

Water Portfolio

Overview

September 24, 2007 Statewide Water Analysis Network Workshop

Definitions

- Lists of definitions are included on the website –

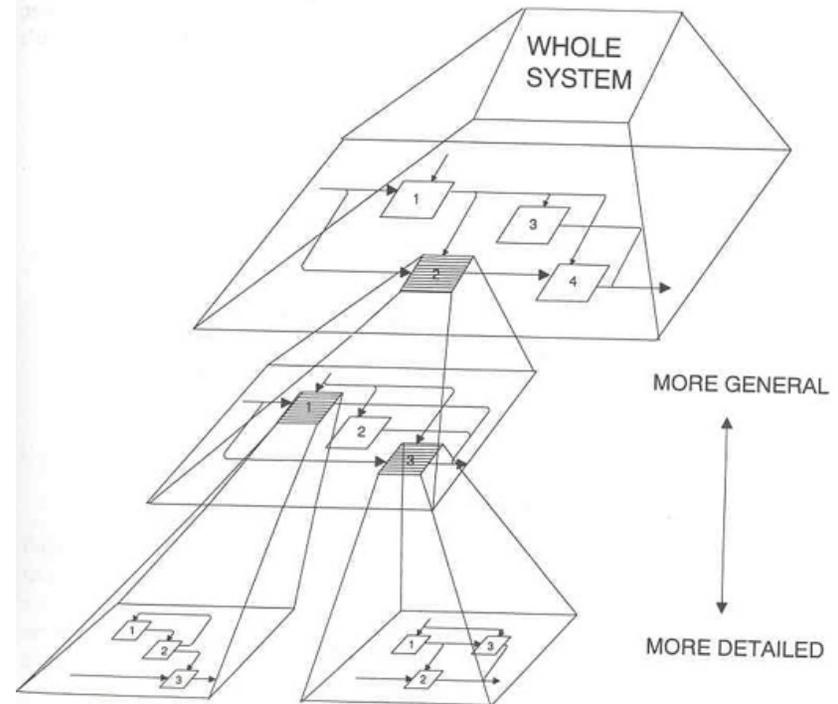
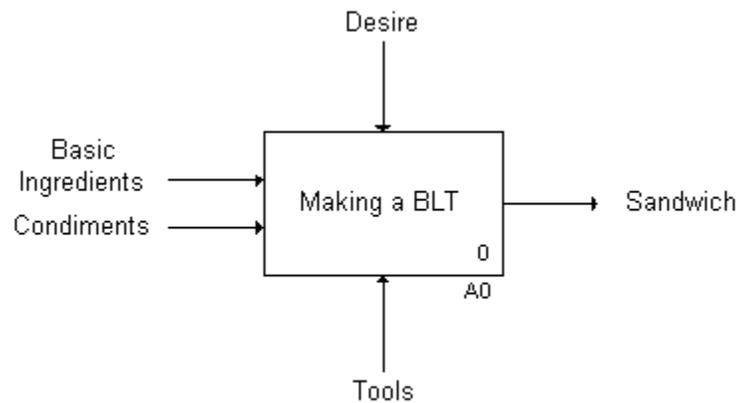
<http://www.waterplan.water.ca.gov/docs/cwpu2005/vol3/vol3glossary.pdf>

Basic Definitions

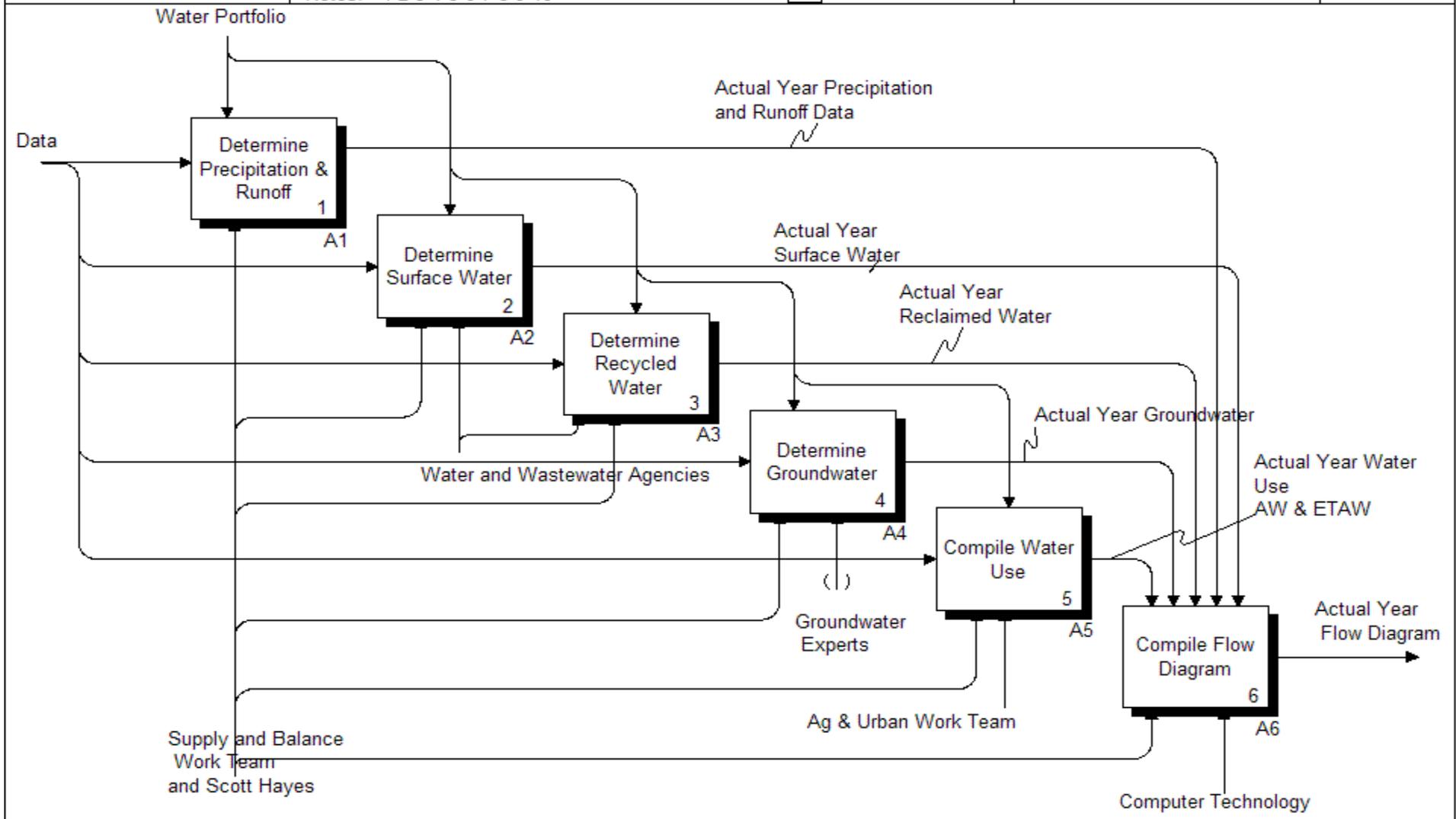
- **Applied Water** – The amount of water from any source needed to meet the demand for beneficial use. Includes consumptive use, reuse and outflow.
- **Net Water Use** – the amount of water needed in a water service area to meet all requirements or demands. Includes evapotranspiration of applied water, irrecoverable water and outflow leaving the service area, but not reuse.
- **Depletion** – Water consumed through evapotranspiration, flows to salt sinks, and other non-recoverable outflows.

Data Development

- The following IDEF0 diagrams describe the processes used to develop the flow diagram data
- The IDEF0 program uses a format similar to the following

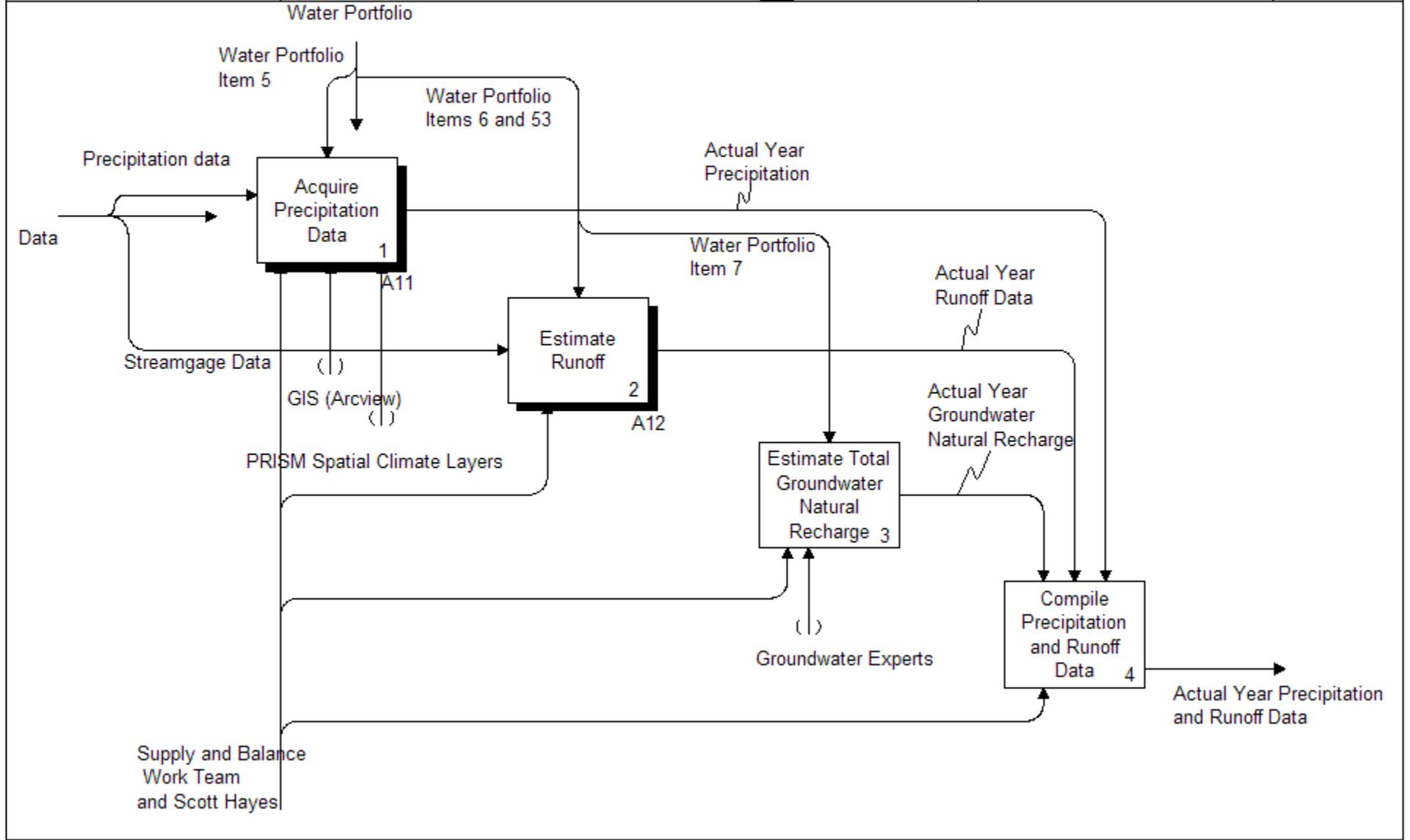


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	Project: Flow Diagram	Rev: 10/11/02	DRAFT			■
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			PUBLICATION			A-0

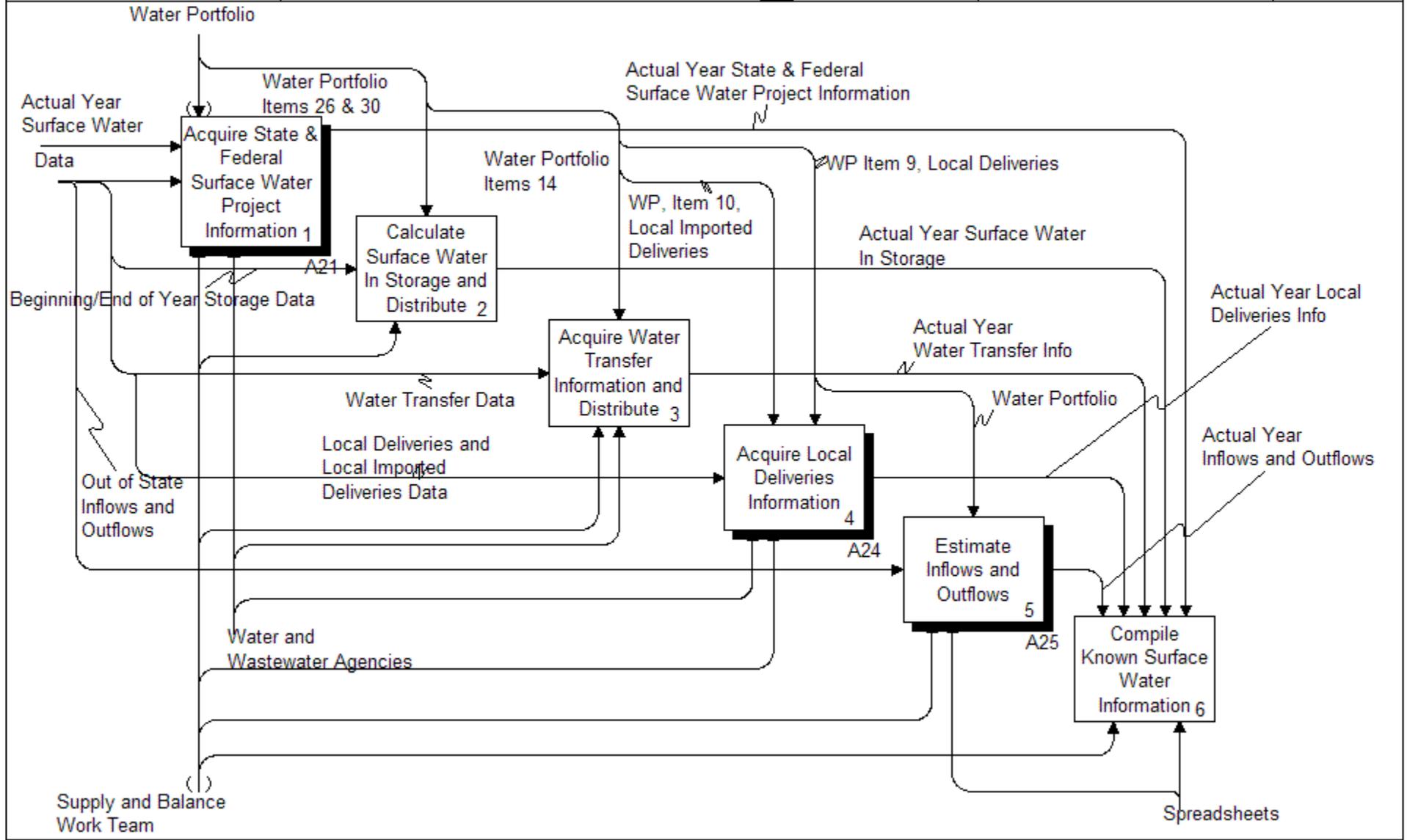


Node: A0	Title: Develop Flow Diagram	Number:	Page: 2
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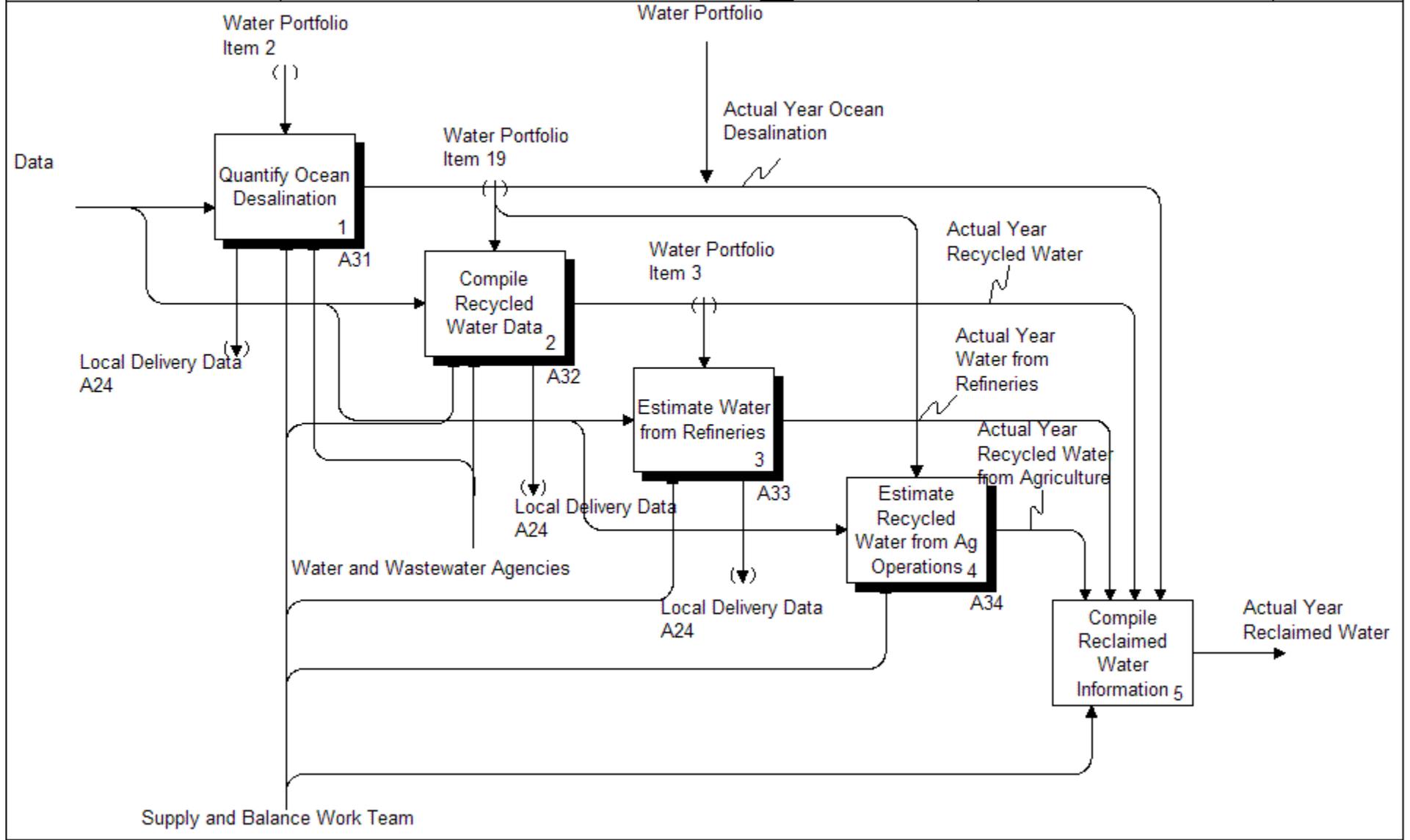
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			PUBLICATION			



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	Project: Flow Diagram	Rev: 10/10/01	DRAFT			
			RECOMMENDED			
			PUBLICATION			
	Notes: 1 2 3 4 5 6 7 8 9 10					

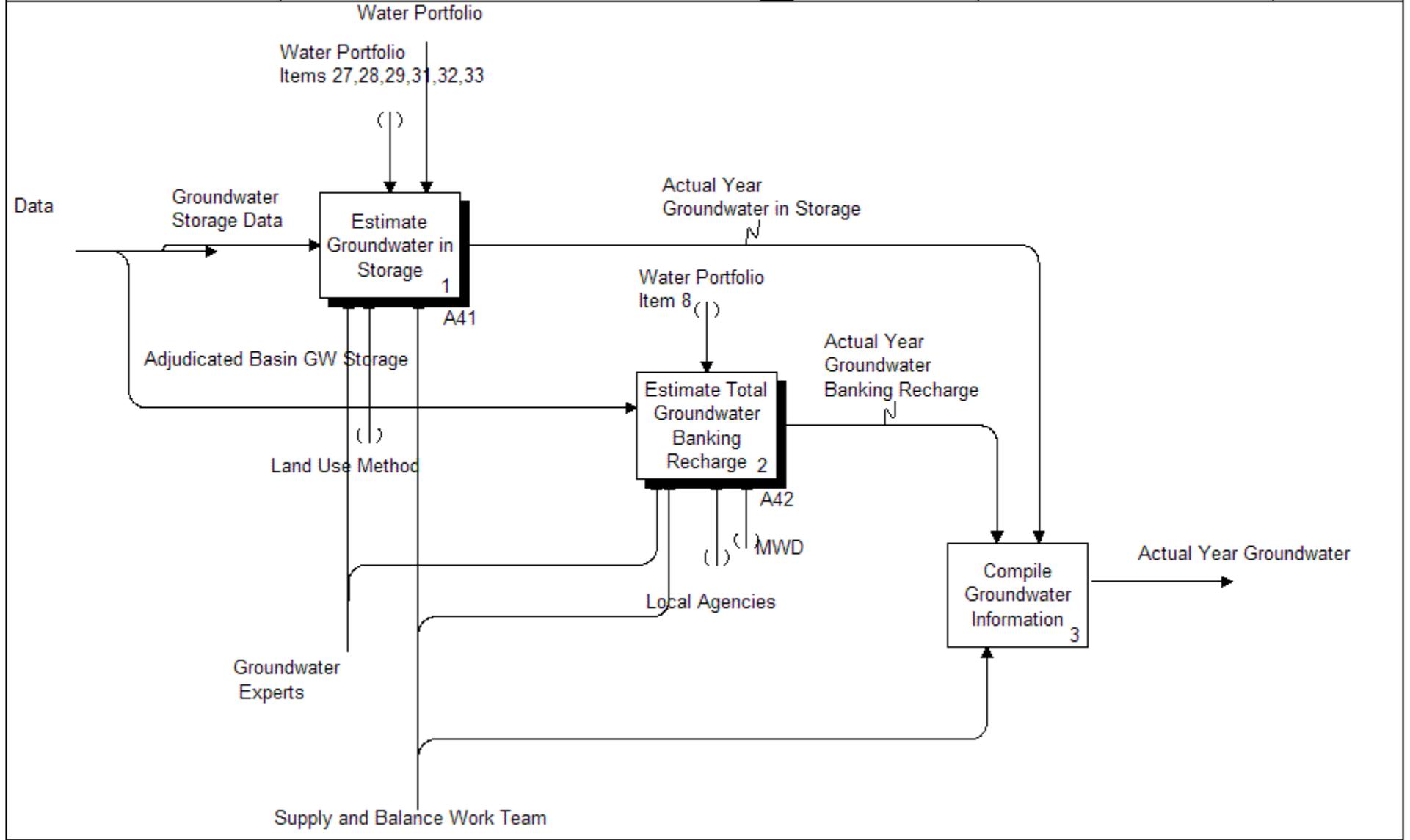


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	Notes: 1 2 3 4 5 6 7 8 9 10		RECOMMENDED			
			PUBLICATION			



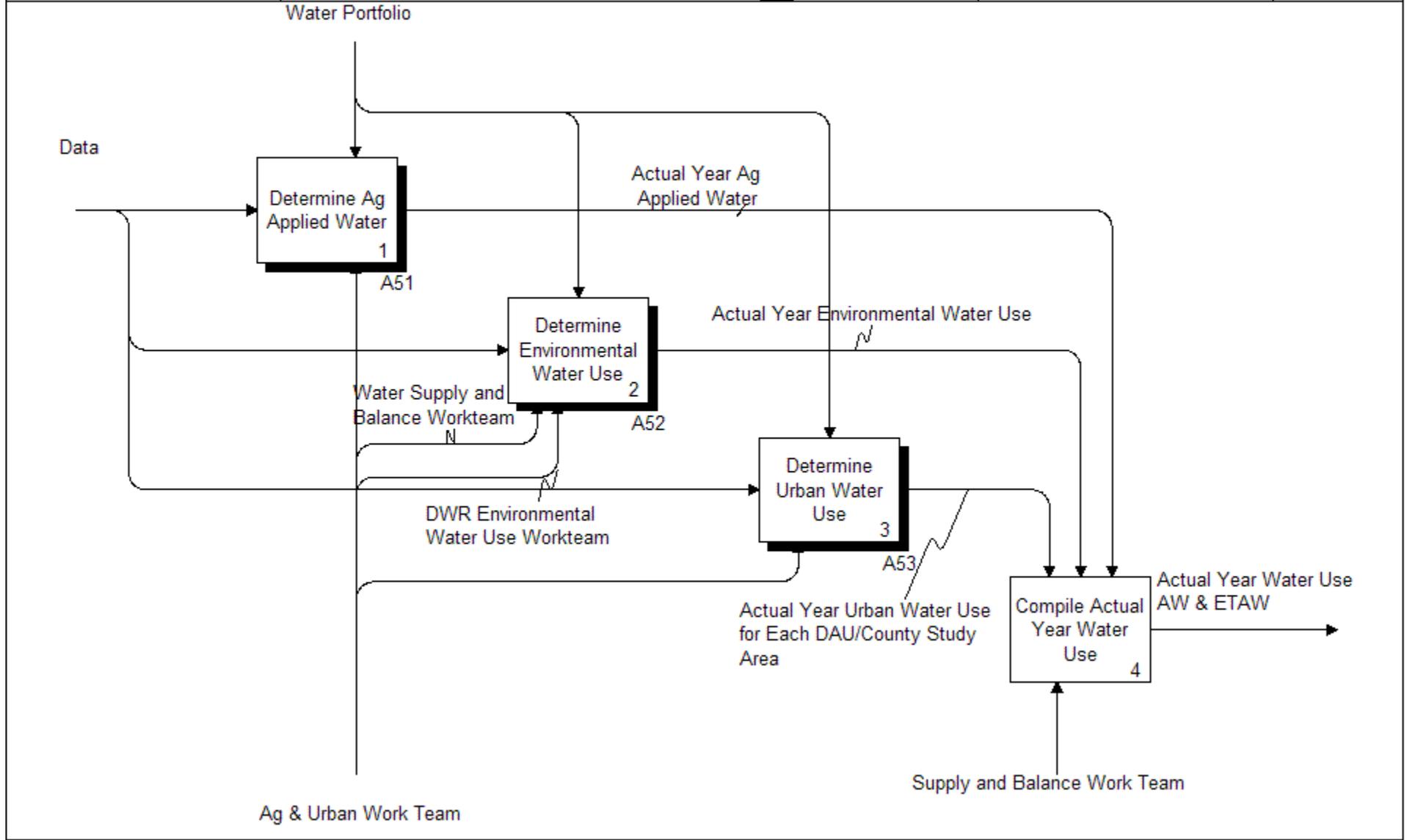
Node: A3	Title: Determine Recycled Water	Number:	Page: 17
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	Notes: 1 2 3 4 5 6 7 8 9 10		RECOMMENDED			
			PUBLICATION			



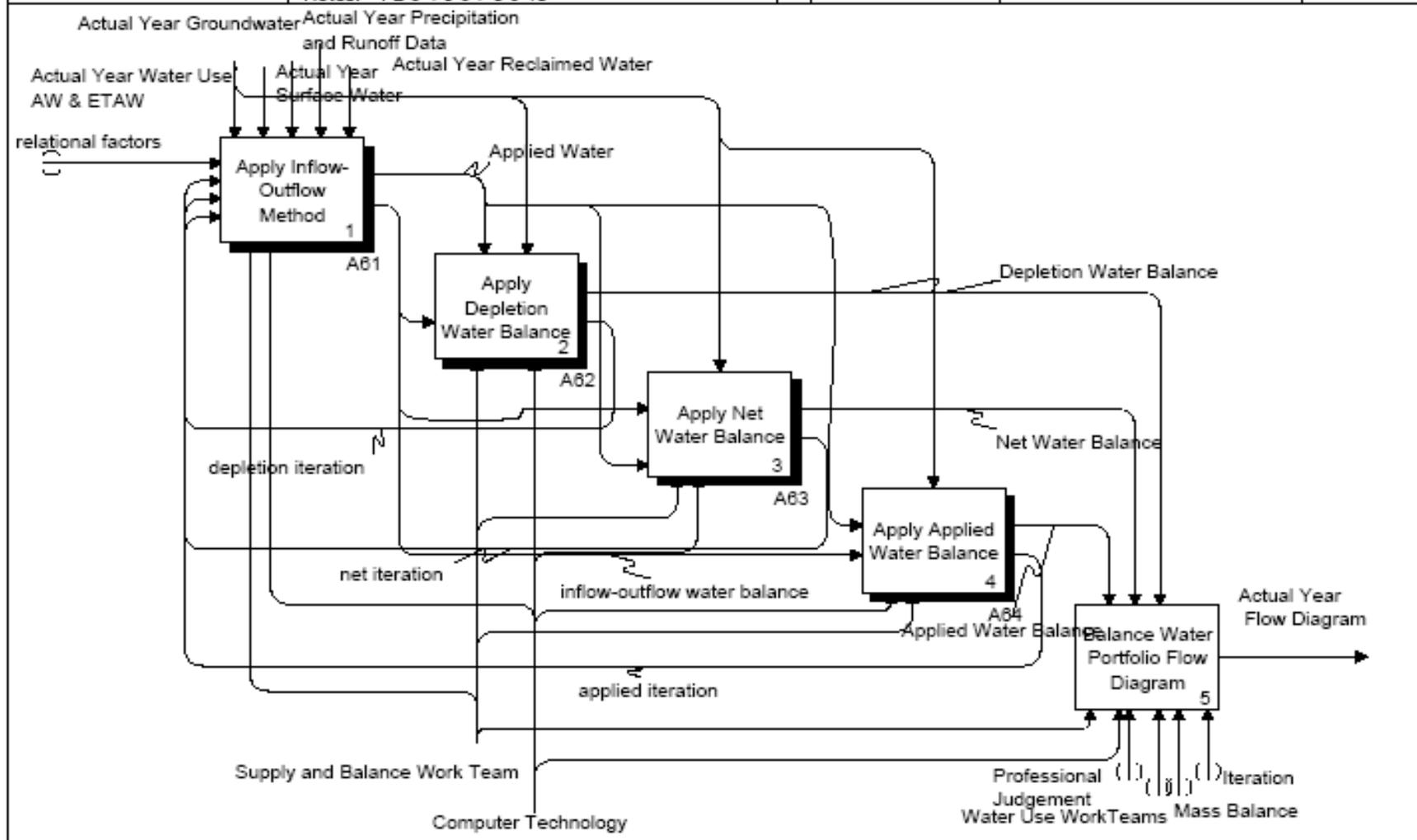
Node: A4	Title: Determine Groundwater	Number:	Page: 22
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	Notes: 1 2 3 4 5 6 7 8 9 10		RECOMMENDED			
			PUBLICATION			



Node: A5	Title: Compile Water Use	Number:	Page: 25
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Used At:	Author: Tipton	Date: 10/19/2001	WORKING	READER	DATE	CONTEXT □ □ □ □ □ ■
	Project: Flow Diagram	Rev: 8/31/2007	DRAFT			
	Notes: 1 2 3 4 5 6 7 8 9 10		RECOMMENDED			A0
			PUBLICATION			



Node: A6	Title: Compile Flow Diagram	Number:	Page: 46
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Developed Water Use Balance
Thousand Acre-Feet

Year: **1999** Scenario Type: **Actual Year**
 Detailed Analysis Unit (DAU) No.: **068** DAU Name: **Pacheco-Santa Ana Creeks**
 County No.: **43** County Name: **Santa Clara**
 Planning Area (PA) No.: **0301** PA Name: **Northern**
 Hydrologic Region (HR) No.: **03** HR Name: **Central Coast**

LEGEND

Green Shading Indicates Data Entry
 Red Font Indicates Calculated Values
 Yellow Shading Signifies Totals
 Blue Shading Indicates Sector Balance Only (not DAU/Co)
 Blue Font Indicates Values for Water Portfolios, Not Used in Developed Water Use Balance
 Orange Shading Indicates Water Use Data

Managed Wetlands

By Refuge or Private Wetland	Name	Name	Name	Name	Name	Total
Surface Water Acreage						0.0
Groundwater Acreage						0.0
Surface Water ETAW						0.0
Groundwater ETAW						0.0
Surface Water AW						0.0
Groundwater AW						0.0
Groundwater Recharge AW						0.0
Percolation/Seepage						0.0
Supply - Local Surface Water						0.0
Supply - Local Import						0.0
Supply - Ground Water - Unadjudicated						0.0
Supply - Ground Water - Adjudicated						0.0
Supply - Ground Water - Banked						0.0
Supply - Colorado River						0.0
Supply - State Water Project						0.0
Supply - Central Valley Project - Base						0.0
Supply - Central Valley Project - Project						0.0
Supply - Other Federal						0.0
Supply - Ocean Desalination						0.0
Supply - Water from Refineries						0.0
Supply - Water Transfers						0.0
Supply - Inter-basin Water Transfers						0.0
Sub-Total (Prime Supply)	0.0	0.0	0.0	0.0	0.0	0.0
Supply - From Other DAUs with Co & PA						0.0
Supply - From Same DAU, out of Co, with PA						0.0
Supply - From Other DAU, out of Co, with PA						0.0
Supply - Out of PA						0.0
Supply - Out of HR						0.0
Supply - Carry-over Storage from Prior WY						0.0
Total Use of Water Supply	0.0	0.0	0.0	0.0	0.0	0.0

	Agriculture	Managed Wetland	Urban	Total
Local Surface Water	0.0	0.0	0.0	0.0
Local Import	0.0	0.0	0.0	0.0
Ground Water - Unadjudicated	0.0	0.0	0.0	0.0
Ground Water - Adjudicated	0.0	0.0	0.0	0.0
Ground Water - Banked	0.0	0.0	0.0	0.0
Colorado River	0.0	0.0	0.0	0.0
State Water Project	0.0	0.0	0.0	0.0
Central Valley Project - Base	0.0	0.0	0.0	0.0
Central Valley Project - Project	0.0	0.0	0.0	0.0
Other Federal	0.0	0.0	0.0	0.0
Ocean Desalination	0.0	0.0	0.0	0.0
Water from Refineries	0.0	0.0	0.0	0.0
Water Transfers	0.0	0.0	0.0	0.0
Inter-basin Water Transfers	0.0	0.0	0.0	0.0
Sub-Total (Prime Supply)	0.0	0.0	0.0	0.0
Inflow Drain Water				
From Other DAUs within County and PA	0.0	0.0	0.0	0.0
From Same DAU, out of County, within PA	0.0	0.0	0.0	0.0
From Other DAU, out of County, within PA	0.0	0.0	0.0	0.0
Out of PA	0.0	0.0	0.0	0.0
Out of HR	0.0	0.0	0.0	0.0
Carry-over Storage from Previous Water Year	0.0	0.0	0.0	0.0
Total Use of Water Supply	0.0	0.0	0.0	0.0

Acronyms	Data Description & Footnotes &
LSW	
LI	
GW-U	
GW-A	
GW-B	
CR	
SWP	
CVP-B	
CVP-P	
OFED	
OCSL	
REF	
WT	
IntWT	
IDW	
IDW	
IDW	
IDW	
STOR	

Water Use Data Input

Ag	Acreage	ETAW	AW
LSW			
GW			
Tot	0.0 TA	0.0	0.0

Urban	Acreage	ETAW	AW
SW			
GW			
Tot	0.0 TA	0.0	0.0

Wetlands	Acreage	ETAW	AW
SW	0.0 TA		
GW	0.0 TA		
Tot	0.0 TA	0.0	0.0
Percolation/Seepage			0.0

GW Recharge Applied Water	Acreage	ETAW	AW
Agriculture		0.0	
Managed Wetlands		0.0	
Urban		0.0	

Ag Cultural Practices (Ag - CP) - Rose
 Decrease other cultural practices

Reuse	Not Included in Total Reuse of Supply
Reuse - Wastewater Recycling	Not Included in Total Reuse of Supply
Reuse - Desalination	Not Included in Total Reuse of Supply
Reuse - Refineries Sectors	
Reuse of Agricultural Supply (Sector Balance Only)	0.0 0.0
Reuse of Managed Wetlands Supply (Sector Balance Only)	0.0 0.0
Reuse of Urban Supply (Sector Balance Only)	0.0 0.0
Total Reuse of Supply from Other Sectors	0.0 0.0 0.0

Rr	
Rrw	
Rd	
Ra	
Rmw	

Reuse of Applied Water within Sector. It is not included in Supply because reuse within a sector does not fit into a mass balance or inflow-outflow analysis.
 Urban Wastewater Reuse by Urban Sector is not included in Supply because this is reuse within sector. Reuse within a sector does not fit into a mass balance or inflow-outflow analysis.
 Desalination Reuse by Urban Sector is not included in Supply because this is reuse within sector. Reuse within a sector does not fit into a mass balance or inflow-outflow analysis.
 This accounts for outflow from one sector to another for sector balancing, but does not increase DAU/County Supply

Note: Supply reuse is the amount of water that moves from one sector and becomes a supply to another sector. This is used ONLY as a method to check sector balance. Otherwise, when evaluating conditions for the entire DAU/County, the movement of water f

ETAW	Agriculture	Managed Wetland	Urban	Total
Evapotranspiration of Applied Water	0.0	0.0	0.0	0.0
Evaporation & Evapotranspiration of Applied Groundwater Recharge	0.0	0.0	0.0	0.0
Evaporation and Evapotranspiration of Wastewater			0.0	0.0
Other Consumptive Losses				
Conveyance System Evaporation & Evapotranspiration	0.0			0.0
Conveyance System Evaporation & Evapotranspiration		0.0		0.0
Conveyance System Evaporation & Evapotranspiration			0.0	0.0
Drainage Losses				
Riparian ET	0.0			0.0
Riparian ET		0.0		0.0
Riparian ET			0.0	0.0
Miscellaneous Agricultural Evapotranspiration	0.0			0.0
Miscellaneous Managed Wetland Evapotranspiration		0.0		0.0
Total Depletion	0.0	0.0	0.0	0.0

LSW	
LI	
GW-U	
GW-A	
GW-B	
CR	
SWP	
CVP-B	
CVP-P	
OFED	
OCSL	
REF	
WT	
IntWT	
IDW	
STOR	
Rr	
Rrw	
Rd	
Ra	
Rmw	

Relational Adjustment Factors for Applied Water

Ag	Wetland	Urban	Fraction of Total GW Recharge Applied Water by Sector
0.0000	0.0000	0.0000	

Relational Factors - Conveyance Evaporation in Relation to Supply

LSW	LI	GW-U	GW-A	GW-B	CR	SWP	CVP-B	CVP-P	OFED	OCSL	REF	WT	IntWT	IDW	STOR	Rr	Rrw	Rd	Ra	Rmw	

Relational Factors - Miscellaneous Losses in Relation to Applied Water

Fraction of Ag Applied Surface Water	Fraction of Ag - CP Applied Surface Water	Fraction of Ag Applied Groundwater	Fraction of Ag - CP Applied Groundwater

Relational Factors - Conveyance Seepage and Deep Percolation in Relation to Supply

LSW	LI	GW-U	GW-A	GW-B	CR	SWP	CVP-B	CVP-P	OFED	OCSL	REF	WT	IntWT	IDW	STOR	Rr	Rrw	Rd	Ra	Rmw	

Conveyance	Agriculture	Managed Wetland	Urban	Total
Conveyance Seepage (not included in Balance)	0.0			0.0
Conveyance Seepage (not included in Balance)		0.0		0.0
Conveyance Seepage (not included in Balance)			0.0	0.0
Conveyance Deep Percolation	0.0			0.0
Conveyance Deep Percolation		0.0		0.0
Conveyance Deep Percolation			0.0	0.0
Conveyance Deep Percolation to Salt Sink	0.0			0.0
Conveyance Deep Percolation to Salt Sink		0.0		0.0
Conveyance Deep Percolation to Salt Sink			0.0	0.0
Conveyance Subsurface Outflow to OR	0.0			0.0
Conveyance Subsurface Outflow to OR		0.0		0.0
Conveyance Subsurface Outflow to OR			0.0	0.0
Conveyance Subsurface Outflow to NV	0.0			0.0
Conveyance Subsurface Outflow to NV		0.0		0.0
Conveyance Subsurface Outflow to NV			0.0	0.0

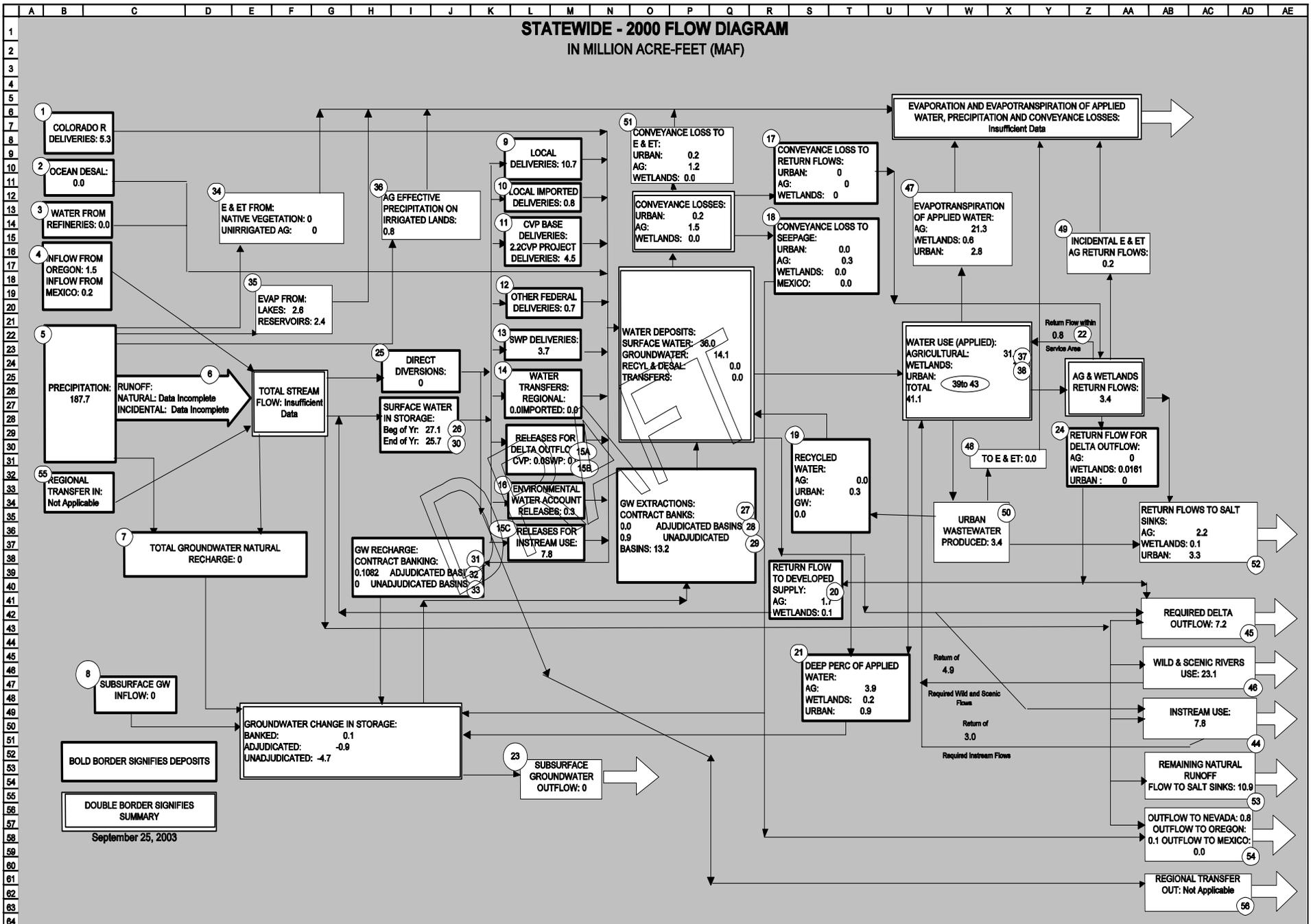
LSW	
LI	
GW-U	
GW-A	
GW-B	
CR	
SWP	
CVP-B	
CVP-P	
OFED	
OCSL	
REF	
WT	
IntWT	
IDW	
STOR	
Rr	
Rrw	
Rd	
Ra	
Rmw	

Relational Factors - Conveyance Seepage and Deep Percolation in Relation to Supply

LSW	LI	GW-U	GW-A	GW-B	CR	SWP	CVP-B	CVP-P	OFED	OCSL	REF	WT	IntWT	IDW	STOR	Rr	Rrw	Rd	Ra	Rmw	

An example of the Inflow-Outflow method of Data Entry

STATEWIDE - 2000 FLOW DIAGRAM IN MILLION ACRE-FEET (MAF)



September 25, 2003

Water Portfolio in Update 2009

- Update 2005 data available on website

http://www.waterplan.water.ca.gov/waterpie/faf_data.cfm

- Complete IDEF0 Flow Charts are available at

<http://www.waterplan.water.ca.gov/technical/processmaps/index.cfm>

- The Water Portfolio data sources are available at

<http://www.waterplan.water.ca.gov/technical/datasources/>

For More Information

Contact staff at the Department of Water
Resources

<http://www.waterplan.water.ca.gov/comments/index.cfm>

Or me

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