



Stakeholder Consensus Survey for Drought Planning

There are Five Drought Stages

STAGE	STAGE 0	STAGE 1	STAGE 2	STAGE 3	STAGE 4
CONDITION	NORMAL	DRY	PROLONGED DROUGHT	ESCALATED DROUGHT	EXTREME DROUGHT
DESCRIPTOR	CONSERVE	CAUTION	CONCERN	ALARM	CRISIS



How is Drought Stage Determined?

A scientific model looks at supply and demand variables.

Supply- Precipitation, Stream flows, Reservoir Storage, Soil Moisture

Demand – Weather conditions, customer water demand, population growth



The model was tested across 56 years of history

Over the past 30 years:

- Stage 0 – 62%
- Stage 1 – 29%
- Stage 2 – 9%
- Stage 3 – 0%
- Stage 4 – 0%

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	DROUGHT DECLARATION
1993	0	0	0	0	0	0	0	0	0	0	0	1	NO
1994	2	1	1	1	1	1	1	1	1	1	1	2	YES
1995	0	0	0	0	0	0	0	0	0	0	0	0	NO
1996	1	1	1	2	2	3	2	3	0	0	0	0	YES
1997	0	1	1	0	1	0	0	0	0	0	0	0	NO
1998	0	0	0	0	0	0	0	0	0	0	0	0	NO
1999	0	0	0	0	0	0	0	0	0	1	1	1	YES
2000	1	0	0	0	0	1	1	1	1	0	0	1	YES
2001	0	0	0	0	0	0	0	0	1	1	0	0	NO
2002	1	1	2	2	2	2	2	2	1	1	1	1	YES
2003	1	1	1	1	2	2	2	2	2	2	1	1	YES
2004	2	2	2	2	2	2	2	1	1	0	0	1	YES
2005	0	0	0	0	1	0	1	0	0	0	0	0	NO
2006	0	0	0	0	0	0	0	0	0	0	0	0	NO
2007	1	2	2	2	2	2	2	1	1	1	2	0	YES
2008	1	1	1	1	1	1	1	1	1	1	1	0	YES
2009	0	0	0	0	0	0	0	0	1	0	1	0	NO
2010	0	0	0	0	0	0	0	0	0	0	0	0	NO
2011	0	0	0	0	0	0	0	0	0	0	0	0	NO
2012	0	0	0	0	0	0	0	0	0	0	1	0	NO
2013	1	1	1	1	1	1	0	0	0	0	0	0	YES
2014	1	1	1	1	1	1	1	0	0	1	1	0	YES
2015	0	0	0	1	0	1	0	1	1	0	0	0	NO
2016	0	0	0	0	0	0	0	0	0	0	0	0	NO
2017	0	0	0	0	0	0	1	0	0	0	0	0	NO
2018	0	0	0	1	1	1	1	1	1	0	0	0	YES
2019	0	0	0	0	0	0	0	0	0	0	0	0	NO
2020	0	0	0	0	0	0	0	0	0	0	0	0	NO
2021	1	1	2	1	1	1	1	1	1	0	1	0	YES
2022	1	1	1	1	1	1	1	0	0	0	0	0	YES

NOTE: Drought stages may bridge from one year to the next



Varying Conditions Merit Different Measures

- Drought measures may be as simple as asking for greater vigilance, or as stringent as prohibiting certain practices.
- Community consensus around measures improves communication and performance.



Drought management has similar characteristics to fire hazard management, where conditions can change throughout a single year.



In a scenario where demand may outstrip supply, the most effective tools at our disposal are those for managing demand.

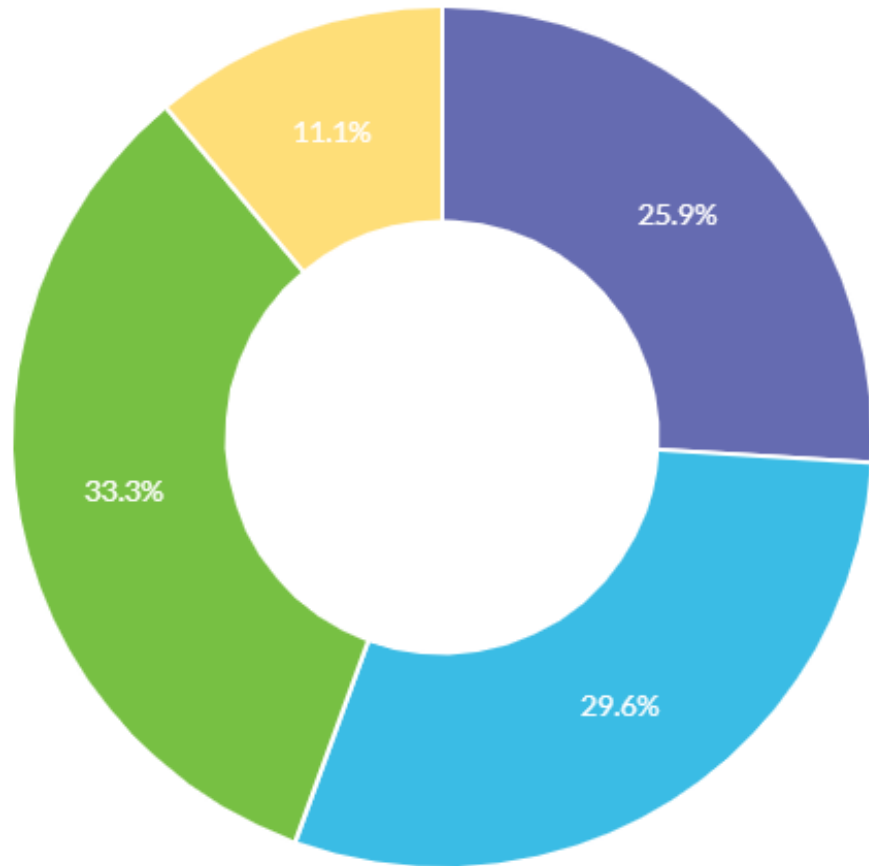


Who Declares Drought?

- Drought stages can be increased or decreased after 3 consecutive months of conditions.
- A committee comprised of Mayors and City Managers of each city will make a recommendation.
- The Washington County Water Conservancy District Board of Trustees makes the final declaration.



Who responded?



Choice	↕	Total	↕
Member of the Drought Plan Committee		7	
Member of the TAC		8	
Voting member of the AAC (Mayor, City Manager or designee)		9	
Member of the WCWCD Board of Trustees		3	



What Stage of Drought?

MEASURE	COMMITTEE RECOMMENDATION	CONSENSUS OUTCOME
Restrictions on watering frequency	1	2.0
Increased incentives for lawn conversion	NA	2.1
Strengthen rate penalties for high use	2	2.4
Prohibit decorative water feature operation	2	2.5
Mandate reductions in golf course water use	2	2.6
Defer planting of new grass	2	2.7
Limit car washing frequency or methods	2	2.8
Prohibit use of mist systems	2	3.0
Suspend swimming pool permits	2	3.2
Allow only hand watering of plants	4	3.5
Limit building permits except critical facilities	3	3.6



All Cities should implement equivalent measures during drought



Minimum response
Maximum response
Level of Concurrence

0 (2x)
10 (8x)
Moderate



All Cities should implement equivalent measures during drought

“A unified approach across all cities ensures clarity and consistency for our residents. It would be more work to get consensus across all cities, but I believe the work would be worth the effort. A unified message would be more cohesive across all media outlets, reduce confusion, and enable cities to pool resources for broadcasting the message.”

“Equivalent is hard to measure, but everyone should be pulling in the same direction for sure.”

“Depending on the area in which a person lives makes secondary water more readily available. This could allow for better kept yards due to having more secondary water available. If not for that cause, I would have rated it a 10, because some cities that do not have that service will ask for more strict rulings.”

“While I think it would be better if every city had the same regulations during a drought, I hate taking away the ability of the city council to determine what works best for them.”

“Cities who have their own water should not be penalized to allow for cities without water to continue to grow.”



Economic impact and potential water savings should be considered when choosing drought measures.



Minimum response
Maximum response
Level of Concurrence

6 (1x)
10 (10x)
High



Economic impact and potential water savings should be considered when choosing drought measures.

“The economic impact should be weighed and considered, but also in conjunction with the broader economic impact of doing nothing.”

“This is all dependent on what type of economic crisis is the priority. There are 2 things that drive the local economy, the first being tourism and the second being building. What affects the local area more? However, until you affect someone's wallet, they will not make a change.”

“Economic impact is important to keep our economy growing and people employed. Water needs trump that in an emergency, but we need to not forget the economic impact effects on people.”

“Economic impacts should not start until we get to Alarm stages. We should also be ensuring that our water supplies are sufficient so that we only hit the Alarm stage maybe once every 100 years and Crisis Stage only once every 1,000 years.”

“I agree with this until it gets to the last stage. At that point, economic impact should take a back seat.”



People who violate drought rules should receive one courtesy reminder and then be assessed a fee.

8.00

Minimum response
Maximum response
Level of Concurrence

3 (1x)
10 (6x)
Moderate



People who violate drought rules should receive one courtesy reminder and then be assessed a fee.

“If an adequate job has been done to communicate the drought enforcement measures, I would favor a graduation of penalties as the drought condition increased. Courtesy reminders and small fees at drought stage 1 and 2, whereas at stage 4 - class B misdemeanor, no warning.”

“Warnings need to be given in case of an accident, but arrogance to a rule should be judged based on the situation. However, if someone is blatantly disregarding a rule then they should be punished without a warning.”

“I agree with this in the upper two stages. In stage 1 and 2, I don't think there should be a fee assessed.”

“Forgiveness should be very expensive...”

“I love the fact that one can make a difference. When a resident receives a kind notice letting them know an issue has come to the attention of the WCWCD, that is all that is needed to have people comply with a problem.”

“I think everyone needs a second chance.”

“Sounds like a good plan.”

“1 courtesy reminder with language of fee for next violation”



It is appropriate to restrict watering of decorative lawns before restricting watering on community parks and athletic fields.

7.19

Minimum response
Maximum response
Level of Concurrence

0 (4x)
10 (4x)
Low



It is appropriate to restrict watering of decorative lawns before restricting watering on community parks and athletic fields.

“Decorative lawns should be removed or replaced with synthetic grass. Watering these should be removed in an earlier stage as to promote the buyback program.”

“Not exclusively. Cities should set the example, and in community parks where watering could be limited as they are not used for specific activities. Active athletic fields should continue to receive the water necessary to continue its purpose.”

“Restrictions can be equal in the beginning but when they get more restrictive decorative lawns should take a harder hit.”

“I don't think citizens would like to see City owned facilities green, while their lawn is brown. While it makes (sense) to keep community parks and athletic fields usable to the public, I don't think the optics would be good.”



Golf courses should be allowed to make their own management decisions as long as they meet community water use reduction targets.



Minimum response	0 (3x)
Maximum response	10 (5x)
Level of Concurrence	Low



Golf courses should be allowed to make their own management decisions as long as they meet community water use reduction targets.

“I don’t like mandatory regulations. I believe there is more than one solution to any problem. Set the restrictions and allow them the leeway to decide how they are going to comply.”

“I am neutral on this. Most of the golf courses are using secondary water to keep grass green. I do think that some cut back should occur, but severe cutbacks need to happen to culinary water use primarily.”

“Golf courses should be required to submit a drought contingency plan to the municipality in which it is located for approval prior to the drought event.”

“Existing golf courses typically use their own water rights or are connected to reuse already. No new golf courses.”

“Are there differences between private vs. public courses?”



Municipalities should periodically report water use reductions of city facilities



Minimum response
Maximum response
Level of Concurrence

1 (1x)
10 (3x)
Low



Municipalities should periodically report water use reductions of city facilities.

“Cities should be accountable to each other during drought conditions.”

“Every month water data is shared. Is this not done already? Reporting isn't hard to do, but it would make our jobs easier with less reporting. Between state, county, and local requirements it becomes an individual's full-time job just monitoring all the reports. More reporting is not needed.”

“I'm not sure what is meant by report. I think cities should set the example in water conservation. They should use the best technology to provide water efficiency. Reporting to the public in newsletters and communication with the citizens would go a long way set that example. I don't know that I feel the cities should have to report to county or state.”

“Maybe once a year could be appropriate.”

“Report to whom?”



Areas for clarification

Does secondary water matter?

When it comes to development, what is a critical facility?

- Primary housing vs. vacation resort?
- Fire station vs. a tire store?
- Earthwork vs. Framing?

Can these measures be modeled? Do we know the resource and economic impacts?

What is the role of the district and the cities on specific items?



Next Steps?

City Council members?

Members of the public?

Key external stakeholder groups?

