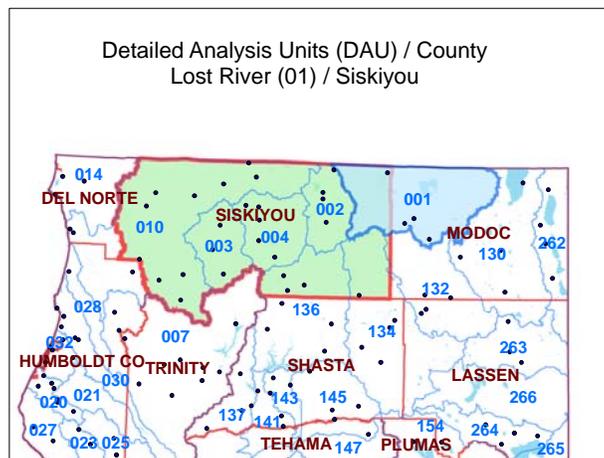
- (1) Public Supply Water Use, and
- (2) Self Supplied Water Use, then
- (3) Combine the two to obtain Total Annual Water Use.

The reasons for this approach are the types of data available to us and method required.

2. DAU/County

For planning purposes, the State is divided into:

- 10** Hydrologic Regions (HR), further divided into
- 56** Planning Area (PA), and further divided into
- 278** Detailed Analysis Units (DAU)



The overlapped area between a county and a DAU is referred to as DAU/County, which is the smallest study area we use to aggregate our urban water use.

3. Data sources

- Surveyed data
- Data from other agencies
- Data from literature review (previous survey results and studies)

4. Public Water System Statistics

This is the form we use to conduct Urban Water Use Survey

State of California

Department of Water Resources

The Resources Agency

PUBLIC WATER SYSTEM STATISTICS

Calendar Year 2006

Sonoma Meadows WWC
 Home Hoyte, CPA
 19969 Greenly Rd.
 Sonoma, CA 95370
 PWS# 5510023
 CD

1. General Information

Please follow the provided instructions.

Contact : _____
 Title: _____
 Phone: _____
 Fax: _____
 E-mail: _____
 Website: _____
 County: _____
 Population served: _____
 Names of communities served: _____

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential				
Multi-family Residential				
Commercial/Institutional				
Industrial				
Landscape Irrigation				
Other				
Agricultural Irrigation				
TOTAL				

3. Total Water Into the System - Units of production:

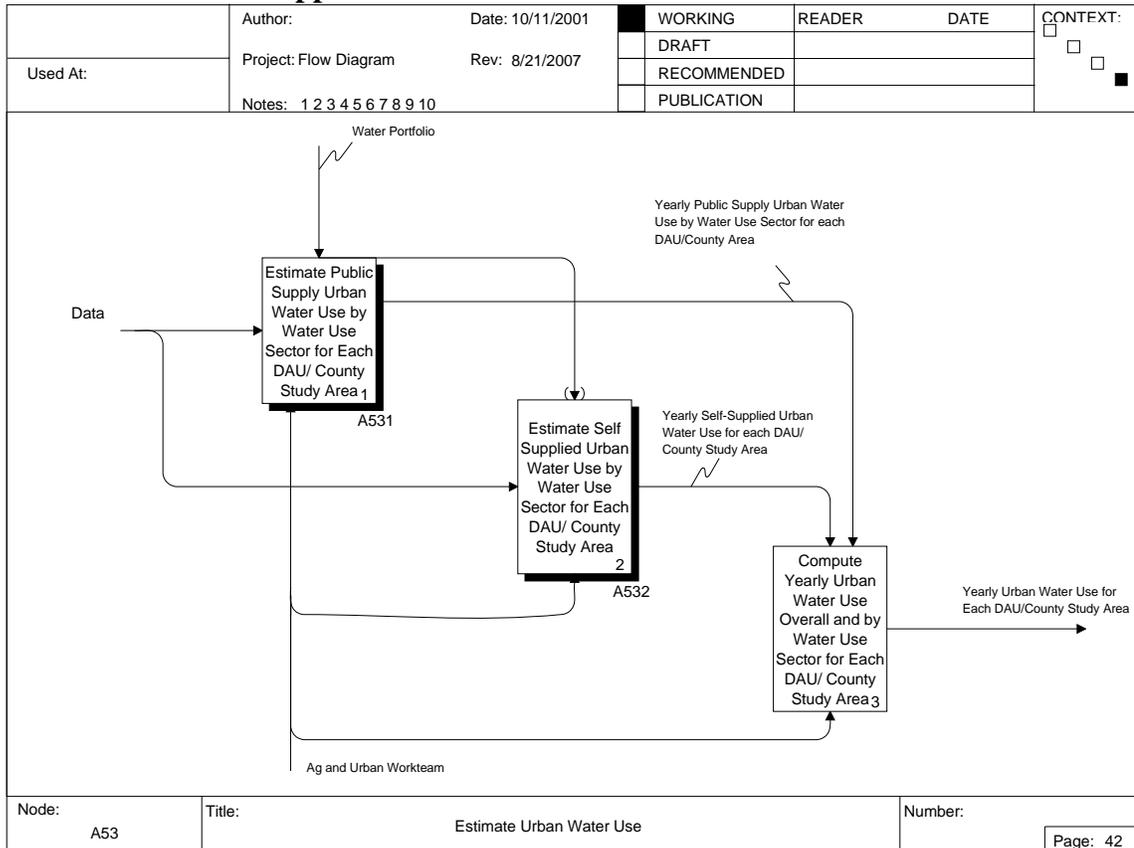
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Potable	Wells													
	Surface													
	Purchased ^{1/}													
	Total Potable													
Untreated Water														
Recycled ^{2/}														

1/ Potable wholesale supplier(s): _____ 2/ Recycled wholesale supplier(s): _____
 Level of treatment: _____

4. Metered Water Deliveries - Units of delivery:

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	<input type="checkbox"/>													
B. Multi-family Residential	<input type="checkbox"/>													
C. Commercial/Institutional	<input type="checkbox"/>													
D. Industrial	<input type="checkbox"/>													
E. Landscape Irrigation	<input type="checkbox"/>													
F. Other	<input type="checkbox"/>													
Total Urban Retail (A thru F)														
Agricultural Irrigation	<input type="checkbox"/>													
Wholesale (to other agencies)	<input type="checkbox"/>													

5. A53: Our overall approach to estimate urban water use.

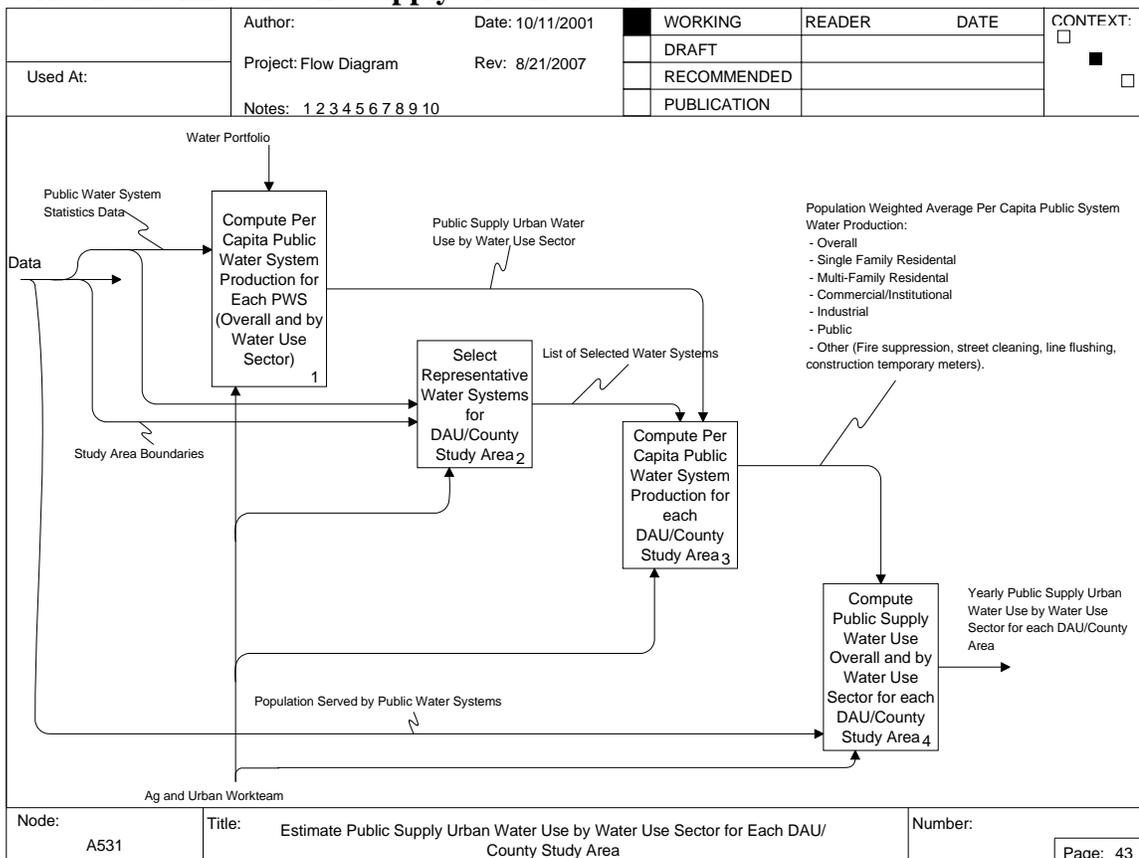


Node: A53

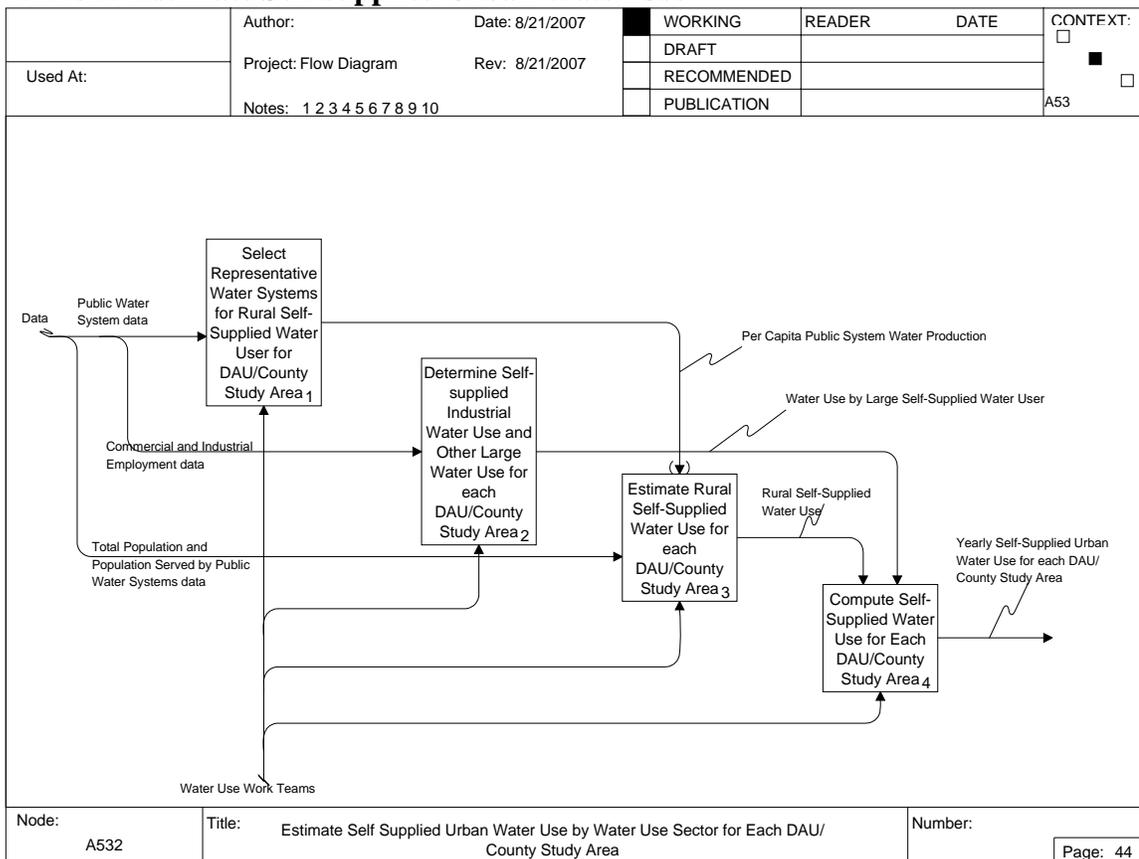
Title: Estimate Urban Water Use

Number: _____ Page: 42

6. A531: Estimate Public Supply Urban Water Use



7. A532: Estimate Self-supplied Urban Water Use



8. Analytical tools

Currently, Most our computation and data manipulation are done by using Excel based models. We have developed a database based model and the model is in testing stage. In the future, we would like to add GIS based tools for our work.

9. Example: Urban water use of DAU/County: Lost River/Siskiyou, year 2000.

Total Urban Water Use is the sum of Public Supply Water Use and Self-supplied Water Use. Self-supplied is the sum of water use by rural water users and large water users.

10. Data products

In addition to overall urban water use, we also provide water use by customer classes, including,

- | | |
|-----------------------------|-------------|
| -Single Family | -Industrial |
| -Multi-Family | -Landscape |
| -Commercial / Institutional | |

All of them are reported separately for public supply and self-supplied; Interior and Exterior water use by Single Family and Multi-Family are also reported separately. We can also provide Population data for each DAU/County.

11. What's new for Update 2009

One of our major efforts is to finish testing California Urban Water Use Model. The model is developed with the help of Jim Cornwell of Bureau of Reclamation.

The model is a database based model. There are many benefits of using database base model, such as (1) Automate all the computation processes; (2) Organizing and storing all types of historical data in one file; (3) The model can “grow” when we add more and more data over time; (4) Query functions allow us to have the flexibility to aggregate water use data the ways as we need it, such as spatially, temporally, or categorically.

12. Improvements beyond Update 2009

(1) We will test a GIS based model called WaterDemandForecaster™, The model forecast water use changes according to land use changes.

(2) We think that more Socio-economic Data Collections will beneficial to our work. The things we are thinking to carry out include Non-residential Water Use Survey and Golf Course Survey.

13. Improvements beyond Update 2009 (continue...)

(3) Our land use team is currently conducting a pilot study of urban landscape survey with Bureau of Reclamation, using remote sensing images. So we expect that we will have data about Urban Landscape in the future, such as types of landscapes and their acreage.

14. Contact Information

<http://www.landwateruse.water.ca.gov/>

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