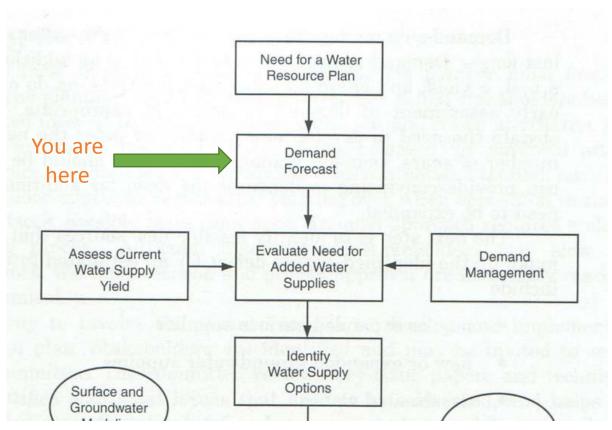
# Interim Baseline Demand Forecast

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### Baseline Demand Forecast Needed To:

- Assess adequacy of existing water supplies
- Determine system reliability and risk of shortfall
- Evaluate efficacy of supply and demand management alternatives

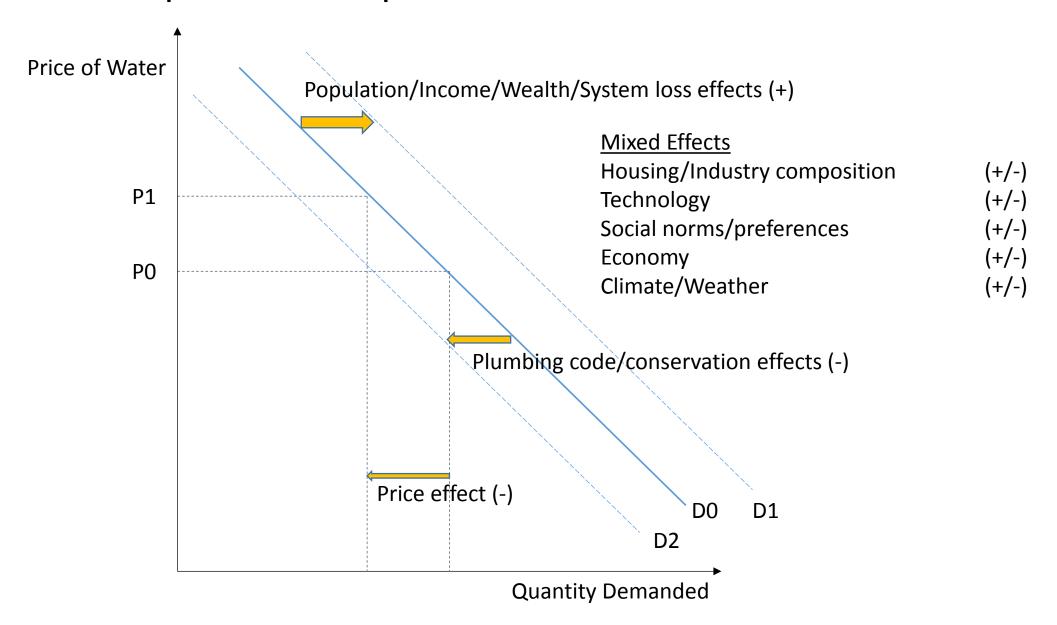


### Baseline Demand Forecast Accounts For:

- Future projected growth in population and economy
- Improvements in water use efficiency due to plumbing codes, appliance standards, and City's existing conservation program
- Effect of water rates and income growth
- Impact of current drought
- Other smaller adjustments

Represents interim estimate of future demand under status quo given normal weather and no curtailments or other restrictions on water use

## Graphical Depiction of Demand Drivers



### This is an INTERIM forecast

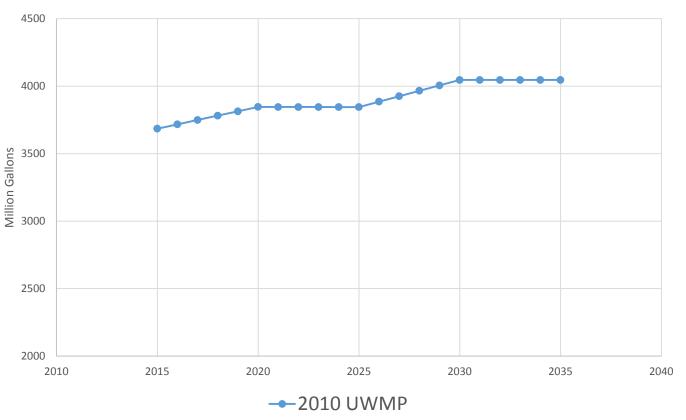
- Intended to bridge gap between City's current forecast from 2010
   UWMP and development of new demand models and projections
- Goal: Use readily available information and professional judgment to make defensible adjustments to 2010 forecast to address most significant concerns with current forecast

### Starting Point: 2010 UWMP Demand Forecast

### Growth Projections

- General Plan 2030 buildout analysis
- AMBAG population forecast
- UCSC Water Supply Assessment (SOI Amendment EIR)
- Baseline use/service
  - Inside/outside city 2007/08
     weather normalized average use
    by customer category

#### Santa Cruz Water System Demand Forecasts



## Adjustments Made to 2010 UWMP Forecast

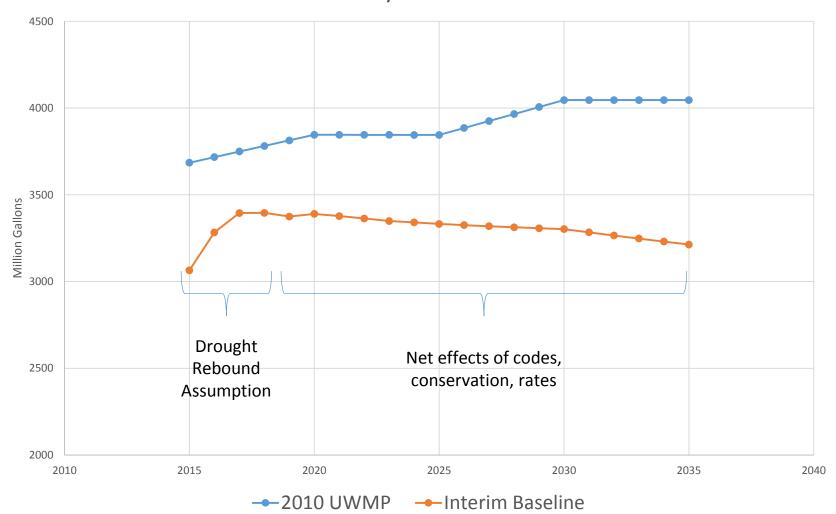
- Plumbing code/appliance standards
- Existing conservation program (Program A)
- In-City commercial growth
- Water rate increases
- Income growth
- North coast ag
- Drought rebound

## Magnitude of Adjustments

	Plumb.	Scaled	Com	North	Price/			
	Code	PRGM A	Growth	Coast	Income	Drought	Misc/	Total
Year	Adj	Savings	Adj	Adj	Adj	Adj	Losses	Adjustment
2015	-1%	-1%	0%	-1%	-1%	-12%	-1%	-17%
2016	-1%	-1%	0%	-1%	-1%	-5%	-1%	-12%
2017	-2%	-2%	-1%	-1%	-2%	-2%	-1%	-9%
2018	-2%	-2%	-1%	-1%	-3%	-1%	-1%	-10%
2019	-2%	-2%	-1%	-1%	-4%	0%	-1%	-12%
2020	-2%	-3%	-1%	-1%	-5%	0%	-1%	-12%
2025	-4%	-3%	-1%	-1%	-5%	0%	1%	-13%
2030	-6%	-3%	-1%	-1%	-6%	0%	-1%	-18%
2035	-6%	-3%	-1%	-1%	-8%	0%	-2%	-21%

### 2010 UWMP vs Interim Baseline

Santa Cruz Water System Demand Forecasts



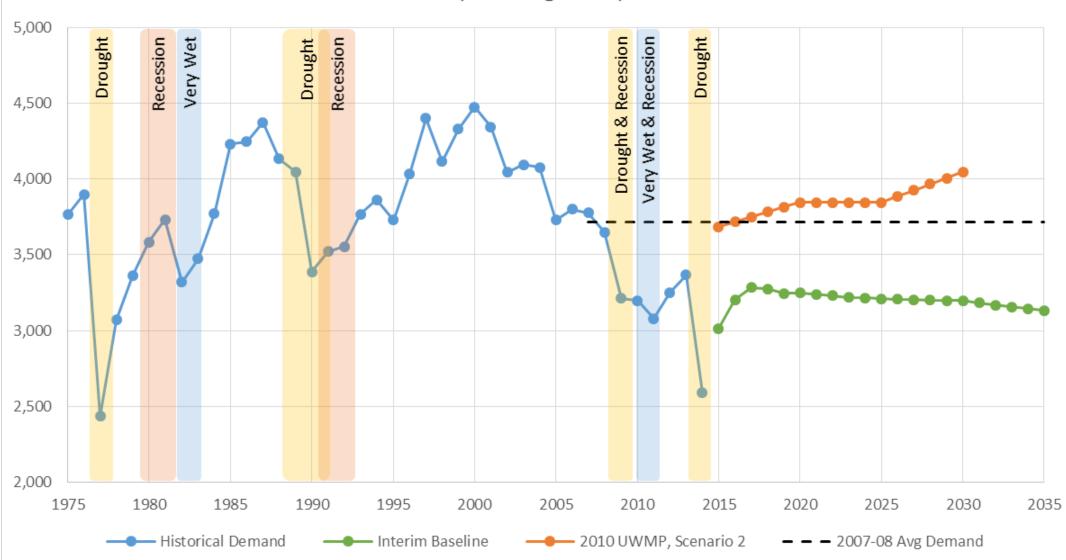
## 2010 UWMP vs Interim Baseline (MGY)

Year	2010 UWMP	Interim Baseline	% Diff
2015	3685	3065	-17%
2020	3846	3390	-12%
2025	3845	3332	-13%
2030	4046	3302	-18%
2035	4046	3213	-21%

## Basis/Sources for Adjustments

Adjustment	Basis/Source			
Code/conservation savings	DSS model preliminary estimates			
In-City Comm. Growth	Reduced from 6 MGY/Y to 3 MGY/Y. Has average about 2 MGY/Y in past 10 yrs			
North Coast Ag	Not a treated water demand. Handled separately in Confluence Model. Removed from forecast			
Rate Increase	<ol> <li>Projected 10%/yr rate increases through 2020. Assume 4.4%/yr avg thereafter (based on CPI Water Sewer Trash Service Index)</li> <li>Price elasticity assumptions based on CUWCC guidelines and recent empirical studies of CA urban water districts</li> </ol>			
Income Growth	<ol> <li>Caltrans per capita income forecast for Santa Cruz County</li> <li>Income elasticity assumptions based on recent empirical studies of CA urban water districts</li> </ol>			
Drought Rebound	Differentiated by customer category. Non-residential irrigation assumed to recover over two-year period. Residential demand over five-year period. Predicated on drought not continuing.			

City of Santa Cruz Historic and Projected Water Production (million gallons)



# Questions/Discussion