

El Paso Water Utilities Public Service Board
Drought and Water Emergency
Management Response Plan
STAGE 2

March 2003

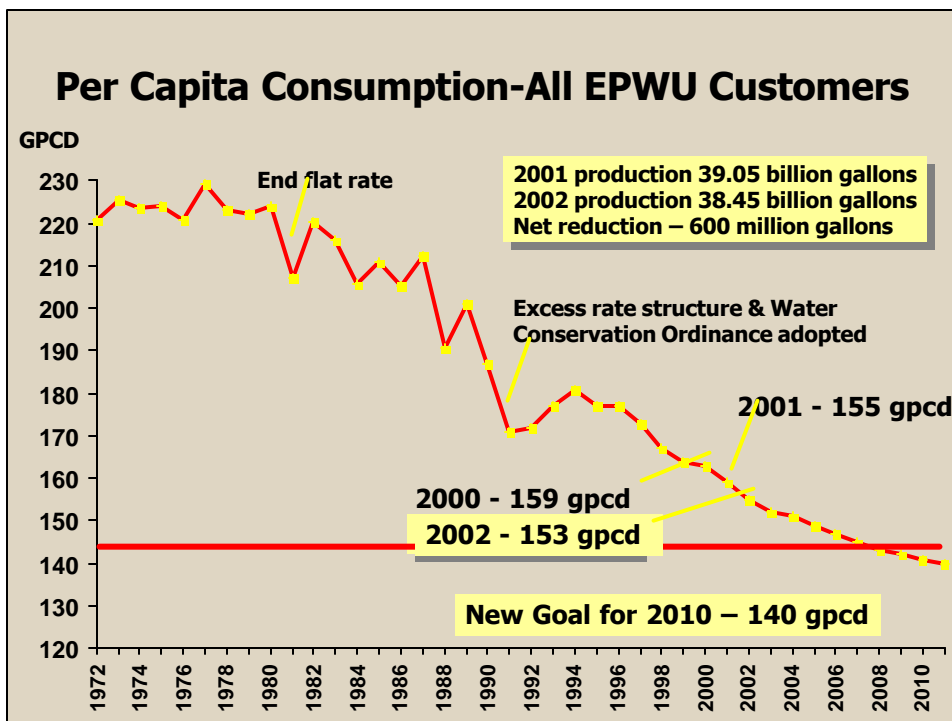


What has EPWU/PSB done to
prepare for a drought

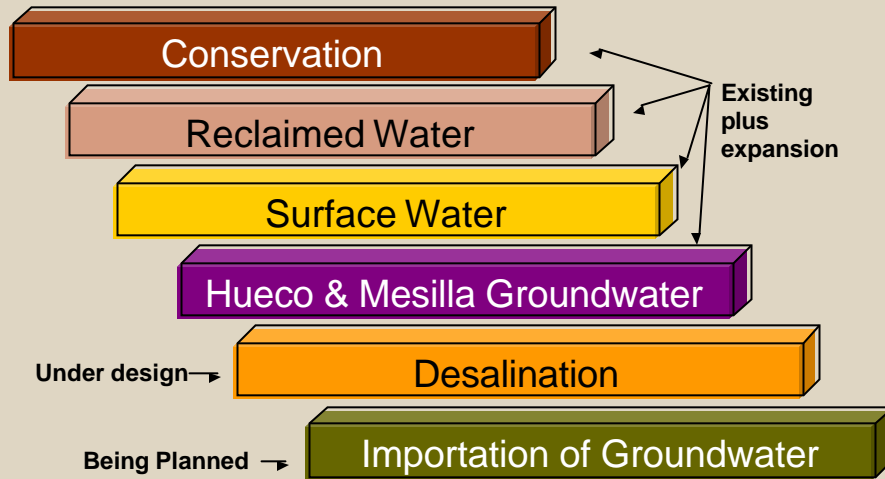
- Drought Planning part of 1991 50-Year Water Resource Management Plan
- PSB began significant water conservation education and rebate programs in 1991
- PSB developed and implemented reclaimed water projects beginning in 1994 at a cost to date of \$30 million dollars
- PSB began detailed drought preparations in 1998
- PSB and City Council adopted the Drought Plan in 1999 and updated it on February 13, 2003

What has EPWU/PSB done to prepare for a drought

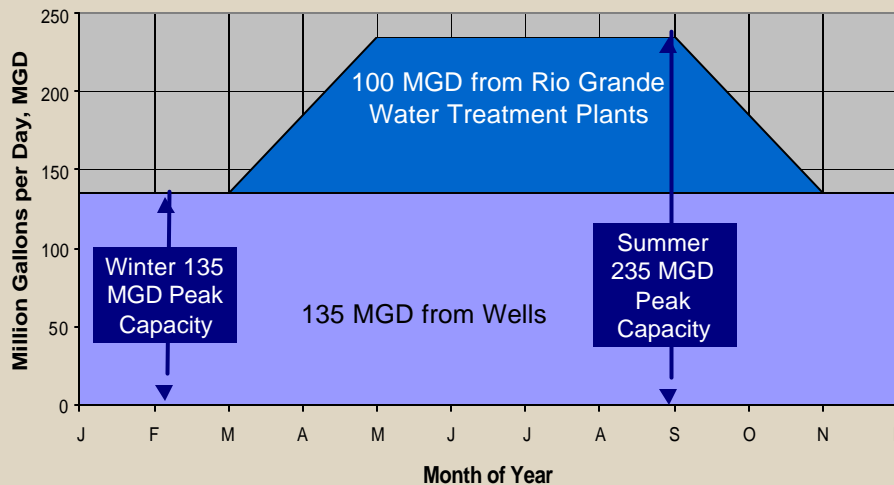
- Drought Planning is also part of the Far West Texas Regional Plan and State Water Plan adopted in 2000
- PSB tried unsuccessfully to develop drought forbearance contracts with the EPCWID No. 1 in 2000-2001
- In 1999 we started the planning of the first desalination plant which will be completed in late 2005
- Over the past 10 years the PSB has acquired water rights in Jeff Davis, Presidio, and Culberson Counties. Planning to import water continues



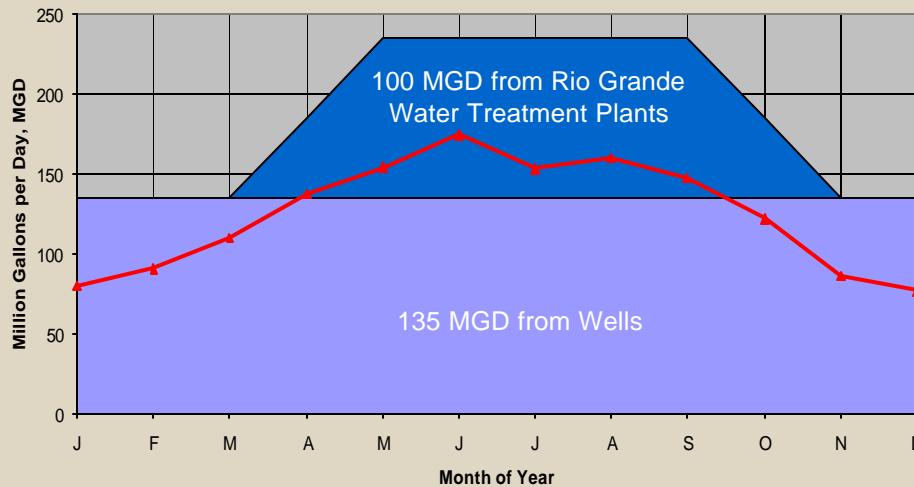
El Paso's Priorities for Additional Water Supply



Normal Year Supplies Rely on Water from the Rio Grande



Normal Peak Supply and Peak Demand



2003 Rio Grande Project Allocation

Updated Allocation – End of February, 2003

Mexico	10,891 acre-feet
Elephant Butte Irrigation District	72,535 acre-feet
El Paso County Water Improvement District #1	55,226 acre-feet
(14.88% of a full supply)	138,652 acre-feet*

* Project water supply available for diversion at the authorized canal headings.

Problem is Timing

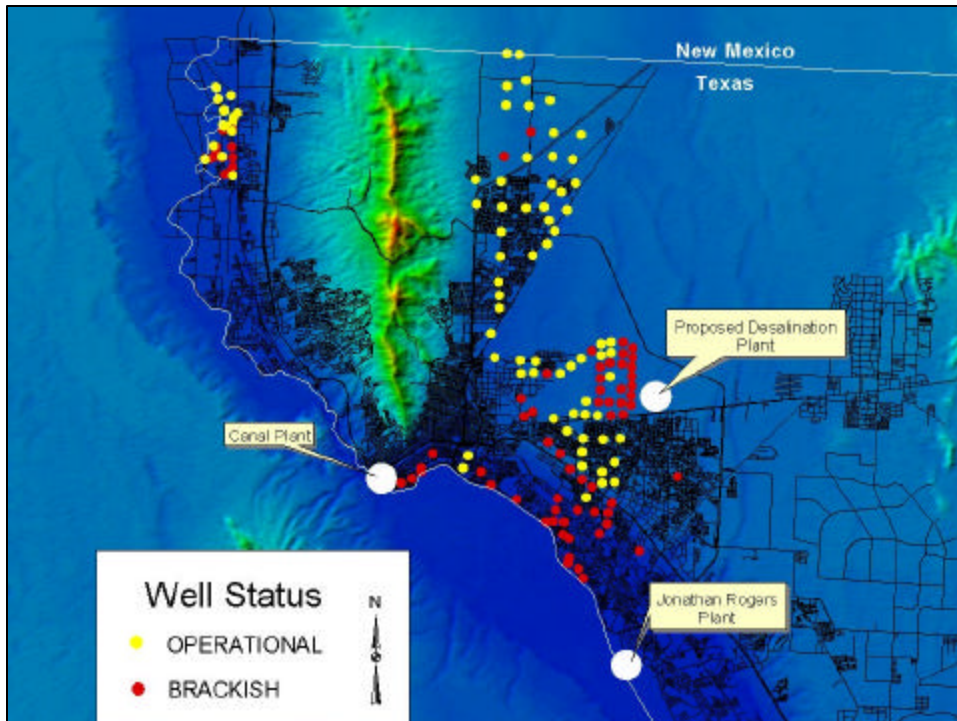
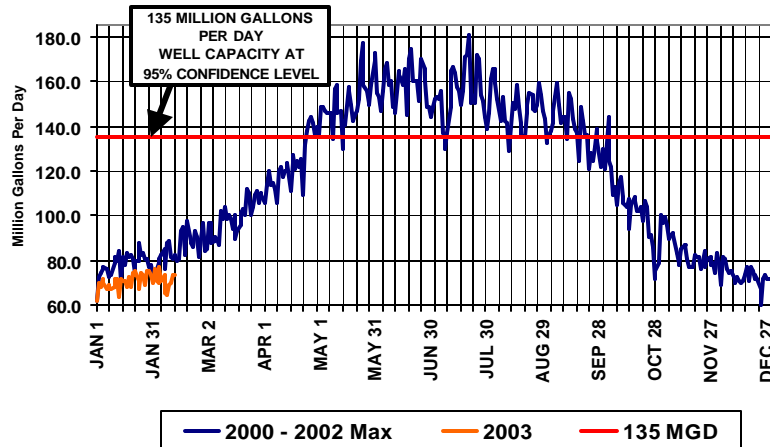
- Demands begin rising in April
- Irrigation District will not release sufficient quality water until late May at the earliest
- EPWU needs to use its available allotment in the hot summer months and curtail demand in April and May

Latest Information from EPCWID#1 March 10, 2003

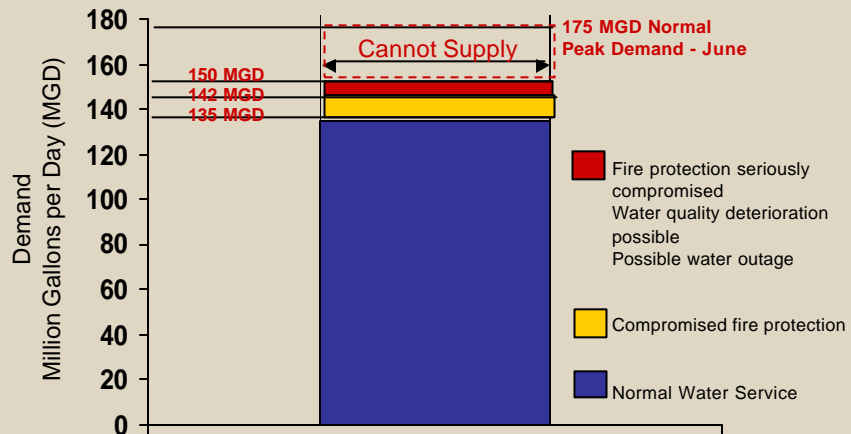
1941 Contract	1,200.00 acre-feet
1962 Contract	3,208.15 acre-feet
2001 Contract	509.24 acre-feet
Lower Valley District	1,783.99 acre-feet
Total	6,701.38 acre-feet

Last year's allocation to EPWU was 65,723 acre-feet
10.2% of last year's allocation

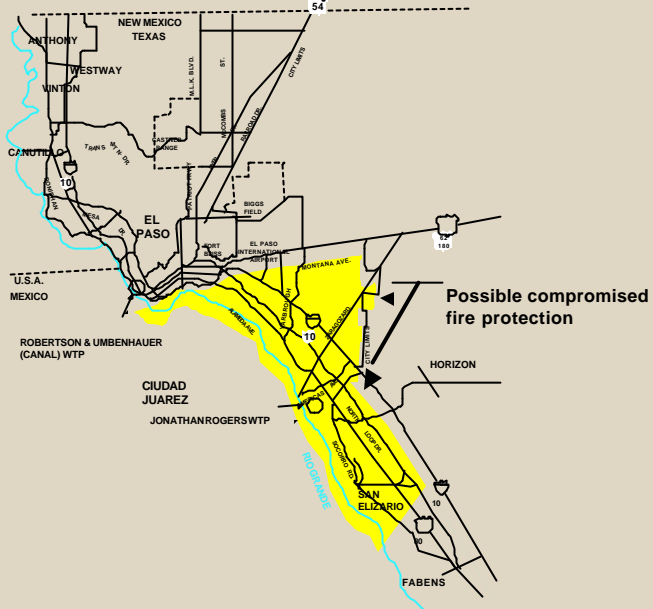
EL PASO WATER UTILITIES 2000 - 2002 PEAK Versus 2003 PEAK DAY DEMAND



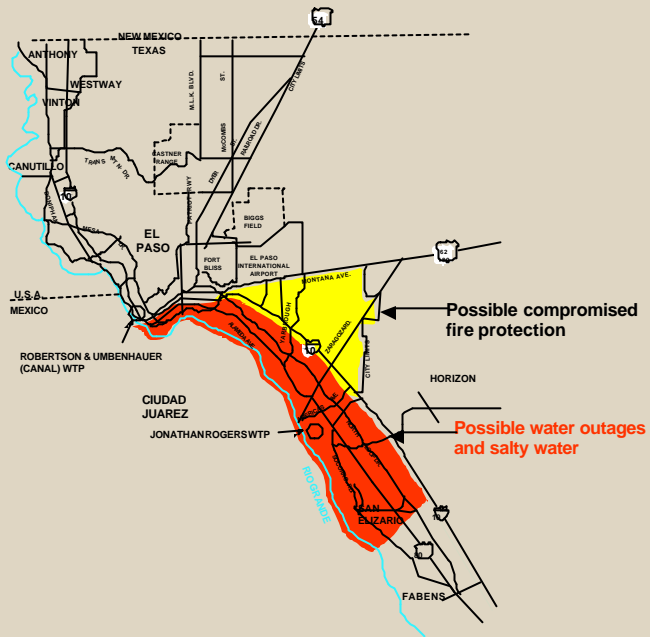
Consequence of Water Demands when no surface water is available



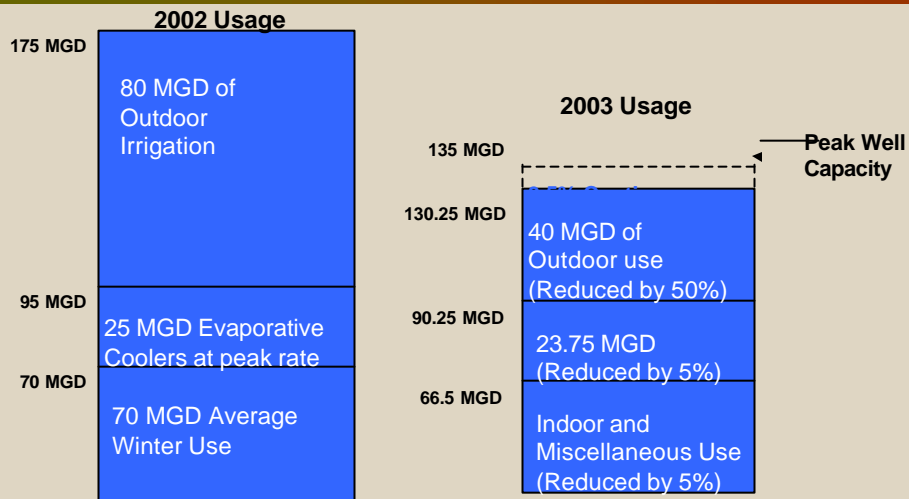
POSSIBLE CONSEQUENCES IF DEMAND EXCEEDS 135 MGD



POSSIBLE CONSEQUENCES IF DEMAND EXCEEDS 143 MGD



25% Overall Reduction in 2003 Needed to Meet Peak Day Demands

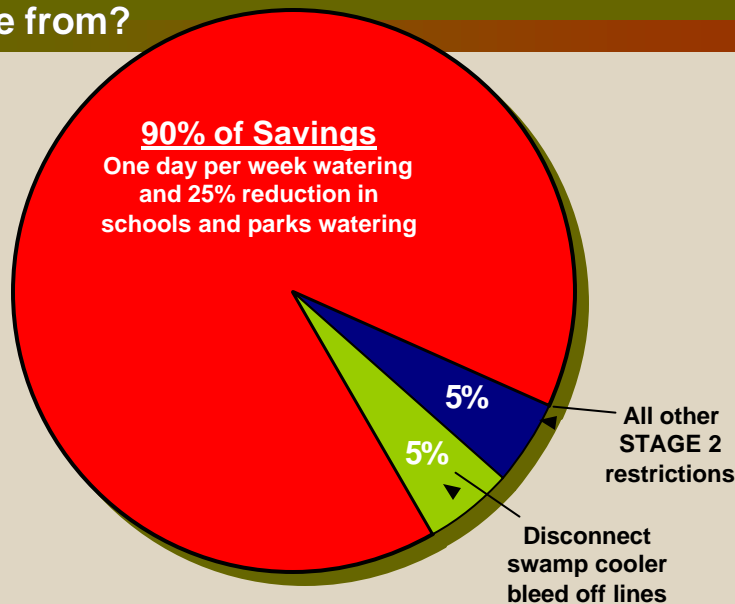


Drought Response Stages

STAGE 2

- When the El Paso County Water Improvement District No. 1 declares surface water allotment of less than 2.5 acre-feet per acre on or before March 15th and river water quality is projected to exceed 300 parts per million (ppm) of sulfates or 1,000 ppm of total dissolved solids in April, May or September; or when water demand is projected to exceed 95% of available capacity as determined by El Paso Water Utilities.

25% Water Use Reduction Target – Where will it come from?



Drought Plan – Stage 2

- Outdoor watering limited to once per week. Watering will occur before 9:00 a.m. and after 7:00 p.m. and shall be limited to two hours per day. The last number of the street address shall determine watering days.

Water Schedule

Day of the Week	<u>Mon</u>	<u>Tue</u>	<u>Wed</u>	<u>Thu</u>	<u>Fri</u>	<u>Sat</u>	<u>Sun</u>
Last # of Address	-	0	1,3	2,4	5	6,8	7,9

(Outdoor watering performed with a permanent drip irrigation system, subsurface irrigation, or reclaimed water is exempt. Using a bucket to water trees, shrubs and flowers is permitted. Using household greywater is encouraged.)

90% of water savings will come from this restriction

Drought Plan – Stage 2 (cont'd)

- Parks and schools served by EPWU shall water in accordance with a special permit and will reduce consumption by a specific amount per month based on reduction targets set to meet basic demand. (Parks and schools irrigating with reclaimed water are exempt.) [25% reduction target](#)
- Golf courses irrigating with potable water supplied by El Paso Water Utilities and municipal golf courses shall water in accordance with a special permit and will reduce consumption by a specific amount per month based on reduction targets set to meet basic demand. (Golf courses irrigating with reclaimed water are exempt.) [25% reduction target](#)

Drought Plan – Stage 2 (cont'd)

- Nurseries shall water plant stock in accordance with a special permit issued by EPWU. [Minimal use and water savings](#)
- No new landscaping shall be installed or planted and no new landscape watering permits will be issued except for Xeriscapes which are drip irrigated using a permanent system, use subsurface irrigation, or are irrigated with reclaimed water. New landscaping watering permits shall be granted for a 7-day period for landscaping that incorporates compost in the area at a rate of 5 cubic yards per 1000 square feet of turf. [Mitigates additional water demands](#)

Drought Plan – Stage 2 (cont'd)

- All evaporative cooler continuous bleed-off lines shall be disconnected or replaced with an automatic water drainage system. [5% water savings](#)
- All water conservation ordinance variances are automatically suspended and no new variances will be issued. [Minimal water savings](#)
- Routine fire hydrant flushing and testing shall be curtailed. [Fire Chief has already suspended routine fire hydrant flushing](#)
- Existing swimming pools cannot be drained and refilled with potable water supplied by EPWU after April 1. Pools can be topped off to replace water loss by evaporation. [Reduces peak demands on the system](#)

Drought Plan – Stage 2 (cont'd)

- Single-family residential swimming pools must be covered when not in use. [Reduces water lost due to evaporation](#)
- Upon a second violation of the Drought Plan, the General Manager may order the installation of a restriction device or downsizing of the water meter at the customer's cost. [After second citation, GM may restrict water use](#)
- Restaurants shall serve water only on request. [Minimal water savings](#)
- Misters shall not be operated, except by special permit for health and safety reasons. [Minimal water savings](#)
- Water used for aesthetic purposes is prohibited except by special permit. [Minimal water savings](#)

Drought Plan – Stage 2 (cont'd)

- Impervious surface cleaning with potable water shall be prohibited, except where conducted by order of the City-County Health and Environmental District or the Police and/or Fire Department. [Minimal water savings](#)
- Hotels and motels must implement water conservation measures, including the reduction of laundry water usage. [Minimal water savings](#)
- A drought surcharge may be added to water rates ([PSB is not recommending the surcharge be implemented at this time. It may need to be implemented if consumption does not drop within stated target or goals set.](#))
- Large housing complexes shall be allowed additional time to water on their designated day, on a case-by-case basis by permit, to be approved by the El Paso Water Utilities Water Conservation Department.

Why not allow a twice per week watering schedule?

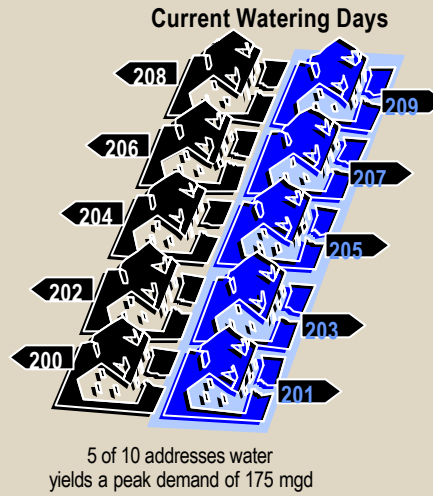
- Other cities have shown little to no water use reductions going to twice per week watering – less than 5% water savings
- Many people already water twice per week – we project a 5 to 10% water savings will result and we will not meet the required demand reduction
- One day per week allows for better monitoring and enforcement to ensure reduced water consumption
- We will not meet water demand reduction targets with a two day per week watering schedule
- We will put the community at risk with low or no water pressure and increase the real probability of lack of fire protection for the city
- Without tough restrictions some areas of the city could actually have no water

Watering Schedule

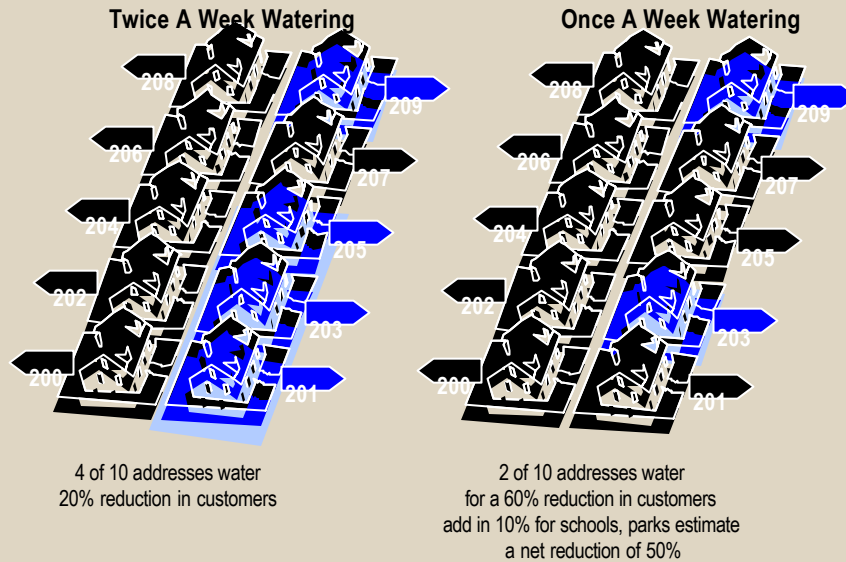
<p><u>Current Schedule</u> Even/Odd Up to 3 times per week</p>	<p>5 out of 10 addresses can water on watering days</p>	<p>Voluntary reduction 6% to date</p>
<p><u>Twice per week</u> Assign addresses to 6 days Not recommended</p>	<p>On some days 4 out of 10 addresses could water Only a 20% reduction in customers who could water Add in schools and parks</p>	<p>Savings projected at 5 to 10%</p>
<p><u>Once per week</u> Assign addresses to 6 days Recommended</p>	<p>2 out of 10 addresses can water A 60% reduction in number of customers who can water</p>	<p>Project a 50% reduction in outdoor water savings which is required to meet overall 25% goal</p>

Watering Schedule

- 90% of savings will come from turf irrigation
- We need to reduce overall outdoor watering by 50% to achieve an overall 25% reduction in water use



Why Twice A Week Watering Will Not Work



With Current Supplies, Maximum Demand Must be Reduced

