

Reservoir Drawdown Frequency and Guidelines for Conservation Triggers, Average Demand = 9.15 mgd

Number of times (or percent of years) during the 77-year streamflow record in which reservoir storage would have declined to 20% or less during the following 18 months.

		Jan 8.0 mgd	Feb 8.2 mgd	Mar 8.0 mgd	Apr 8.3 mgd	May 9.2 mgd	Jun 9.8 mgd	Jul 10.5 mgd	Aug 10.6 mgd	Sep 10.3 mgd	Oct 9.8 mgd	Nov 9.0 mgd	Dec 8.1 mgd
Water Remaining in University Lake and Cane Creek Reservoirs (% Full and Million Gallons)	100% 3356	0	0	0	0	0	0	0	0	0	0	0	0
	95% 3190	0	0	0	0	0	0	0	0	0	0	0	0
	90% 3022	0	0	0	0	0	0	0	1	0	0	0	0
	85% 2854	0	0	0	0	2	0	0	1	0	0	0	0
	80% 2686	0	0	0	0	2	3	2	1	1	0	0	0
	75% 2519	0	0	0	0	2	3	2	1	1	0	0	0
	70% 2351	0	0	0	0	2	3	3	3	1	1	0	0
	65% 2183	0	0	0	2	4	4	4	3	1	1	0	0
	60% 2015	0	0	1	4	6	10	6	5	3	1	1	0
	55% 1847	0	1	2	4	13	12	12	7	3	2	1	0
	50% 1679	0	1	2	6	15	18	16	9	6	3	1	1
	45% 1511	1	1	3	7	17	21	22	17	8	3	2	1
	40% 1343	1	1	3	8	24	29	26	25	18	5	3	1
	35% 1175	1	3	5	12	25	34	34	31	27	15	3	2
	30% 1007	1	4	6	14	27	38	39	39	40	25	7	3
	25% 839	3	4	6	17	33	45	48	46	50	40	19	5

Conservation Stages and Risk Levels

NORM	ADV	#1	#2	#3	EMRG
0-1%	1-3%	3-8%	8-21%	21-47%	48+%

2002 Reservoir Levels

Highlighted Cells

Each cell of the table contains an integer and a percentage, which represent the probability that reservoir levels will decline to 20 percent or less of full capacity during the following 18 months. These were calculated from spreadsheet model runs of 77+ years of daily streamflow data, updated through January 2003, and driven by monthly water demand and reservoir storage at the beginning of each month. Calculations were based on an average annual raw water demand of 9.15 mgd (which was OWASA's average day demand during CY 2001, after a 10 percent reduction for process water recycling) adjusted by observed monthly ratios, which are reflected in monthly demands shown at the top of the table.

Each row of the table corresponds to a month, and each column corresponds to reservoir storage at the beginning of that month. Storage is subdivided into increments of 5% and also expressed as million gallons (MG).

Colors indicate the corresponding conservation and risk levels proposed for each condition. One cell in each row is highlighted in black, representing actual reservoir storage conditions at the beginning of that month during 2002.

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		Jan 8.0 mgd	Feb 8.2 mgd	Mar 8.0 mgd	Apr 8.3 mgd	May 9.2 mgd	Jun 9.8 mgd	Jul 10.5 mgd	Aug 10.6 mgd	Sep 10.3 mgd	Oct 9.8 mgd	Nov 9.0 mgd	Dec 8.1 mgd
Water Remaining in University Lake and Cane Creek Reservoirs (% Full and Million Gallons)	100% 3358	0	0	0	0	0	0	0	0	0	0	0	0
	95% 3190	0	0	0	0	0	0	0	0	0	0	0	0
	90% 3022	0	0	0	0	0	0	0	1	0	0	0	0
	85% 2854	0	0	0	0	2	0	0	1	0	0	0	0
	80% 2686	0	0	0	0	2	3	2	1	1	0	0	0
	75% 2519	0	0	0	0	2	3	2	1	1	0	0	0
	70% 2351	0	0	0	0	2	3	3	3	1	1	0	0
	65% 2183	0	0	0	2	4	4	4	3	1	1	0	0
	60% 2015	0	0	1	4	6	10	6	5	3	1	1	0
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Conservation Stages and Risk Levels

NORM	ADV	#1	#2	#3	EMRG
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2002 Reservoir Levels

Highlighted Cells

EXISTING WATER CONSERVATION ORDINANCE SUMMARY

Year Round Conservation	Water Supply Advisory	Stage One Shortage	Stage Two Shortage	Stage Three Shortage	Water Supply Emergency
<p>Moisture sensors required on all newly installed irrigation systems</p>	<p>[No Advisory Stage in existing ordinance]</p>	<p>Triggered at 125 days of available supply, or by OWASA's judgment ~ All irrigation limited to 3 days/week between dusk and dawn ~ All irrigation limited to 1 inch per week ~ No OWASA water for cleaning or washing exterior building surfaces or paved areas (impervious surfaces) ~ Restaurants to serve water only upon request ~ Institutional customers to reduce heating/cooling load demand from lower priority facilities</p>	<p>Triggered at 75 days of available supply or by OWASA's judgment ~ All irrigation limited to 1 day/week between dusk and dawn ~ All irrigation limited to ½ inch per week ~ No OWASA water for cleaning or washing exterior building surfaces or paved areas (impervious surfaces) ~ Restaurants to serve water only upon request ~ No OWASA water to refill ornamental fountains, ponds, and like devices ~ No filling, refilling, or topping off swimming pools except to the minimum essential for operation</p>	<p>[No Stage Three in existing ordinance]</p>	<p>Triggered by OWASA's determination due to conditions (no numerical trigger) ~ No OWASA supplied potable water for any outdoor purposes other than emergency fire suppression ~ Institutional customers to reduce heating/cooling load demand in all but the most essential facilities to the maximum extent allowable ~ Water service may be discontinued or reduced to designated users or in designated portions of the OWASA service area in order to preserve the availability of water for essential public health and safety requirements, such as fire protection, hospitals, clinics, and other critical community needs</p>

PROPOSED WATER CONSERVATION ORDINANCE SUMMARY – APRIL, 2003

Year Round Conservation	Water Supply Advisory	Stage One Shortage <i>10% reduction goal</i>	Stage Two Shortage <i>15% reduction goal</i>	Stage Three Shortage <i>20% reduction goal</i>	Water Supply Emergency <i>20+% reduction goal</i>
Spray Irrigation limited to 3 days/week, between 8 PM and 9 AM ~ All irrigation limited to 1 inch per week ~ Automatic controllers and moisture sensors required on all irrigation systems ~ Shut-off nozzles required on all hoses ~ Wasteful water use prohibited ~ Leaks must be repaired within 10 days ~ Use of reclaimed or harvested water strongly encouraged ~ Restaurants to serve water only on request ~ Hotels to change bed linens only on request ~ Dishwashers and clothes washers to be operated with full loads only ~ Use of water saving fixtures strongly encouraged	Public alert about potential shortage; notice that water use restrictions may be imposed in the near future ~ No mandatory water use restrictions other than year- round requirements already in place ~ Targeted conservation education and awareness campaign	Spray Irrigation limited to 1 day/week, between 8 PM and 9 AM ~ All irrigation limited to ½ inch per week ~ Irrigation by underground, drip irrigation, soaker hoses, or hand - held hoses or watering cans may occur at any time or frequency, but limited to ½ inch per week ~ No OWASA water to refill ornamental fountains, ponds and like devices ~ No OWASA water for routine cleaning of paved surfaces such as sidewalks and roadways. Restrictions do not apply to pressure cleaning of exterior building surfaces ~ Water use by residential customers limited to 1,000 gallons per day	No Spray Irrigation, except by persons regularly engaged in the sale of plants ~ Irrigation by underground, drip emitters, soaker hoses, or hand- held hoses or watering cans may occur at any time or frequency, but limited to ½ inch per week ~ No OWASA water to refill ornamental fountains, ponds, etc. ~ No vehicle washing, except at commercial or institutional car washes in which 50% of water has been recycled ~ No OWASA water for filling or refilling empty swimming pools. Operating swimming pools may be topped off. ~ No OWASA water for cleaning or washing exterior building surfaces or paved areas. Pressure washing of buildings prior to painting is allowed ~ Residential use limited to 800 gallons per day	No irrigation, except with hand-held hoses or watering cans, limited to 3 days per week, no more than ½ inch per week ~ No outdoor use, except for emergency fire suppression or other activities necessary to maintain public health, safety or welfare ~ No OWASA water to refill ornamental fountains, ponds, etc. ~ No washing of vehicles ~ No pressure cleaning of building exteriors ~ No OWASA water for flushing or pressure testing new lines unless water is recycled ~ No filling, refilling, or topping off operating swimming pools ~ Water for heating and cooling to be reduced to the maximum extent allowable ~ Residential use limited to 600 gallons per day	No OWASA-supplied potable water for any outdoor purposes other than emergency fire suppression or other activities necessary to maintain public health, safety, or welfare ~ Water for heating and cooling to be reduced to the maximum extent allowable ~ Water service may be discontinued or reduced to designated users or in designated portions of the OWASA service area in order to preserve the availability of water for essential public health and safety requirements, such as fire protection, hospitals, clinics, and other critical community needs