

2009 Urban Drought Workshop

Ready to Ration

Santa Clara Valley Water District, San Jose

March 16, 2009

Welcome & Introductions

Sharon Judkins
Chief Executive
Officer - SCVWD

Why are we here today?



California's
DROUGHT

Manucher Alemi
California Department of Water
Resources
March 16, 2009

RECLAMATION

Managing Water in the West

The Central Valley Project 2009 Drought Workshop

Anna Sutton
U.S. Department of the Interior
Bureau of Reclamation



Tracy Ligon
SCVWD Drought
Planning

Toby Goddard

City of Santa Cruz

The Seven Steps

ONE	Establish a Water Shortage Response Team
TWO	Forecast Supply in Relation to Demand
THREE	Balance Supply and Demand: Assess Mitigation Options
FOUR	Establish Triggering Levels
FIVE	Develop Staged Demand Reduction Program
SIX	Adopt the Water Shortage Contingency Plan
SEVEN	Administer and Implement the Water Shortage Contingency Plan

Establish a Team

- Designate Water Shortage Response Team Leader
- Designate team member from each department or division

Compile Demand Data

Quantify average demand for previous five years

- Single Family
- Multifamily
- Commercial
- Industrial
- Institutional
- Landscape
- (Agricultural)

Example Approach - Table 1

Demand Data

Table 1

Customer types	Yr 2003	Yr 2004	Yr 2005	Yr 2006	Yr 2007	5-yr Avg
Single family	6,897	7,421	6,027	6,539	7,556	6,888
Multi-family	3,099	3,165	2,520	2,742	2,982	2,902
Commercial	2,475	2,665	2,376	2,511	2,849	2,575
Industrial	177	190	170	179	203	184
Institutional	884	952	849	897	1,017	920
Landscape	552	650	494	564	668	586
Demand subtotal	14,084	15,043	12,436	13,432	15,275	14,054
NRW (8%)	1,127	1,203	995	1,075	1,222	1,124
Total demand	15,211	16,246	13,431	14,506	16,496	15,178

Compile Supply Data

Quantify worst-case supply for next **FIVE** or more years

Local surface

Wholesale

Groundwater

Private Transfers

DWR Water Bank (Table 2c)

Other

Example Approach - Table 2a, 2b, 2c

Supply Data

Table 2a

Source	Full Supply	2009	2010
USBR	9,322	4,661	4,661
(% of normal)	100%	50%	50%
State Water Supply	7,500	1,125	750
SWP (% of normal)	100%	15%	10%
Other (define)		0	0
Other (% of normal)	100%		
Groundwater	2,350	2,350	2,350
GW (% of normal)	100%	100%	100%
Emergency Supply		4,000	4,000
TOTAL	19,172	12,136	11,761

Average Demand 15,178

Supply Data

Table 2b

Source	Full Supply	2011	2012	2013	2014
USBR	9,322	6,992	6,992	6,992	6,992
(% of normal)	100%	75%	75%	75%	75%
State Water Supply	7,500	1,875	1,875	1,875	1,875
SWP (% of normal)	100%	25%	25%	25%	25%
Other (define)		0	0	0	0
Other (% of normal)	100%				
Groundwater	2,350	2,350	2,350	2,350	2,350
GW (% of normal)	100%	100%	100%	100%	100%
Emergency Supply		3,000	2,000	1,000	500
TOTAL	19,172	14,217	13,217	12,217	11,717

Average Demand 15,178

Supply & Demand Balance

Table 2c - Drought Water Bank / Critical Needs

Water Use Sectors	60 gpcd	80%
Single family (49,000)	3,293	
Multiple family (25,200)	1,694	
Commercial		2,060
Institutional		147
Industrial		736
Landscape Irrigation		
Reduced allotments	4,987	2,943
Non-revenue water (8%)	634	
Critical Needs Total	8,564	56%

Average Demand 15,178

Determine Supply & Demand Balance

- Quantify shortage for 2009 and project 2010
- Project worst case supply for 2011 - 2014

Example Approach - Table 3a, 3b

Supply & Demand Balance

Table 3a - Worst Case Supply vs. Average Demand

		2009 Supply	2009 Shortage	2010 Supply	2010 Shortage
Avg. Demand	15,178	12,136	(3,042)	11,761	(3,417)
Percent Shortage		20%		23%	

Supply & Demand Balance

Table 3b - Worst Case Supply vs. Average Demand

		2011 Supply	2012 Supply	2013 Supply	2014 Supply
Avg. Demand	15,178	14,217	13,217	12,217	11,717
Percent Shortage		6%	13%	20%	23%

Increase Supply

- Pursue supplemental supplies – Drought Water Bank, transfers
- Increase groundwater capacity - schedule well driller
- Plan to increase supplier efficiency (a few percent)
 - Meter replacement
 - System losses
 - System pressure
 - System flushing
 - Fires and Hydrants
 - Supplier landscaping

Example Approach - Table 4

Increase Supply / Reduce NRW

New Supplies	2009 AF	2010 AF
Well(s)	-	900
Water Bank	-	-
Transfer	500	250
Total	500	1,150

NRW (Losses)	Avg. AF	% reduction	AF savings
Meter Replacement	800	20%	160
System Losses	270	10%	27
System Pressure		3%	8
System Flushing	18	100%	18
Fires & Hydrant	6	50%	3
Supplier Landscape	30	50%	15
Total NRW	1,124		231

Decrease Demand

- Determine health & safety minimum supply
- Determine potential savings by customer type (landscape, other regulations)
- Select water allocation method by customer class & stage
- Adopt restrictions, enforcement rules and penalties

Example Approach - Table 5a & 5b

(assumes population of 74,200)

Average Demand

Full Supply **19,172**

Population **74,200**

Priority	Residential	CII	Landscape	NRW	TOTAL	% of Total
Average Use (2003-07)	9,789	3,679	586	1,124	15,178	
Health & Safety (60 gpcd)	4,987	150			5,137	34%
Com / Instit / Indust		2,693			2,693	18%
Landscape	4,717	786	576		6,079	40%
New Connections	85	50	10		145	1%
TOTAL (AF)	9,789	3,679	586	1,124	15,178	

Decrease Demand

STAGE I (85%)

Available Supply 12,902

Priority	Residential	CII	Landscape	NRW	TOTAL
Average Use (2003-07)	9,789	3,679	586	1,124	15,178
Health & Safety (60 gpcd)	4,987	150	0		5,137
Com / Instit / Indust	0	2,793	0		2,793
Landscape	3,362	478	440		4,279
New Connections	100	50	0		150
TOTAL (AF)	8,448	3,471	440	989	13,348
% reduction	14%	6%	25%	12%	12%

STAGE II (75%)

Available Supply 11,384

Priority	Residential	CII	Landscape	NRW	TOTAL
Average Use (2003-07)	9,789	3,679	586	1,124	15,178
Health & Safety (60 gpcd)	4,987	150	0		5,137
Com / Instit / Indust	0	2,793	0		2,793
Landscape	2,017	368	293		2,678
New Connections	0	0	0		0
TOTAL (AF)	7,004	3,311	293	849	11,456
% reduction	28%	10%	50%	25%	25%

Decrease Demand

STAGE III (65%)

Available Supply **9,866**

Priority	Residential	CII	Landscape	NRW	TOTAL
Average Use (2003-07)	9,789	3,679	586	1,124	15,178
Health & Safety (50 gpcd)	4,156	150	0		4,306
Com / Instit / Indust	0	2,793	0		2,793
Landscape	1,681	0	205		1,886
New Connections	0	0	0		0
TOTAL (AF)	5,836	2,943	205	719	9,703
% reduction	40%	20%	65%	36%	36%

STAGE IV (50%)

Available Supply **7,589**

Priority	Residential	CII	Landscape	NRW	TOTAL
Average Use (2003-07)	9,789	3,679	586	1,124	15,178
Health & Safety (40 gpcd)	3,325	120	0		3,445
Com / Instit / Indust	0	2,653	0		2,653
Landscape	840	0	147		987
New Connections	0	0	0		0
TOTAL (AF)	4,165	2,773	147	567	7,652
% reduction	57%	25%	75%	50%	50%

Decrease Demand

Table 5b showing water allocation method by customer class & stage

Decrease Demand

STAGE III (65%)

Available Supply 9,866

Priority	Residential	CII	Landscape	NRW	TOTAL
Average Use (2003-07)	9,789	3,679	586	1,124	15,178
Health & Safety (50 gpcd)	4,156	120	0		4,276
Com / Instit / Indust	0	2,793	0		2,793
Landscape	1,681	0	205		1,886
New Connections	0	0	0		0
TOTAL (AF)	5,836	2,913	205	716	9,671
% reduction	40%	21%	65%	36%	36%

H&S <20% H&S <20%

irrig <50% irrig <100% irrig <65%

NO NEW CONSTRUCTION

Balance the Budget

- Prepare new pricing structure and rates by stage (Prop. 218)
- Decreased sales, increased costs by stage

Example Approach - Table 6

Balance the Budget

Sales	Normal	Stage 1	Stage 2	Stage 3	Stage 4
% of Normal Supply		85% normal	75% normal	65% normal	50% normal
% Rate Increase		6% rate increase	12% rate increase	26% rate increase	57% rate increase
Fixed charge	\$7,687,889	\$7,687,889	\$7,687,889	\$7,687,889	\$7,687,889
Quantity charge	\$11,524,068	\$10,643,938	\$10,129,399	\$9,923,566	\$9,838,528
Total Income	\$19,211,957	\$18,331,828	\$17,817,289	\$17,611,455	\$17,526,417

Operating Expenses	Normal	Stage 1	Stage 2	Stage 3	Stage 4
overhead expense	\$525,500	\$550,000	\$575,000	\$600,000	\$600,000
source of supply	\$3,903,000	\$3,505,170	\$3,099,800	\$2,647,800	\$2,695,750
product. & purification	\$2,000,000	\$2,556,136	\$2,249,840	\$1,858,240	\$1,716,600
trans. & distribution	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000
customer accounts	\$850,000	\$900,000	\$950,000	\$1,000,000	\$1,000,000
general & admin.	\$3,000,000	\$3,300,000	\$3,600,000	\$3,900,000	\$3,900,000
Conservation	\$175,000	\$300,000	\$900,000	\$1,200,000	\$1,200,000
depreciation	\$3,600,000	\$3,600,000	\$3,600,000	\$3,600,000	\$3,600,000
capital projects	\$1,500,000	\$750,000	\$0	\$0	\$0
Total Operating	\$18,053,500	\$17,961,306	\$17,474,640	\$17,306,040	\$17,212,350

Implement

- Establish stage triggers based on priorities and quantifiable supply availability by source
- Identify lag-time and seasonal issues related to each reduction program
- Consider and monitor impact of limited-number-of-days irrigation programs
- Develop customer service & appeal procedure
- Involve community

Make it work

for your agency & customers

- Establish required computer capabilities for billing, data tracking and customer support
- Identify required changes to existing computer systems
- Make required computer system changes and test thoroughly

Make it work for your agency & customers

- Prepare customer information brochures
- Plumbing hardware recommendations and rebate programs
- Customer assistance programs
- Identify needed new full-time and part-time contract staff and required space and equipment
- Work with media

Planning timeline April - May 2009

NOW	Staff member begins to research and draft an updated rationing plan.
15 - Apr	GM and team review draft plan, suggest changes. The plan is modified and expanded to include implementation procedures for actions necessary during Summer 2009. Essential staff review plan and comment on how it effects their functions, ensure that it is 'workable.'
1 - May	Board subcommittee reviews the plan, suggests changes, and sends the plan to the Board for review and action
15 - May	Full Board reviews the draft plan and schedules public hearings.

Planning timeline June - July 2009

mid-Jun	Plan released for public review. Two public hearings - suggested changes incorporated into plan.
late-Jun	Board adopts WSCP, declares (if necessary) a Water Shortage Emergency, starts voluntary or mandatory program.
1 - July	Customers are notified by direct mail that voluntary mandatory rationing has been adopted and how the plan will affect them

Planning timeline July '09 - May '10

Jul-Oct	Weekly Team meetings to complete future stages. Monitor community response to current plan and modify as necessary
Nov-Dec	Team works with local agencies to coordinate regional response. Board sets more public hearings.
Jan-Feb 2010	Board adopts plan, computer/billing upgrades completed. Materials prepared, rate hearings scheduled.
March	Hire staff, lease vehicles, purchase computer, cell phones, etc. Commence rationing.
April - May	Customers receive individual letter with their allotment, description of rationing plan and appeal procedure, general rationing brochure, and conservation information on how to reduce use.

Lunch

Local Agency Experience

Wrap Up

Marsha Prillwitz - prillwitzm@gmail.com

Larry Farwell - lfarwell@earthlink.net

Dave Todd - dtodd@water.ca.gov

Kevin Clancy - kclancy@mp.usbr.gov