

2020 Compliance Plan and IWMP Update Project



Workshop #2 – Getting to Yes for the 2020 Compliance Plan

May 5, 2010

Lisa Maddaus, P.E.

Agenda

- Success factors
- Schedule update
- 2020 Project – *80 minutes*
 - Recap SB 7 – 20x2020 requirements
 - Gallons per capita per day (GPCD) final analysis (historical and target reductions)
 - Summary of conservation measures determined for analysis in Workshop 1
 - Conservation measures model review
 - Policy decisions from the 2020 model
- IWMP Update Project – *15 minutes*
 - Recap Dry-year and climate change planning scenarios
 - Review assumptions and policies in the IWMP model under development
- Summary and Next Steps



2020 and IWMP Project Success Factors

- 2020 Compliance Plan
 - Meet SB 7 targeted GPCD reductions by 2015 and 2020
 - Have a phased approach from basic to more aggressive conservation measures
 - Understand the business case to help prioritize investments in different conservation measures
- IWMP Update
 - Update supply reliability analysis
 - Reanalyze water supply and demands based on 2020 compliance being achieved
 - Include climate change and recycled water

Schedule

- Accelerated schedule to complete Plans prior to next election
- Planned Plan completion: September 2010
- Public comment period after 4th Workshop
- Key strategies to meet this date:
 - **Short time-frame to review materials**
 - All stakeholders (BC, RMCSD staff and Board Members) are responsible for meeting delivery dates
 - Workshop participation

2020 Project Approach Review

- Task 1.1 – Design Blueprint for 2020 Compliance Model
 - Workshop 1
- Task 1.2 – 20x2020 Demand Targets and Compliance Measures Analysis
 - Workshop 2
- Task 1.3 – Draft 2020 Compliance Plan
 - Workshop 4 (with release for 30 day public comment)
- Task 1.4 — Finalize 2020 Plan
 - Final adoption Board Meeting in October

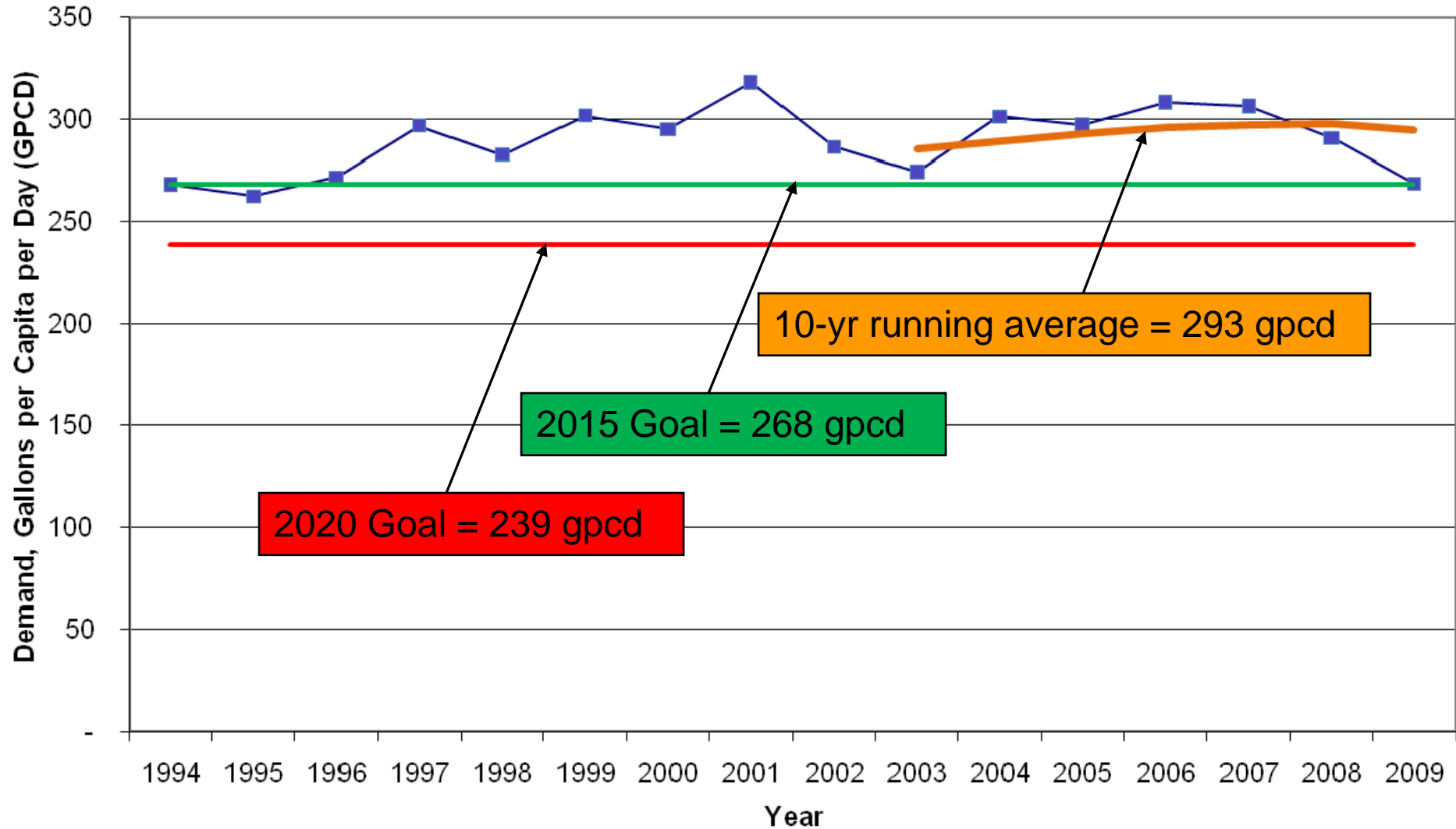
SBX7 7 – 20% by 2020

- Ag and Urban Water Conservation
- “The state shall achieve a 20-percent reduction in per capita water use...”
- Each urban retail water supplier must set interim (2015) and final (2020) targets
- Applicable to “urban retail water suppliers with greater than 3,000 end users or deliver more than 3,000 acre-feet”
- Flexibility in setting baseline 10-year period
- Four alternatives for compliance
 - Methods 2, 3 and 4: geographic scale taken into account
 - Report on approach in 2010 UWMP
- Enforcement provisions

Workshop 2 – 2020 Outcomes Needed

- Confirmation of Method 1 and the GPCD targets
- Confirmation of the growth projection
- Agreement on the specific measures for inclusion in the 2020 Plan based on model results
- Decision on the level of effort to meet the GPCD targets (scope, budget, schedule)
- Overall plan for meeting GPCD targets

Historical Gallons Per Capita Per Day (GPCD)



2020 Goal = 239 gpcd

2015 Goal = 268 gpcd

10-yr running average = 293 gpcd

GPCD Methods Summary

- GPCD – based on total water production divided by population
 - Method 1 – recommended
 - Method 2 – not the best option
 - Method 3 – not feasible
 - Method 4 – under development by Department of Water Resources

Decision on Method 1 - Future Targets

- Historical 10 year running average = 293 gpcd

Method 1

- 2015 Target (10% reduction) = 268 gpcd
- 2020 Target (20% reduction) = 239 gpcd
- Estimated difference historical to 2020 Target using Method 1 = 55 gpcd

Options for reaching GPCD targets

- Conservation measures
- Recycled water – offset, plus recycled water surplus (and helps resolve discharge issues) helpful for meeting any targets

2020 Potable Connections Forecast

- Reference Handout #2
- 2009-2015 Existing Accounts:
 - Total = 2,502
 - EDUs = 1,943
- 2020 Medium Growth Scenario (baseline):
 - Total = 3,117
 - EDUs = 2,484

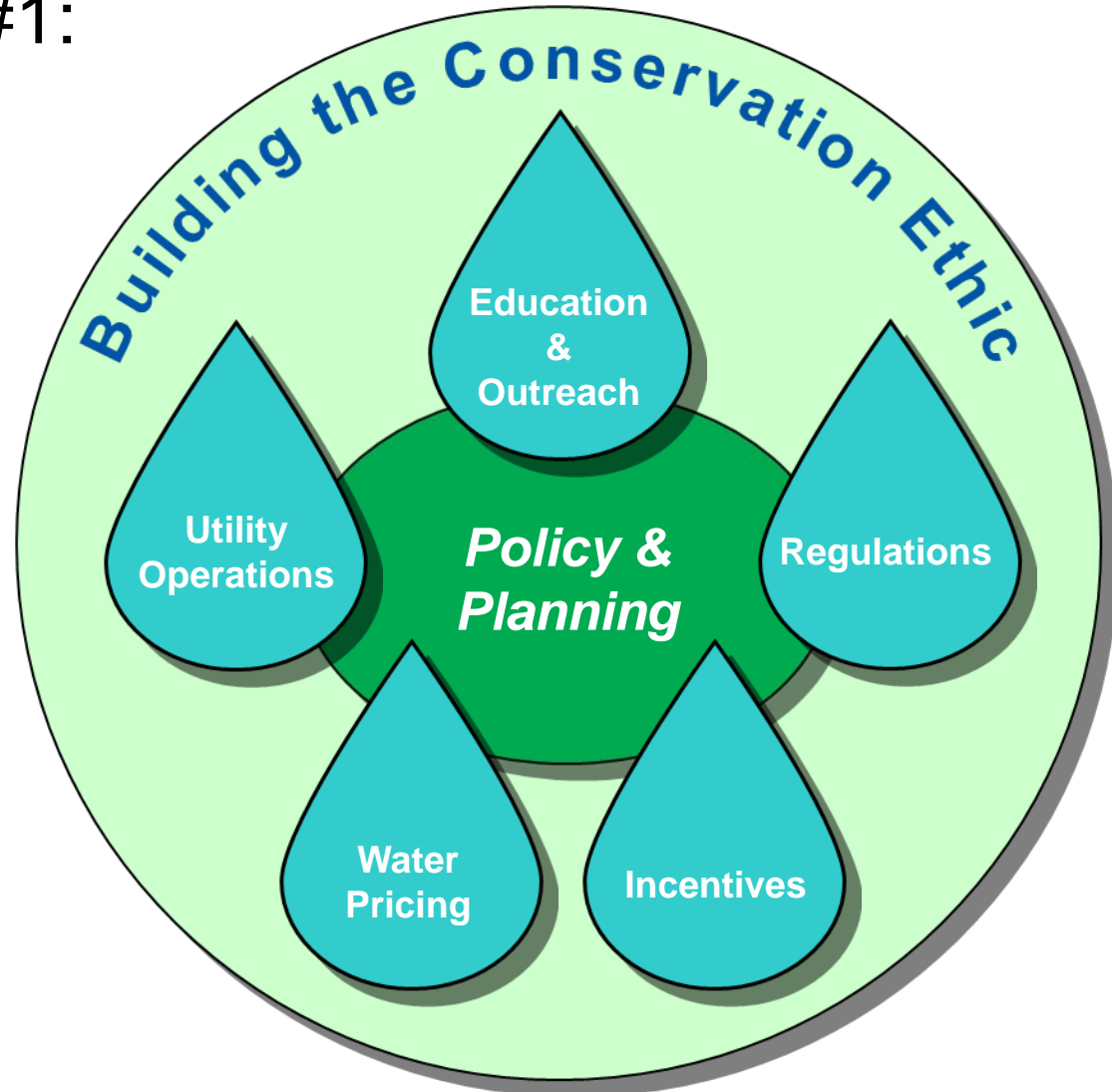
Measures Strategy Discussion

- Basic – select low hanging fruit (least cost, easier to implement)
- Track over time
- Higher cost saved for more “aggressive” approaches
- Policy decisions (e.g., water scheduling)
- Conservation pricing as a last resort



2020 Proposed Compliance Plan Measures List

- Reference Handout #1:
 - Education
 - Incentives
 - Residential indoor
 - Residential outdoor
 - Landscape
 - Utility practices
 - Tiered Pricing
 - New codes and regulations



2020 Model Measures

Measure Name		Estimated GPCD Savings in 2020	Benefit/Cost Ratio
Education and Outreach Program			
1	USEPA WaterSense "Fix A Leak" Week Campaign	5.9	Not Applicable
2	Home Leak Detection and Repair (e.g., list of local contractors)		
3	Promote water efficient plantings at new homes		
4	Native Landscape Demonstration Garden		
5	Homeowner irrigation classes		
6	Top users education (direct mail to largest users)		
7	Toilet flapper program		
8	Real-time metering (e.g., using totalizers)		
9	Sacramento Business Environmental Resource Center (BERC) Award program for water savings by businesses		
10	Commercial Water Survey and provide new pre-rinse spray rinse nozzles (if higher use device tested)		

2020 Model Measures

Measure Name		Estimated GPCD Savings in 2020	Benefit/Cost Ratio
Residential Indoor			
11	Residential Plumbing Kit Retrofits	0.4	0.8
12	Residential High Efficiency Toilet (HET) Rebate	0.9	1.2
13	Clothes Washer Rebates for High Efficiency Machines	1.7	1.1
Residential Outdoor			
14	Residential Water Surveys	3.4	0.4
15	Weather-based Controller Rebates	6.1	0.4
16	Irrigation retrofit incentive program, financial incentives for irrigation upgrades (e.g., drip conversion kits)	2.5	0.6
17	Turf Retrofit/Cash-for grass	4.2	0.1
18	Residential Rain Barrel Incentive Program	0.2	0.0

2020 Model Measures

Measure Name		Estimated GPCD Savings in 2020	Benefit/Cost Ratio
Large Landscapes			
19	Financial incentives for complying with water use budget	1.2	0.9
20	Large landscape conservation surveys, water budgets	1.2	1.7
21	Irrigation efficiency financial incentives for upgrades for parks and open public spaces	0.9	0.3
RMCS D – Utility Program			
22a	Recycled Water - New Connections	20.3	0.2
22b	Recycled Water - New and Existing Connections	21.2	0.3
23	Support efforts to upgrade public/community buildings retrofit	7.3	Not Applicable
24	Water Utility / CSD water reduction goals		
25	Water loss control (Leak Detection)		
26	Tiered water rates		

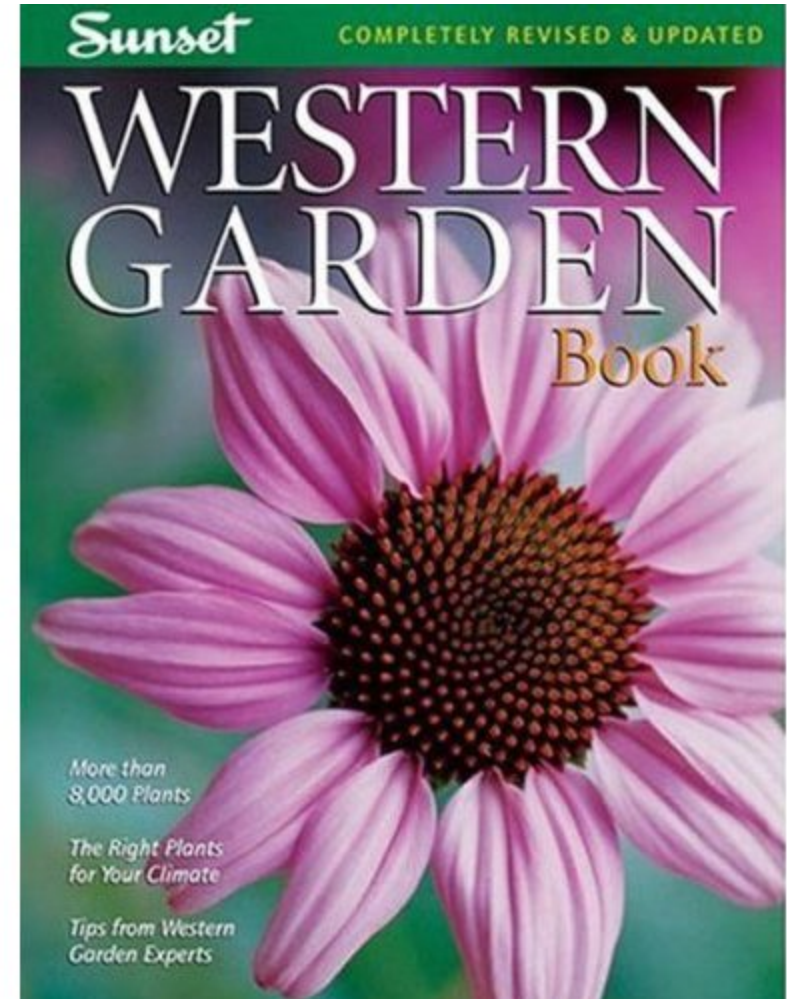
2020 Model Measures

Measure Name		Estimated GPCD Savings in 2020	Benefit/Cost Ratio
New Codes or Regulations			
27	Watering schedule	7.3	Not Applicable
28	Require 1.6 gal (or 1.28) per flush toilets to be installed at the time of sale of existing buildings (ROR)		
29	New Building Indoor Water Efficiency (e.g., require WaterSense labeled homes)		
30	New Building Landscape Water Efficiency (e.g., plan review for Sac County Landscape Ordinance)		
31	Enforce landscape requirements for new landscaping systems (turf limitations / regulations)		
32	Water waste ordinance and follow-up		
33	Local codes (e.g., recycled, graywater and/or rainwater systems on new homes)		

2020 Model Features

- GPCD Historical
 - Indoor and by type of customer
- Targets for 2015 and 2020
- Estimates of measures savings and recycled water options
- Demand reductions with a schedule of measures
- Levels of aggressiveness (turn measures on and off with checkboxes)
- Graphic showing if demand reduction target is estimated to be met based on analysis

Model Review



Break

See you in five minutes!



2020 Plan Decisions Needed

- Policy on meeting SB 7 in 2015 and 2020
- Agreement on the measures to be included in 2020 Plan
- Appropriate level of detail on the budget, schedule in terms of order of priority (basic, moderate to aggressive)
- Confirm measures not to be funded or funded as a last resort (e.g. updated tiered pricing)

IWMP Update Project Approach

- Task 2.1 – Design Blueprint for IWMP Model
 - Workshop 1
- Task 2.2 – Climate Change, Supply, and Demand Evaluations
 - Workshop 3 – use dry-year and climate change scenarios to test shortfalls
- Task 2.3 – Draft Updated IWMP Plan
 - Workshop 4 (with release for 30 day public comment)
- Task 2.4 — Finalize Plan
 - Final adoption Board Meeting in October

Connection to 2020

- Review demand forecast extending from 2020 to buildout
- Assume meet 2020 compliance GPCD targets through conservation or non-potable (recycled) offsets
 - No growth between 2010 and 2015
 - “Medium” growth scenario selected for baseline from 2010 through buildout for IWMP Update Model
 - Drop down list for low, medium and high buildout conditions
 - Drop down list on selecting each 5 years between 2015-2030

Build-out Connections Forecast

- Reference Handout #3
- 2009-2015 Existing Accounts:
 - Total = 2,502
 - EDUs = 1,943
- Build-out (2030) Medium Growth Scenario (baseline):
 - Total = 4,346
 - EDUs = 3,565

Updated and New Policies Discussion

- *Reduced Demand due to 2020 Compliance*
- Drought Shortage Reductions
 - Mandatory Water Reductions (50% cutback)
 - Reduced Water Allocation (100 gpd/estate lot)
 - Demand Management Pricing
- Expanded recycled water service
- Climate change supplies
- Discussion on GHG reductions

IWMP Update Model features under development

- Hydrology
 - Historical
 - Climate Change
- Worst case dry years
 - 25yr/200 yr, single dry year, consecutive three and seven years
- Demand scenarios
 - Low, Medium, High Growth for Buildout (assuming meeting SB 7 requirements)
 - drop down boxes
- Current operating rules optimized
- Future expansions or non-potable uses (recycled water)
- Water loss

Summary thoughts and next steps

