

CITIZENS' WATER ADVISORY COMMITTEE (CWAC) AGENDA

April 12, 2022, 6:00 p.m.

AMENDED 04/11/22

Aspen Room, 2nd Floor, Aurora Municipal Center
Or Hybrid option below

Microsoft Teams Link:

[Click here to join the meeting](#)

Or go to

<https://bit.ly/3iTRz8o>

Call in (audio only) - 720-388-8447

Phone Conference ID: 595 739 077#

Members: Angie Binder - Chair, Richard "Dick" Eason - Vice Chair, Jay Campbell, Tom Coker
Dennis Dechant, William Gondrez, Janet Marlow, David Patterson, Daniel Widrich

- | | | | |
|-----|--|----------------|-----------|
| 1. | Approval of Minutes – March 8, 2022 | Chair | 6:00 p.m. |
| 2. | Introductions/Public Invited to be Heard | Chair | 6:05 p.m. |
| 3. | New/Old Business | Chair | 6:10 p.m. |
| 4. | Communications Update | Greg Baker | 6:15 p.m. |
| 5. | Legislative Update | Kathy Kitzmann | 6:20 p.m. |
| 6. | Water Connection Fee Changes | Joann Giddings | 6:40 p.m. |
| 7. | Aurora Water Drought Response | Lauren Maggert | 6:50 p.m. |
| 8. | Water Management Plan | Greg Baker | 7:00 p.m. |
| 9. | Economic Work Group Status | Janet Marlow | 7:15 p.m. |
| 10. | Summer Tours | Greg Baker | 7:20 p.m. |
| 11. | Review Follow-Up Questions Generated at this Meeting | Greg Baker | 7:25 p.m. |
| 12. | Confirm Next Meeting – Tuesday, May 10, 2022 | Chair | 7:30 p.m. |
| 13. | Adjourn | Chair | 7:35 p.m. |

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Citizens’ Water Advisory Committee (CWAC) Minutes
March 8, 2022, 6:00 p.m.
Held virtually via Microsoft Teams

Members Present: Angie Binder – Chair, Dick Eason - Vice Chair, Jay Campbell, Tom Coker, Dave Patterson, Bill Gondrez, Janet Marlow, Daniel Widrich

Absent: Dennis Dechant

Staff Present: Greg Baker, Leiana Baker, Tim York, Rory Franklin, James DeHerrera, Marshall Brown, Swirvine Nyirenda,

Visitors Present: None

The meeting was called to order at 6:04 p.m.

1. Approval of February 8, 2022 Minutes

The February 8, 2022, minutes were approved.

2. Introductions/Public Invited to be Heard

None.

3. New/Old Business

None.

4. Communications Update

None.

5. Nonfunctional Turf Ordinance

T. York gave a presentation. The Mayor will present this item to the Water Policy Committee and to Council. J. Campbell asked, is that 10 feet or wider on the curb side? T. York replied, the 10 feet wide is the distance from the sidewalk to the curb. T. Coker asked, regarding no more new golf courses, is Kings Points grandfathered? M. Brown replied, yes. T. Coker what would be the water source, M Brown potentially groundwater, as well as a sustainable water source. D. Eason – Ordinance Section 3 – city employees aren’t subject to fine. G. Baker stated he will ask city attorney for a response and share it via email to the committee. D. Eason what is the comparison cost for turf and non-turf. T. York replied, it was less than \$1,000 per landscape during a previous study. D. Eason asked, can low water use warm grasses be used for golf courses? T. York replied, warm season grasses don’t tolerate foot traffic well. A. Binder asked, what about trees and are there recommendations on type of trees? T. York replied, the ordinance doesn’t impact planting trees. Forestry department would have more information on tree types. D. Widrich asked, how can we better irrigate trees? T. York replied, irrigating with drip irrigation and/or low flow irrigation and move the irrigation as the tree grows out to the tree canopy edge. A Binder asked, where are

we on the timing of the ordinance? M. Brown replied, it’s going to study session in May. A Binder asked, is Aurora the first municipality to do this? M. Brown replied, yes and other municipalities are looking at doing this.

Action: Does the Committee support the Ordinance? Committee voted unanimously to support the Ordinance.

6. Integrated Water Master Plan (IWMP) Overview

J. DeHerrera gave a presentation. D. Eason asked, what is Everst and Walker? J. DeHerrera replied, they are gravel pit storage reservoirs within the North Campus System. J. Campbell asked, how much do you get into fees down the road in the IWMP? J. DeHerrera replied, there will be a 20 year capital improvement plan. A. Binder asked, do we do any kind of projection or forecast on the non-functional turf and how to use that in the IWMP? M. Brown replied, some of the conservation goals is to come up with about 10% additional water savings and that’s built into some of our planning in the IWMP.

7. Review Follow-up Questions Generated at this Meeting

G. Baker will reach out to the city attorney regarding the Ordinance Section 3 regarding city employees aren’t subject to fine and report back to the committee. City Attorney response: Section 3, penalty is intended to protect City employees from being prosecuted/subjected to the general penalty (\$2650 fine, and up to a year in jail) for mistakes in administering the City Code.

8. Confirm Next Meeting – Tuesday, April 12, 2022 Hybrid meeting Aspen room.

10. Adjourn

The meeting was adjourned at 7:12 p.m.

Angie Binder, Chair
Citizens’ Water Advisory Committee

Adopted: _____

MEMORANDUM



City of Aurora

Worth Discovering • auroragov.org

TO: Citizens' Water Advisory Committee

THROUGH: Marshall P. Brown, General Manager, Aurora Water
Greg Baker, Manager of Public Relations
Alex Davis, Deputy Director of Water Resources

FROM: Kathy Kitzmann, Water Resources Principal

DATE: April 12, 2022

SUBJECT: 2022 State Legislative Review

The second regular session of the 73rd Colorado General Assembly convened on January 12th and is scheduled to adjourn on May 11th. At the time of this writing, the legislature is two-thirds of the way through the 2022 session and has introduced 542 bills plus 38 resolutions/memorials and counting. Aurora Water is currently tracking 37 introduced bills and aware of 5 conceptual bills in various stages of development (more detail in attached March 30th Legislative Tracking Sheet). Following are a few highlighted bills:

[HB22-1151](#) *Turf Replacement Program*. Aurora Water is in support of this bill that creates a turf replacement program within the Colorado Water Conservation Board to incentivize voluntary removal of nonessential irrigated turf on residential, commercial, and industrial properties across the state. There will be a \$4.0 million transfer from the General Fund to the newly created Turf Replacement Fund for use in FY2022-23 and FY2023-24. Local governments that already administer a turf replacement program will be eligible for matching grants from this program. Third party administrators can be used for areas without existing programs throughout the state.

[SB22-114](#) *Fire Suppression Pond Water Rights*. Aurora Water is in support of this bill that allows a county to apply to the State Division of Water Resources to designate ponds as fire suppression ponds. This bill provides a solution for critical fire suppression ponds that may be at risk of being drained for not having a water right or water augmentation source. In order to be designated, the pond must meet narrow criteria including existence prior to 1975, cannot create injury to an existing valid water right, completed analysis demonstrating the pond is critical to fire response, as well as other restrictions. Although this creates a water use exempt from the prior appropriation system, Aurora Water is supportive of keeping these small, but critical fire suppression ponds for efficient response to small fires and prevention of wildfires within Colorado's watersheds.

[HB22-1345](#) *Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)*. Aurora Water is reviewing this recently introduced bill which aims to reduce PFAS contamination sources. Proponents of this bill worked with multiple stakeholders, including water and wastewater treatment providers, to revise the initial draft concepts. The bill requires manufacturers to notify the state of products that contain intentionally added PFAS and are sold or distributed in Colorado. The bill also phases out the sale or distribution of products that contain intentionally added PFAS chemicals.

After this 2022 legislative session ends, there will be the legislative Interim Water Resources Review Committee and Interim Wildfire Matters Review Committee that will focus on a few items to bring forth in the 2023 session. This summer and fall will also be a significant election season. Colorado's 2021 state redistricting concluded last November with final approved plans and maps available at <https://redistricting.colorado.gov/>. Elected offices on Colorado's 2022 Ballot will include:

- U.S. Senate 1 seat
- U.S. House all 8 seats
- Governor, Lt. Governor, Secretary of State, Treasurer, Attorney General
- State Senate 17 of 35 seats
- State House all 65 seats

Aurora Water also monitors state ballot initiatives and state court cases that may impair or enhance the ability to provide safe, dependable and sustainable water, sewer, and stormwater services for today and the future. Currently, there are no ballot initiatives of concern, but there is one court case that Aurora Water is following along with Colorado Water Congress and other water providers. *Hill v. Warsewa* is a fishing access dispute that was filed in 2018. The complaint included a claim that a portion of Arkansas River was the property of the State of Colorado and "to be held in trust for the public". Arguments revolve around a federal standard of navigability to river access and if the disputed section of river was used for commerce, such as beaver pelts or tree products/materials being floated, when Colorado became a state in 1876. A determination in favor of Public Trust may create a conflict with Colorado's Prior Appropriation Doctrine. Colorado Water Congress has additional information on both water related ballot initiatives and the *Hill v Warsewa* case at <https://www.cowatercongress.org/ballot-issues.html>.

Federal request - FY23 Congressionally Directed Spending Recommendations

Colorado's federal delegation have the opportunity to submit Congressionally Directed Spending (CDS) requests for Fiscal Year 2023 requests for consideration to be a part of the federal budget. This process allows Senators and Representatives to request funding for community projects within their state to receive federal funds. The city is submitting several projects for consideration for a CDS. Aurora Water included a large waterline replacement, which is highlighted in the attached memo. Support letters are being gathered from our state delegation (sample also attached).

Attachments:

- 2022 State legislation tracking spreadsheet
- FY23 Congressionally Directed Spending Recommendations letter sample
- Proposed waterline replacement memo

BILL NUMBER	BILL TITLE (CO General Assembly Bill Search)	AURORA WATER	CML	CWC
	Senate Status Sheet			
SJR22-002	Water Projects Eligibility Lists	support if asked	support	support
SB22-002	Resources For Volunteer Firefighters	monitor	support	
SB22-007	Increase Wildfire Risk Mitigation Outreach Efforts	actively support	monitor	monitor
SB22-013	Boards & Commisions	monitor	monitor	monitor
SB22-015	Douglas County On Urban Drainage Flood Control District	support if asked	support	
SB22-028	Groundwater Compact Compliance Fund	support if asked	support	support
SB22-029	Investment Water Speculation	monitor	monitor	monitor
SB22-030	Water Resources Review Committee To Include Agriculture	monitor	monitor	monitor
SB22-080	Wildland Fire Investigations	monitor	monitor	
SB22-114	Fire Suppression Ponds Water Rights	actively support	monitor	monitor
SB22-115	Clarifying Terms Related To Landowner Liability	support if asked		monitor
SB22-126	Prioritize South Platte Basin Storage Projects	support		oppose
SB22-131	Protect Health of Pollinators and People	amend		monitor
SB22-138	Reduce Greenhouse Gas Emissions in Colorado	monitor	neutral	
SB22-158	Species Conservation Trust Fund	support if asked		support
SB22-169	Sensitive Species Data & Public Records	monitor	monitor	
SB22-174	Sunset Review Criteria	in review		
SB22-175	Mobile Electronic Devices & Motor Vehicle Driving	in review	support	
	House Status Sheet			
HB22-1007	Assistance Landowner Wildfire Mitigation	monitor	support	monitor
HB22-1011	Wildfire Mitigation Incentives for Local Government	actively support	support	monitor
HB22-1012	Wildfire Mitigation and Recovery	monitor	support	monitor
HB22-1092	Loans from Irrigation Districts to Landowners	monitor	monitor	monitor
HB22-1097	Dissolution of Special Districts	monitor	support	monitor
HB22-1132	Regulation & Services For Wildfire Mitigation	support if asked	monitor	
HB22-1148	Wildfire Camera Pilot Program	monitor	monitor	monitor
HB22-1151	Turf Replacement Program	actively support	no position	support
HB22-1152	Prohibit Employer Adverse Action MJ Use	monitor	n/a	monitor
HB22-1166	Incentives Promote CO Timber Industry	support if asked	oppose/amend	
HB22-1249	Electric Grid Resilience & Reliability Roadmap	monitor	monitor	
HB22-1297	Daylight Savings Time	monitor	no position	

HB22-1301	Environmental Agricultural Facility As Agricultural Property	in review	monitor	monitor
HB22-1316	CWCB Construction Fund Project	support if asked	support	monitor
HB22-1322	Regulation of Water Quality in the State	in review	deliberating	monitor
HB22-1323	Updates to CSFS Nursery	in review	monitor	
HB22-1329	Long Bill (Budget)	in review	no position	
HB22-1345	Perfluoroalkyl and Polyfluoroalkyl Chemicals	in review	monitor	
HB22-1348	Oil & Gas Chemicals (includes PFAS)	in review	deliberating	
	Bill drafts/concepts:			
	Draft RIVR (Recreation Instream Values Reach)			
	Get the Lead Out of School Drinking Water			
	Water Conservation Differential Tap Fees			
	Biodiversity			
	Water Conservation Enterprise Grant Program (Bottle Bill)			
	Color Coding:			
	Passed, Governor Signed			
	Passed, Awaiting Signature			
	Failed, Postponed Indefinitely			

April 7, 2022

The Honorable Michael Bennet
United States Senate
261 Russell Senate Office Building
Washington, DC 20510

RE: FY23 CDS Request – Original Aurora Waterline Replacement Project

Dear Senator Bennet,

I am writing in support of the City of Aurora's FY23 Congressionally Directed Spending request for the *Original Aurora Waterline Replacement Project* that invests in the City's drinking water infrastructure and community resilience. The need for replacing and upgrading aging infrastructure is common in older communities as pipelines reach their end of designed use. The *Original Aurora Waterline Replacement Project* is located in North Aurora and Del Mar Parkway Neighborhoods that were developed in the 1950s. These neighborhoods have a higher percentage of residents who are 65+ with disabilities, a lower median home value and lower median income in comparison to other parts of the City.

The City of Aurora is proud to be one of the most diverse cities in the nation and is a minority-majority city, where the total population of the minority groups is larger than the white, non-Hispanic group. Thirty percent of Aurora residents claim a native language other than English and twenty percent of our population is foreign born. A large number of foreign-born residents from the Americas, Africa, and Asia call the northwest Aurora neighborhoods home.

The *Original Aurora Waterline Replacement Project* will replace and upgrade 13,260 feet of aging pipe. This replacement project will greatly reduce water service outages due to waterline breaks and will reduce health risks to the City. The City's funding request of \$4 million will assist the City's public water system with keeping the City's service rates reasonable for these disadvantaged neighborhoods while aging infrastructure replacement costs continue to rise annually.

I strongly urge that Congress includes this Congressionally Directed Spending request for the *Original Aurora Waterline Replacement Project* that will assist to complete this project.

Sincerely,

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TO: John Bruneau, Project Manager, P&E

cc: Mike Mills, Gary Edwards, Marc Tamburro, Dean Bedford

THROUGH: Swirvine Nyirenda, Manager, PS

FROM: Shiva Sapkota, Engineer, AM

DATE: 09/03/2021

SUBJECT: Asset Management 2023 Waterline Replacement Program Recommendation

Water Asset Management in co-ordination with T&D Operations recommends the following replacement of approximately 13,260 ft of 6” and 8” Cast Iron Pipe (CIP) in 3 different locations. This recommendation is based on an elevated break history and failure risks.

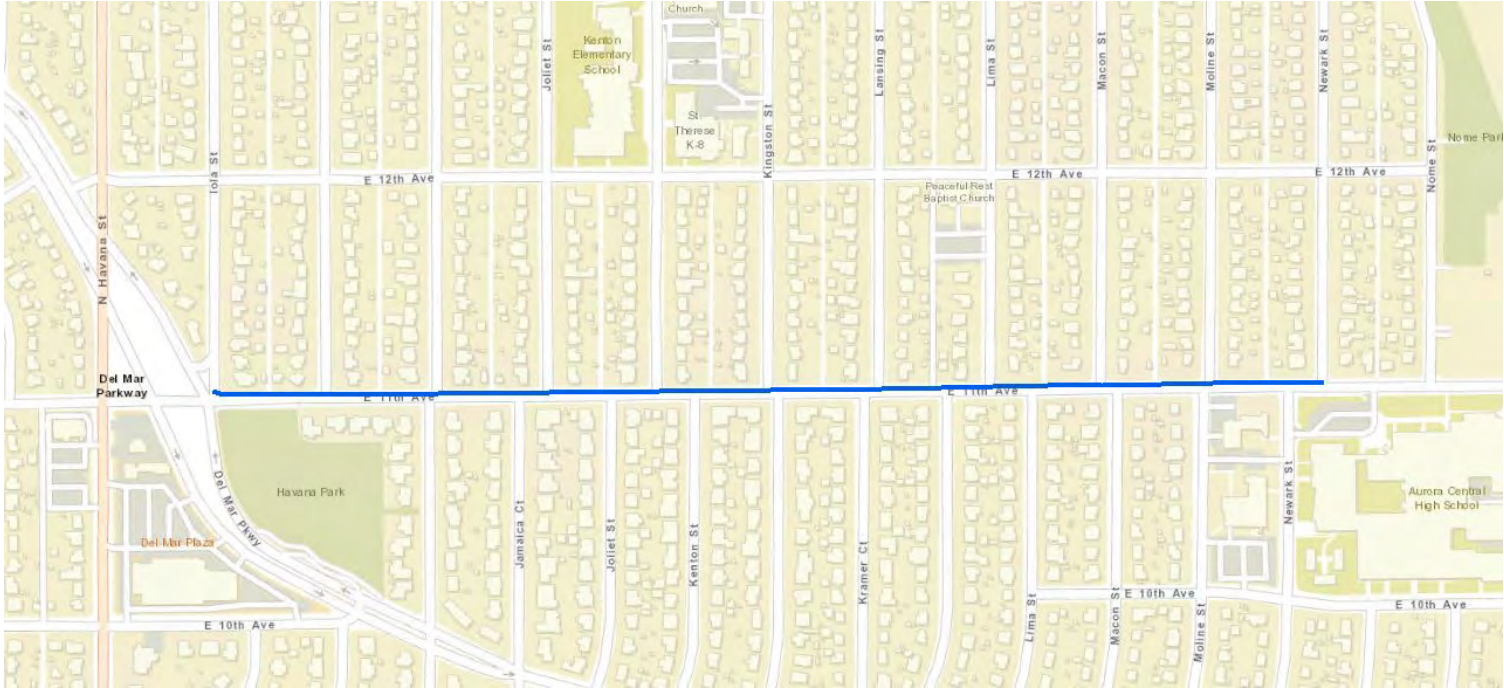
2023 Waterline Replacement Recommendation – Vicinity Map





Replacement Area 1 – 11th Ave (Del Mar Pkwy to Newark St) – 3,288 ft

This section contains 6” Cast Iron Pipe built in the 1950s. This line have/had multiple breaks over the years. CIP pipes are the oldest water pipes in Aurora Water’s system and historic data suggests higher break rates on CIP pipes. This pipeline is in a vicinity of a school and other critical facilities.





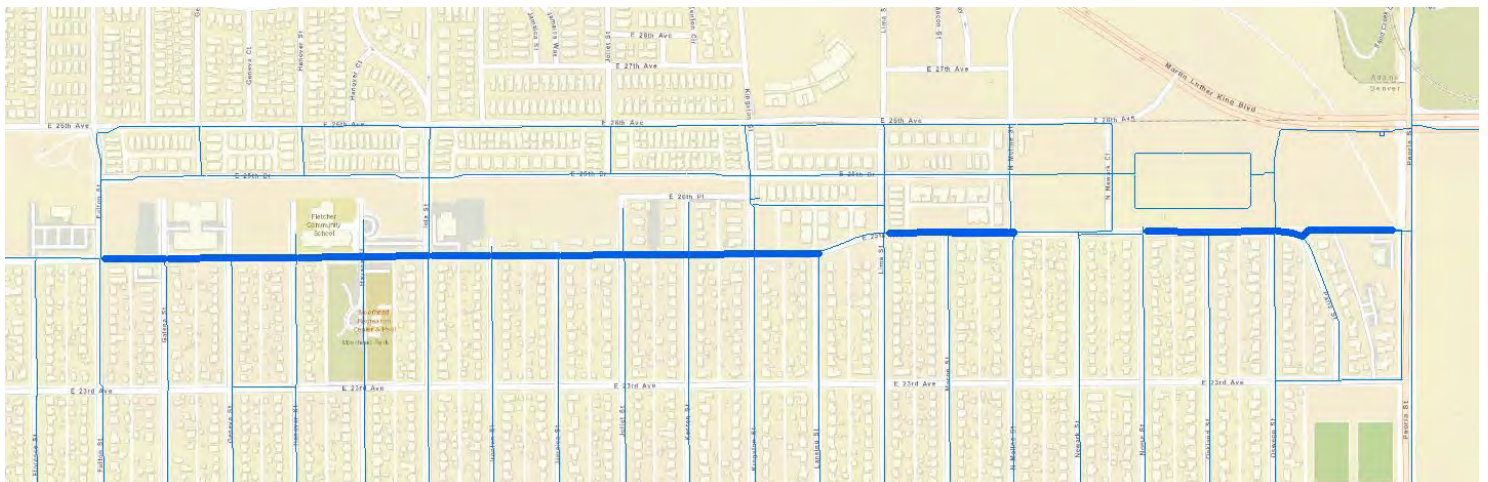
Replacement Area 2 – Montview Blvd (From Havana to Peoria) – 4,221 ft

This is a 6” CIP line that was built in the 1950s. It runs through a busy road and next to a school among other critical and commercial facilities. This line had multiple complicated breaks in the past. Each of those breaks resulted in significant resources due to the location, proximity to other infrastructure and repair complications. Aurora Water T&D team has replaced several sticks of pipeline in this section due to repeated past failures.



Replacement Area 3 – 25th Ave (From Havana to Peoria) – 5,751 ft

This is an 8” CIP line that was built in the 1950s. It runs through a busy road and in vicinity of commercial properties as well as new development. Aurora Water T&D team has replaced several sticks of pipeline in this section due to repeated past failures. Records obtained from past break show severe pipeline damage due to corrosion.



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To: Citizens' Water Advisory Committee

Through: Marshall P. Brown, General Manager, Aurora Water

From: JoAnn Giddings, Deputy Director Water Financial Administration

Date: April 5, 2022

Subject: 2023 Water Connection Fee Changes and Credit Card Fees

Annually staff provides the Citizen's Water Advisory Committee with updates to ordinances, rates, and fees that are planned to be proposed in the budget. Aurora Water staff have been working on a number of updates that will further promote conservation, assist with sustainability of the water system and provide water services to our customers that promotes the health and safety of our community.

Water connection fees are charged to all new development connections to the water system. The fee is used to fund costs associated with building the water system to meet customer demands. A fee increase of 3.9% is planned for 2023 as part of the phase-in plan based on the 2017 water master plan.

The fee is designed to cover the costs of the system based on water needed for additional development and at the same time encouraging water conservation. As the cost of water continues to increase and Aurora continues to grow, staff is proposing an adjustment to the current calculation for fees that will encourage more conservation-oriented developments.

Staff is proposing a change to the calculation based on return flows that can be recaptured and used again versus water usage that has limited return flows. Consumptive use water is returned to the system and is recycled for additional use. Non-consumptive water (water that can't be reused for example irrigation, cooling towers, others) has a limited amount returned to the system.

Consumptive use has a reusability of 95% while non-consumptive use has only an average of 18% reusability. As Aurora Water Right's portfolio relies on the reusability of water rights, non-consumptive use increases the cost of water for all customers.

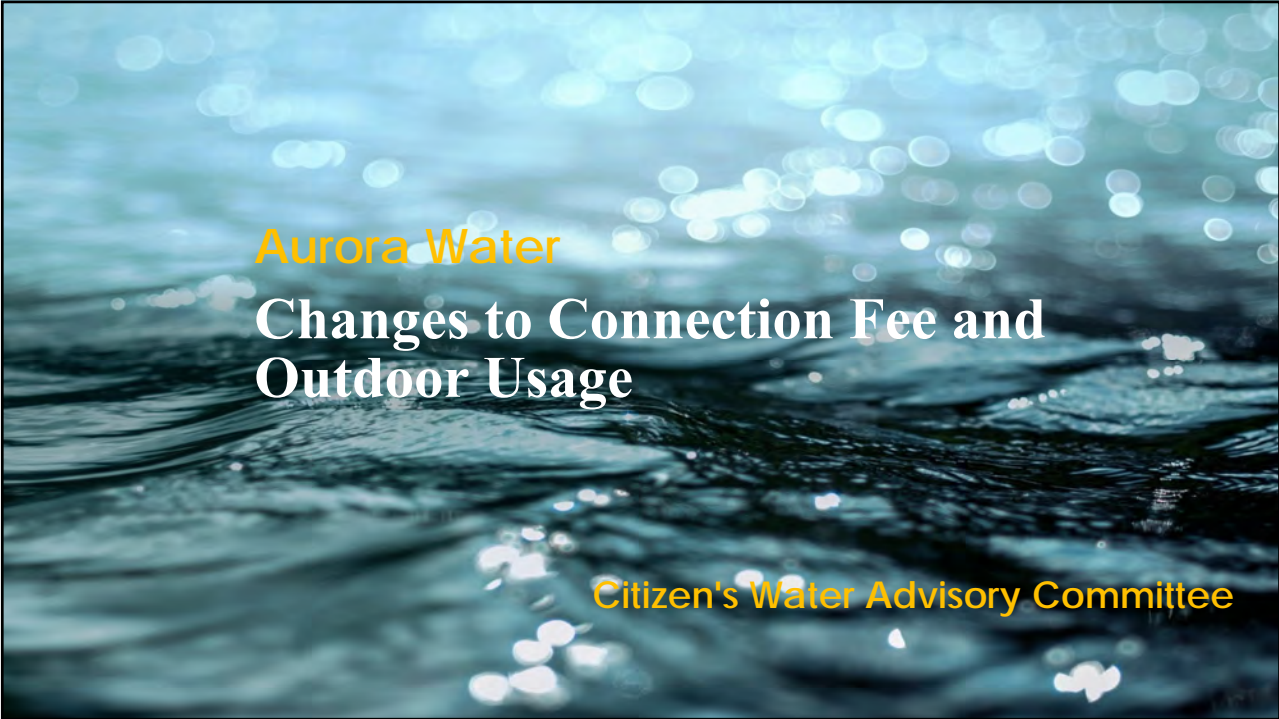
The fee change will more appropriately charge a higher cost of the water rights purchases to customers that have the more limited return flows, requiring additional water rights to replace the consumed water. The changes will be easily implemented due to our existing structure that recognize indoor versus outdoor usage which is understood by the development community.

In addition, an ordinance update will include more water conservation within new development, encouraging more plants that are native to Aurora and limiting large lawns that require significant water. This change will also mean the overall costs for connection fees for these developments will be less. An average home with 3 baths on a 6,900 square foot lot will see about a 13% decrease in the cost to connect.

Staff is also proposing a rate increase in the 2023 budget. Staff works to keep rates as low as possible. The proposed rate increases for the 2023 budget are Water – 3.5%, Sewer- 4.0% and Stormwater – 3.5%

Another item for consideration in this budget is the cost of allowing customers to use credit cards. Staff has provided a number of ways for customers to pay their water bills. Customers can pay in person, by mail, by phone, by internet. Customers also have the option to pay at many grocery stores and other locations through Western Union. There are other pay options that customers have found on their own as well.

The fees Aurora Water is paying for customers to pay by credit card has continued to grow over the last few years. The costs have grown to over \$1,000,000. Staff is proposing having each customer that pays their bill by credit card, pay the fee associated with using their credit card. Every \$1,000,000 in costs incurred by Aurora Water equate to about a 1% rate increase. This will put the burden of the fee on the customers choosing this payment method rather than all customers helping to pay the cost of the fee. Customers may choose to use ACH rather than a credit card which has a cost of \$0.30. Aurora Water would continue to absorb this cost.



1

Water Connection Fee Phased-In Plan

Description	2021	2022	2023	2024
Connection Fee	\$63.62	\$70.38	\$73.12	TBD*
% Increase	0.0%	10.6%	3.9%	

*Fees will be reviewed based on new master plans to be completed in the next two years

2

Aurora Water Conservation Goals

- Promote the efficient use of water resources by incentivizing more conservation-oriented developments
- Reduce the high intensity irrigation areas
- Improve the reusability of our water right’s portfolio
- Recognize the cost of non-consumptive water (water that can’t be reuse for example irrigation, cooling towers, etc)



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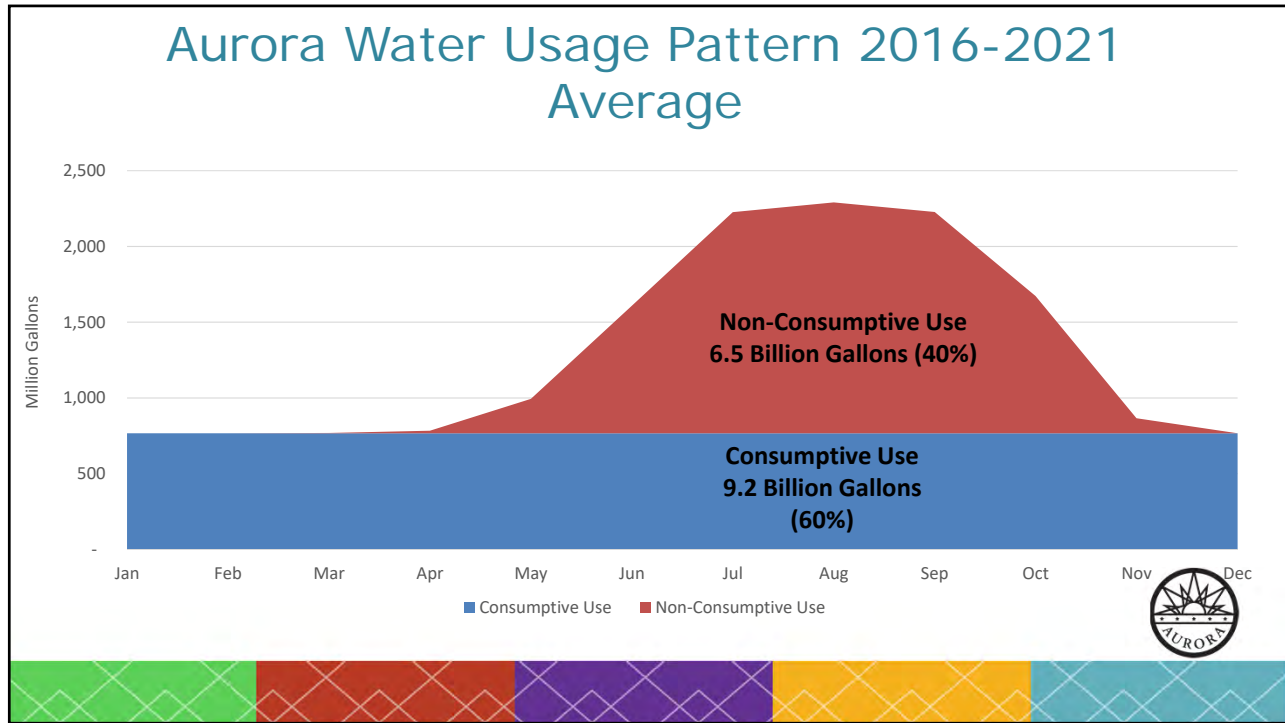
1 AF Water Rights First Use and Reuse

Type of Usage	First Use	Reuse	Total Yield	
Consumptive Use	1	0.95	1.95	
Non-Consumptive Use	1	0.18	1.18	65% Diff

Aurora Water would need to buy 0.65 AF more water rights for Non-Consumptive use to get the same yield as the consumptive use.



4



5

Water Connection Fee Components

Item	2022 Fee (gpd)	2023 Phased-in Fee (gpd)	2023 Fee Consumptive Use (gpd)	2022 Fee Non-Consumptive Use (gpd)	
Water Resource Fee	\$19.60 ¹	\$19.60 ¹	\$19.60	\$32.34 ²	65% Diff
Source of Supply	23.65	25.22	15.13 ³	25.22	67% Diff
Treatment & Transmission	11.38	11.38	11.38	11.38	
Transmission Dev. Fee	1.48	2.29	2.29	2.29	
Carrying Cost	2.04	2.04	2.04	2.04	
Water Losses	\$12.23	\$12.59	10.57	12.59 ⁴	
Total Water Connection Fee	\$70.38	\$73.12	\$61.01	\$85.86	41% Diff

1. 2022 Water Resource fee assumes \$17,500 per AF
2. Non-Consumptive Water resource is based on yield differential for reusability
3. Consumptive SOS fee is 60% of total fee to account for indoor % of total use
4. Water losses for water resource Non-Consumptive fee is based on Consumptive fee

6

Proposed Water Connection Fee 2023

Single Family Residential

Indoor Use		Outdoor Use (per sq ft of lot size)
Number of Bathrooms	2023 Proposed Fee	2023 Proposed Fee
1-2	\$6,749 \$5,850	\$1,153 \$1.406*
3-4	\$10,904 \$9,452	
5+	\$18,897 \$16,381	
Single Family Attached Fee Simple Lots (per unit)		\$10,798 \$9,360

Multi-family Residential (Indoor Use Fee per Unit)

2023 Proposed Fee
\$10,798 \$9,360

Commercial

Meter Size (Inches)	2023 Proposed Fee
3/4	\$24,553 \$21,285
1	\$43,950 \$38,100
1-1/2	\$96,493

Irrigation (per square foot of landscaped area)

Landscape type	2023 Proposed Fee
Non-Water Conserving	\$3.36 /\$4.10
Water Conserving	\$1.80 \$2.20

- Based on \$61.01 gpd Consumptive Use fee and \$85.86 Non-consumptive use Fee
- 2" and larger is based on projected Consumptive and Non-consumptive usage and subject to capital recovery fee



7

Residential Outdoor Usage Assumptions

- Water Conserving landscape uses 46% less water
- Landscape area is not known for residential customers at time of connection fee assumption of usage per lot size is used
 - Existing assumption = 5,979 gallons per 1,000 sq. ft.
 - With proposed changes = 4,234 gallons per 1,000 sq. ft
- Outdoor residential fee will be 29% lower for developments under proposed rules
- AW will update this assumptions with actuals once more data is available



8

Proposed Water Connection Fee 2023

Single Family Residential

Indoor Use		Outdoor Use (per sq ft of lot size)
Number of Bathrooms	2023 Proposed Fee	2023 Proposed Fee
1-2	\$6,749 \$5,850	\$1.153 \$1.406/ \$0.996
3-4	\$10,904 \$9,452	
5+	\$18,897 \$16,381	
Single Family Attached Fee Simple Lots (per unit)		\$10,798 \$9,360

Multi-family Residential (Indoor Use Fee per Unit)

2023 Proposed Fee
\$10,798 \$9,360

Commercial

Meter Size (Inches)	2023 Proposed Fee
3/4	\$24,553 \$21,285
1	\$43,950 \$38,100
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Irrigation (per square foot of landscaped area)

Landscape type	2023 Proposed Fee
Non-Water Conserving	\$3.36 /\$4.10
Water Conserving	\$1.80 /\$2.20

-Based on \$61.01 gpd Consumptive Use fee and \$85.86 Non-Consumptive use Fee
 -2" and larger is based on projected Consumptive and non-consumptive usage and subject to capital recovery fee



9

Average Residential Impact

- Status Quo -An average residential single-family home with 3 bathrooms and 6,900 sq. ft. will see an increase of 1.56% (\$293.70)
- New Ordinance - An average residential single-family home with 3 bathrooms and 6,900 sq. ft. will see a decrease of 13.6% (\$2.5K)



10

Planned Rates and Fees Adjustments

Proposed Rate Revenue Adjustments

Utility	2022	2023	2024	2025	2026
Water	3.5%	3.5%	0.0%	3.5%	0.0%
Sewer	4.0%	4.0%	4.0%	4.0%	4.0%
Stormwater	3.5%	3.5%	0.0%	3.5%	0.0%

Proposed Fee Adjustments

Utility	2022	2023	2024	2025	2026
Water	10.6%	3.9%	TBD**		
Sewer	6.3%	6.4%			
Stormwater	0.0%	0.0%**			

**Fees will be reviewed based on new master plans to be completed in the next two years



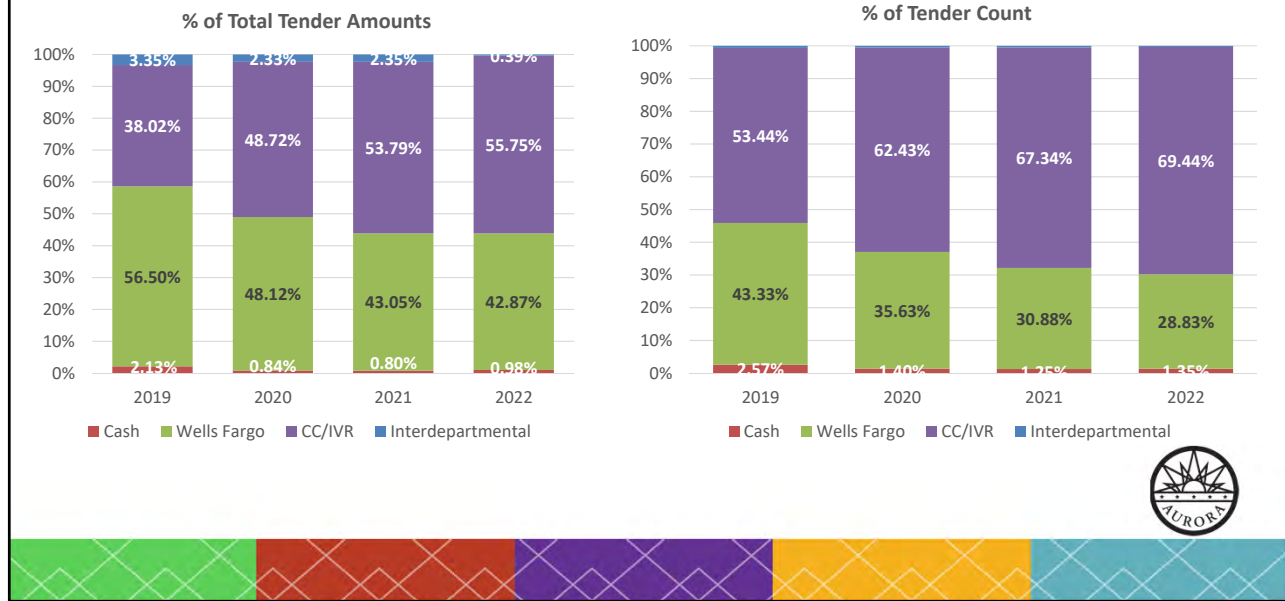
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FYI – Credit Card Fees



12

Statistics of Payments



13

Should Charge a Credit card Fee?

Arguments in Favor

- The increase in credit card fees requires a 1% increase in rates to cover the cost
- Equitable not all transactions are created equal
- Customers take advantage of miles and perks to use credit cards
- We can create a fee structure that incentivize the use of less expensive methods of payments

Arguments Against

- Is the cost of doing business
- This could reduce payments and increase delinquency
- Not all utilities charge for credit card fees



14

Questions





TO: Citizens' Water Advisory Committee

THROUGH: Marshall Brown, General Manager, Aurora Water
Alexandra Davis, Deputy Director of Water Resources, Aurora Water
Rich Vidmar, IBES Water Resources Supervisor, Aurora Water

FROM: Lauren Maggert, Water Resources Project Manager, Aurora Water

DATE: April 12, 2022

SUBJECT: Aurora Water Drought Response Presentation

Purpose:

Aurora Water initiated the Drought Action Team in early 2021 with the objective of bringing together staff from across divisions to develop recommendations and propose actions to mitigate drought risks. The Drought Action Team vetted over 40 mitigation options and developed a feasible list of options to implement. The team also provided recommendations on how to improve Aurora's future drought planning and response. The team put together a 2021 Drought Action Team report that summarized the 2021 drought conditions, Aurora's response, as well as detailed discussion of the team's recommendations. Drought conditions have improved since 2021, but the Drought Action Team continues to meet on a regular basis to monitor conditions and track progress on their recommended projects and actions.

Action Required:


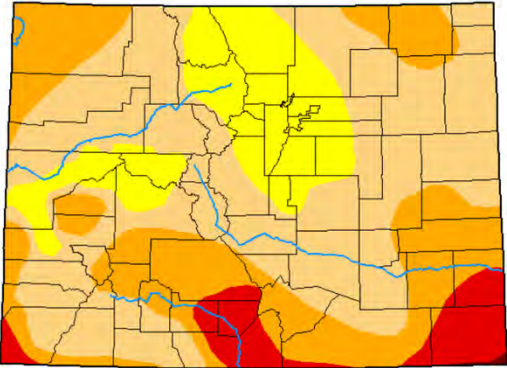
No action required. Informational item only.

**AURORA WATER
DROUGHT
RESPONSE**

*Lauren Nance Maggert
Citizen Water Advisory Committee
April 12, 2022*

**U.S. Drought Monitor
Colorado**


March 22, 2022
(Released Thursday, Mar. 24, 2022)
Valid 8 a.m. EDT



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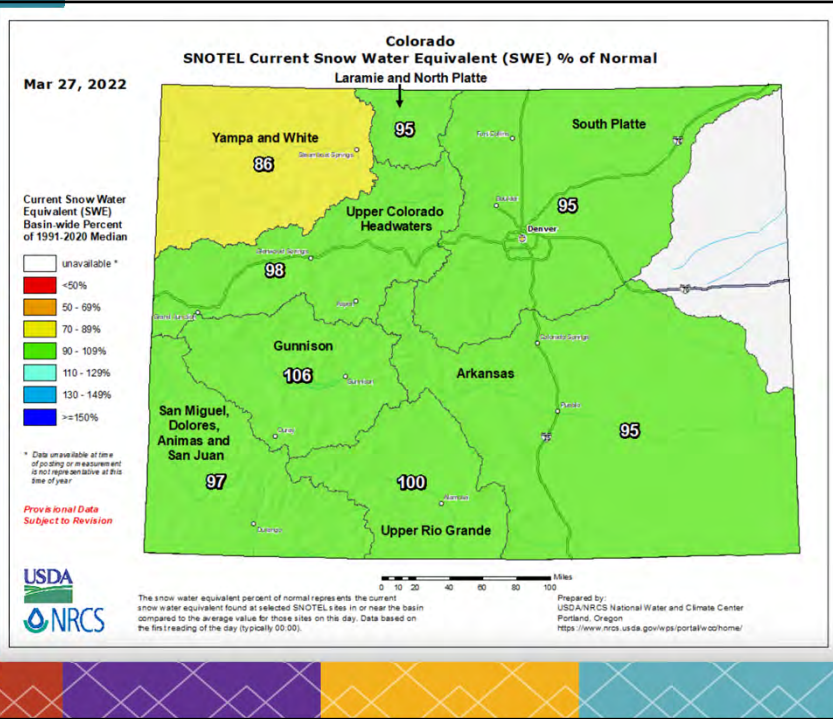
AGENDA

- Current Drought and Water Supply Conditions
- Aurora’s Drought Action Team
– 2021 Accomplishments and current priorities

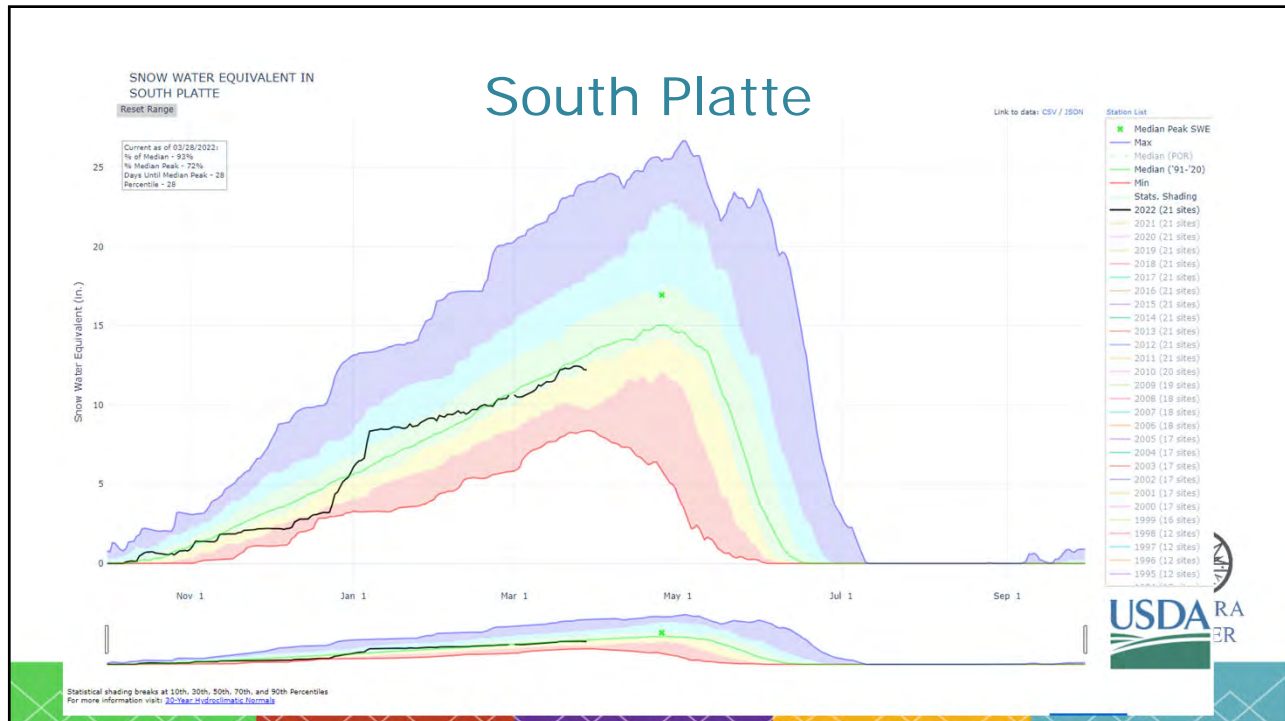


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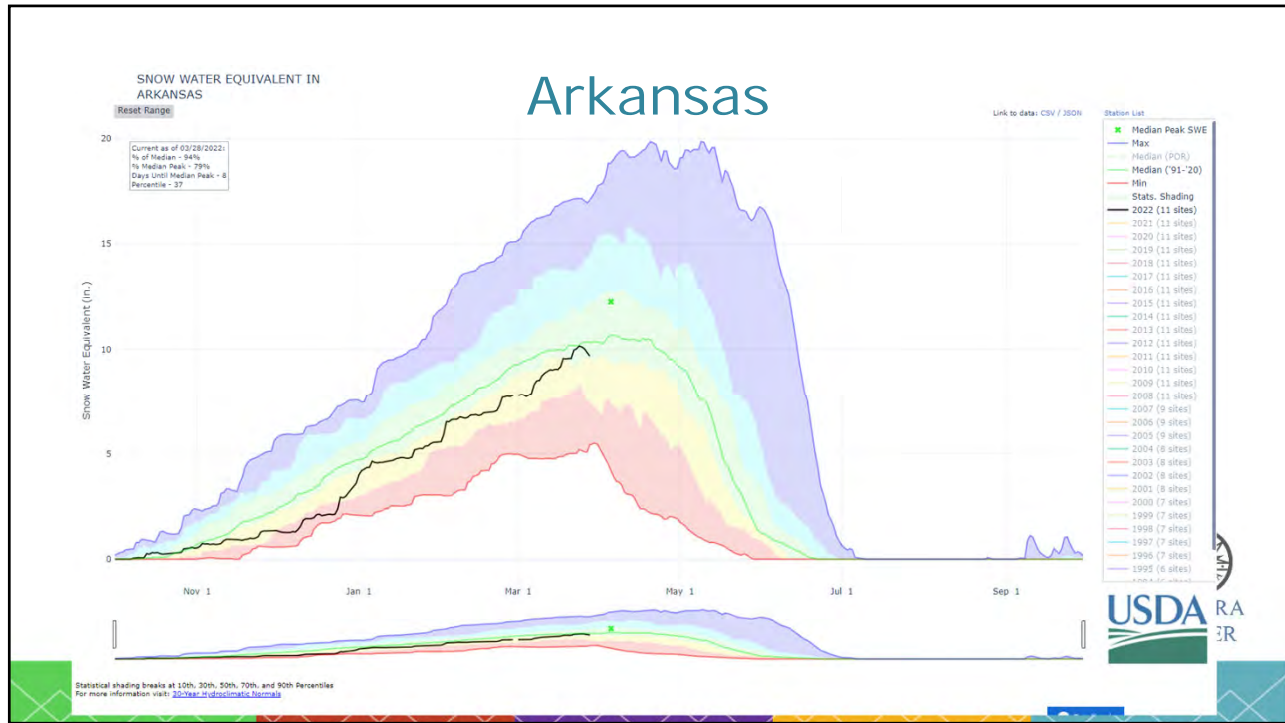
CURRENT DROUGHT & WATER SUPPLY CONDITIONS



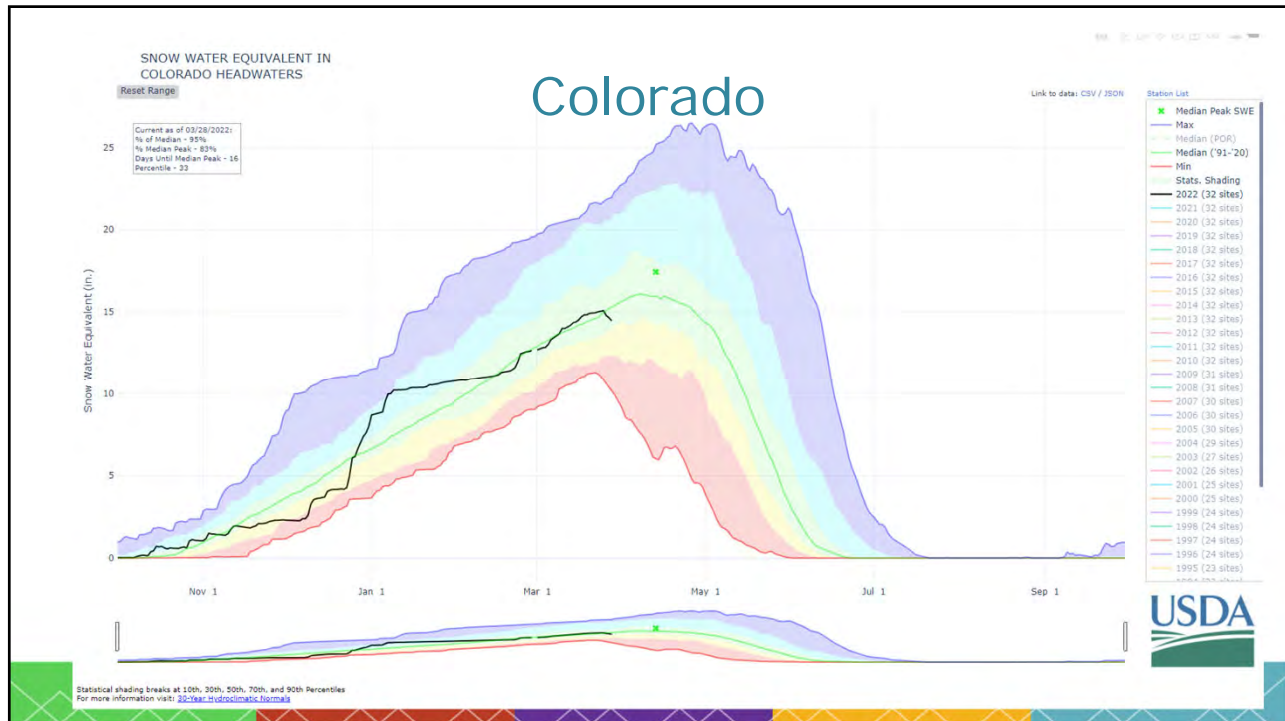
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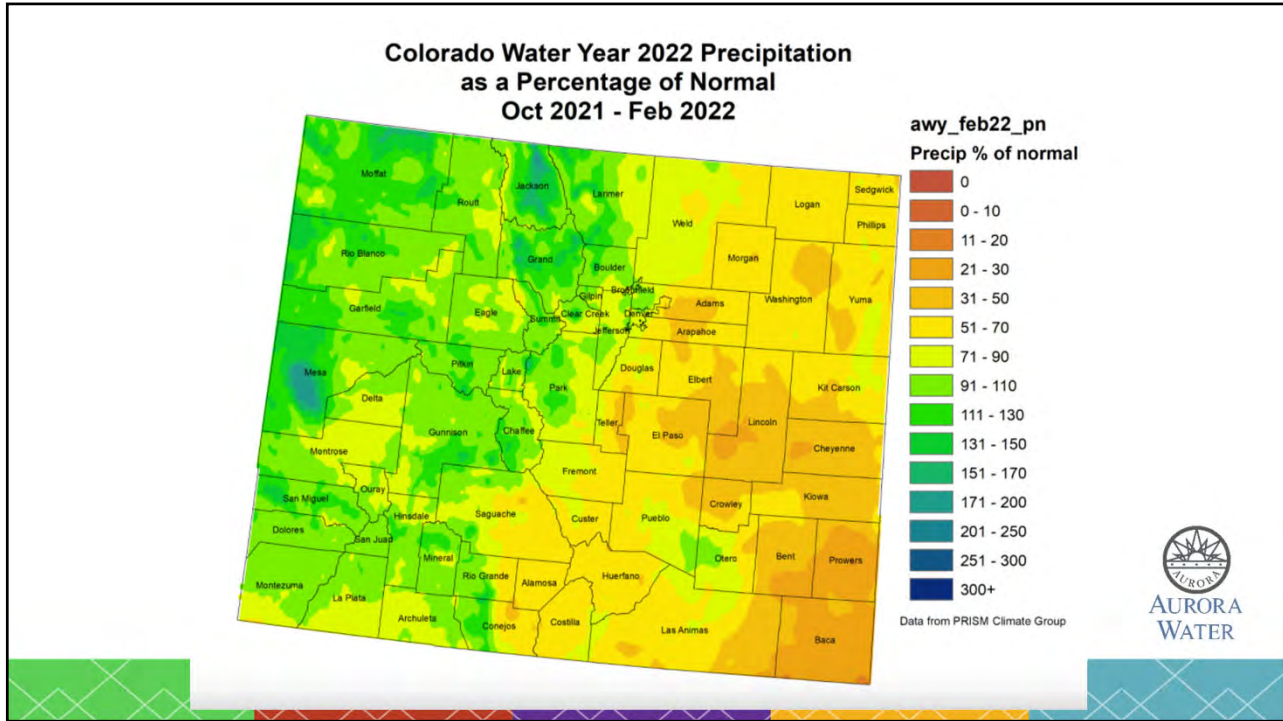
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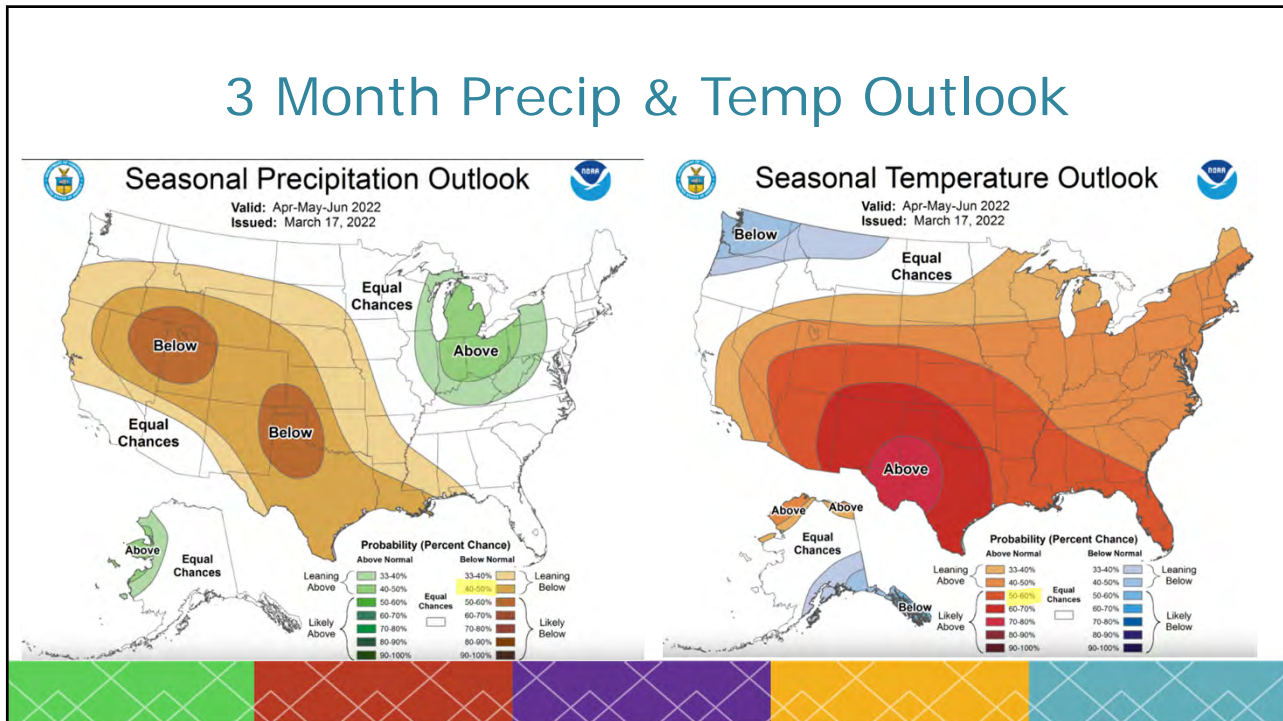
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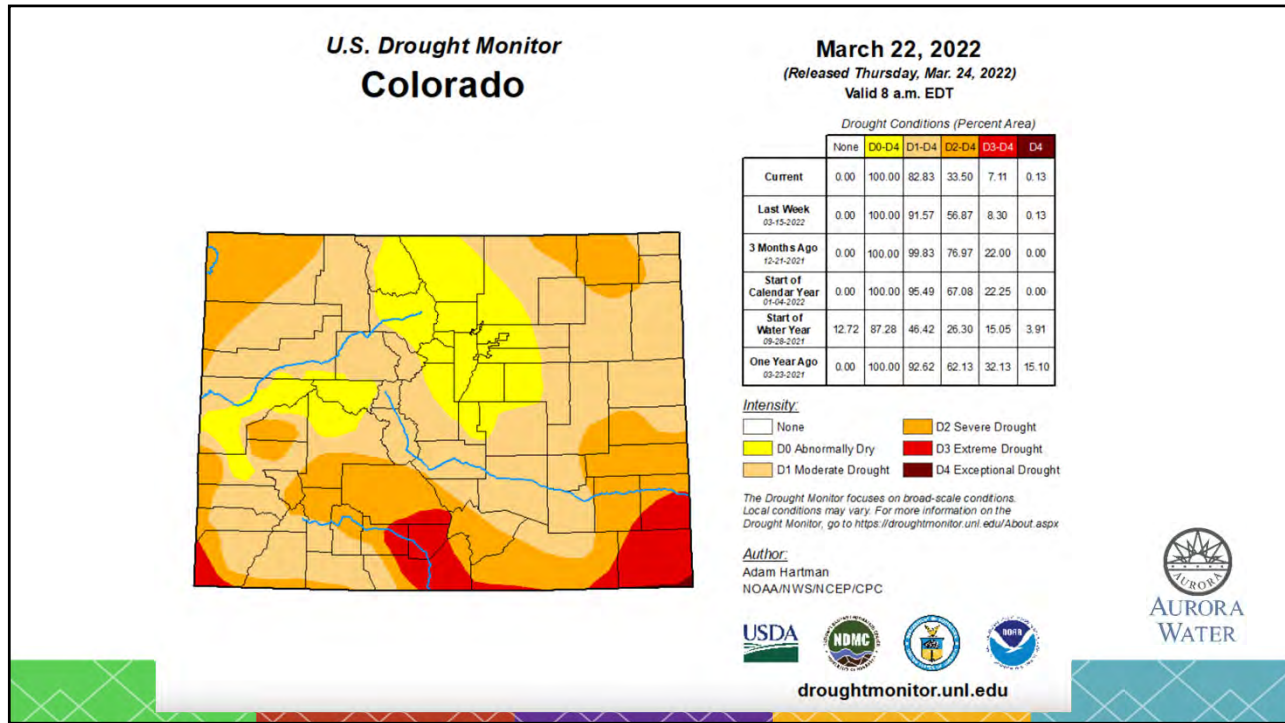
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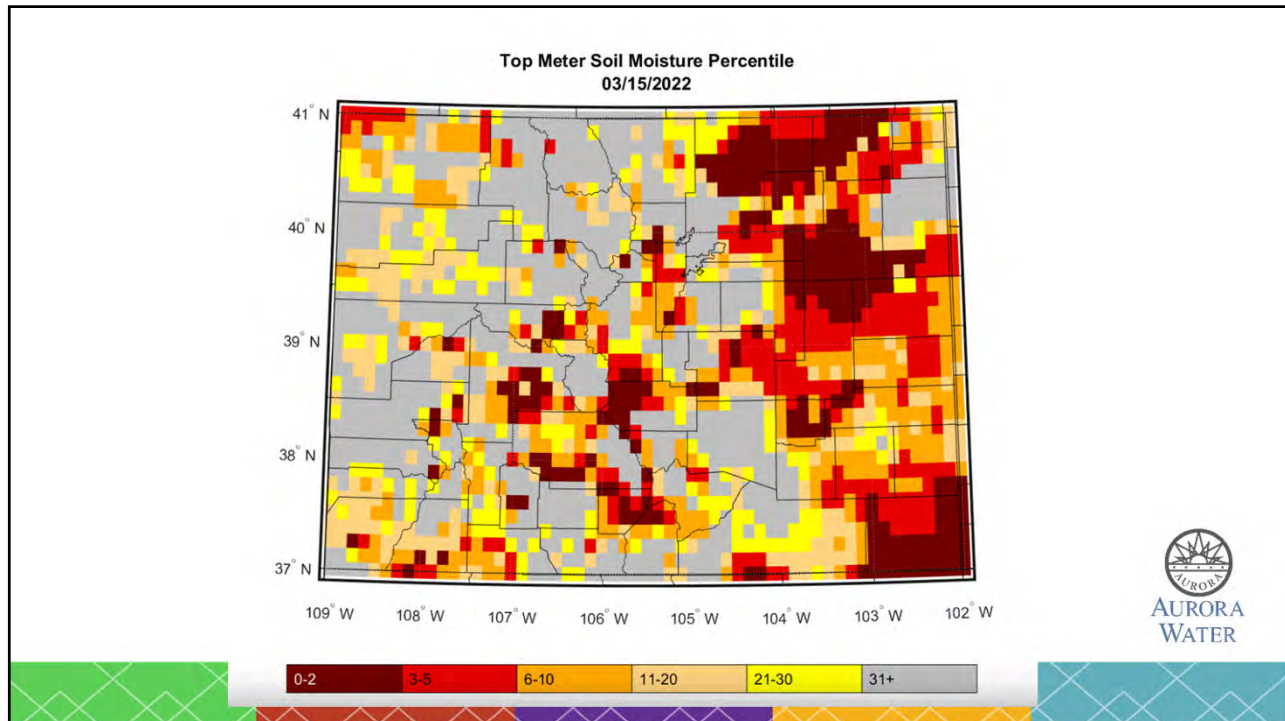
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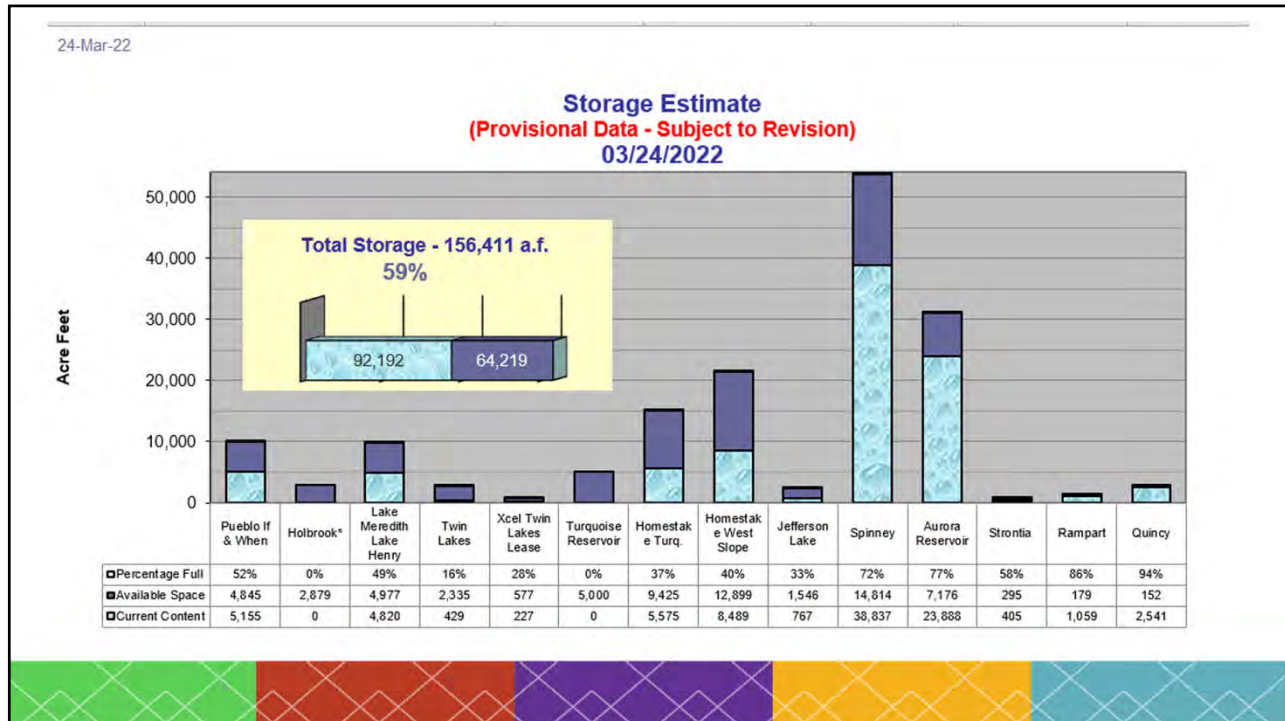
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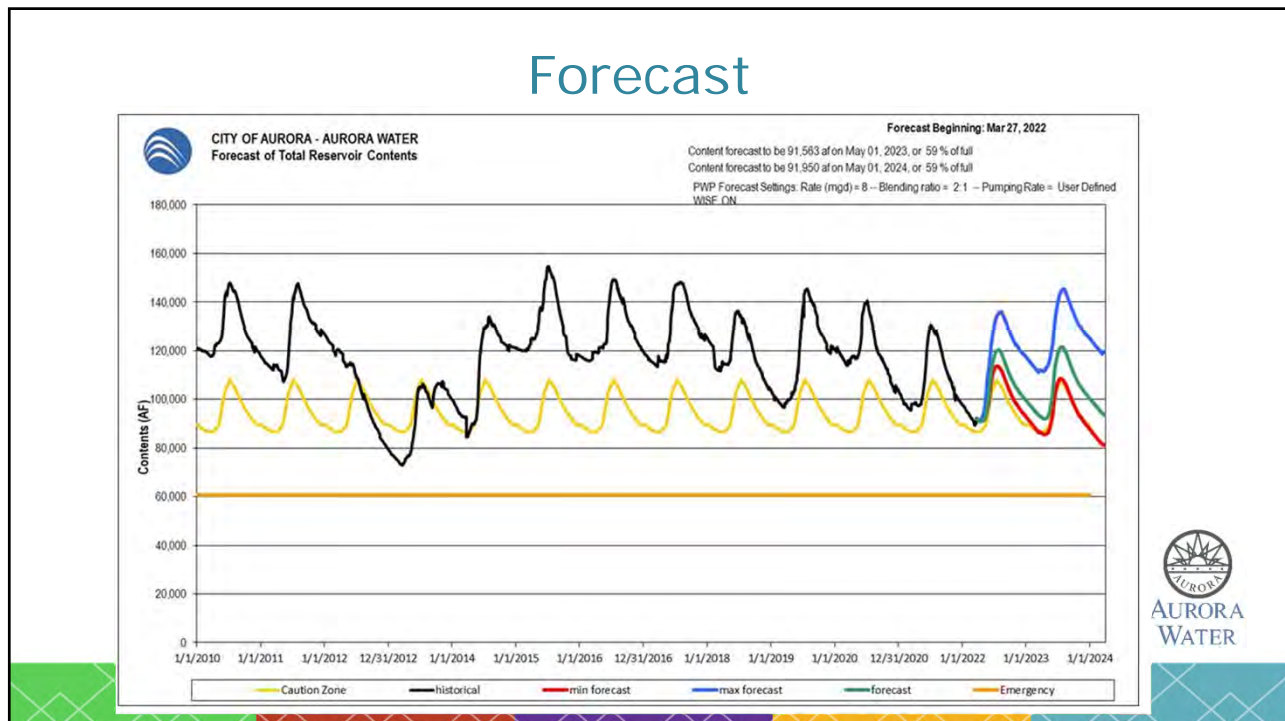
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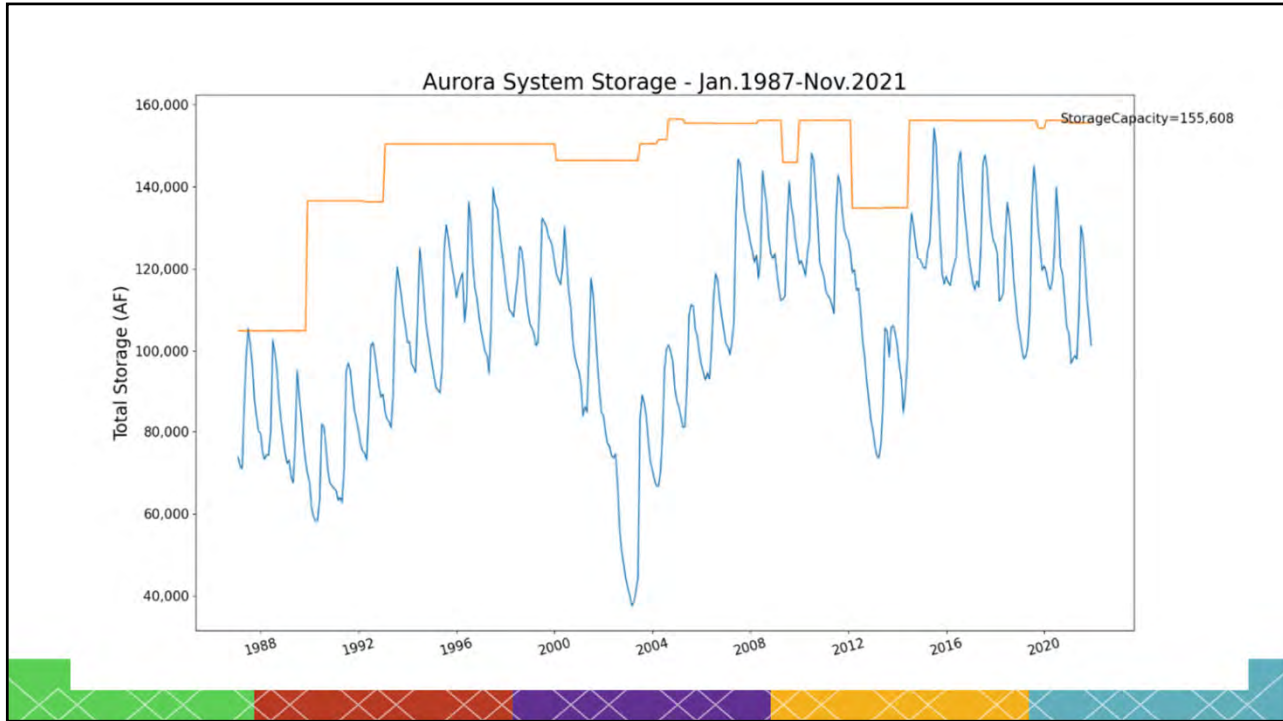
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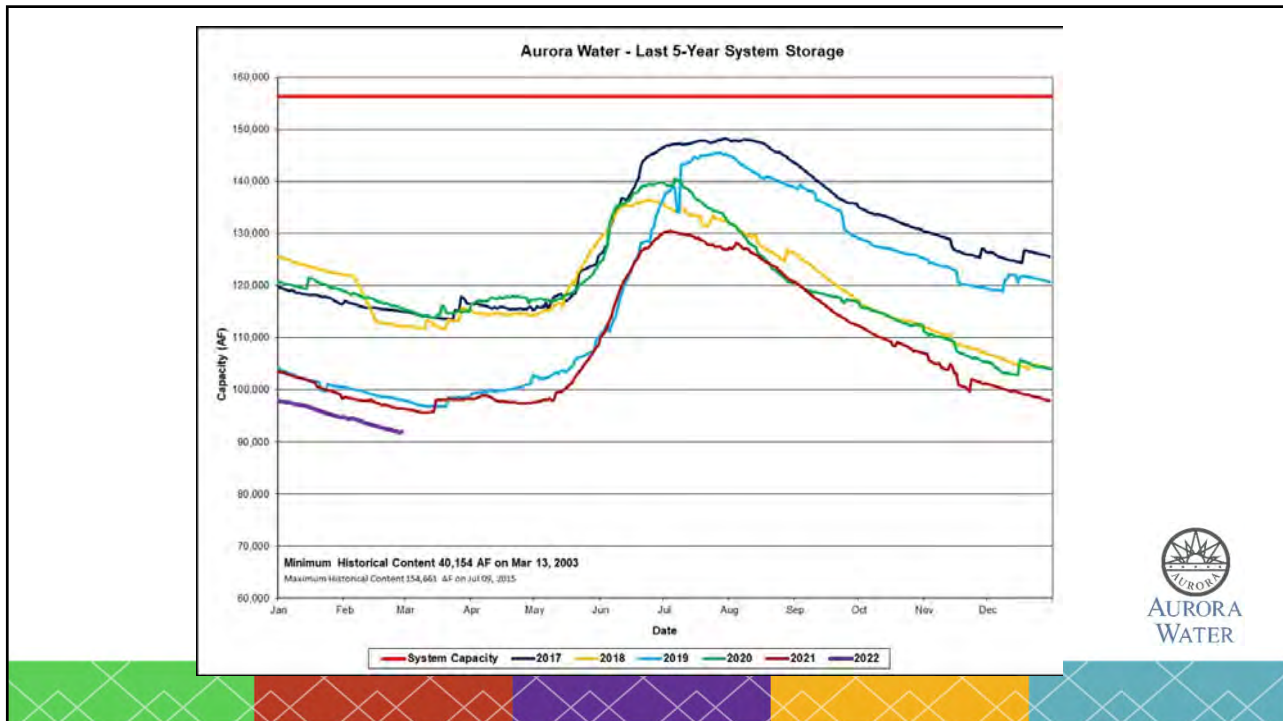
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**DROUGHT
ACTION
TEAM**




15

Aurora Water’s Drought Action Team

Objective: Bring together staff from across Aurora Water to develop recommendations and propose actions to mitigate drought risks.

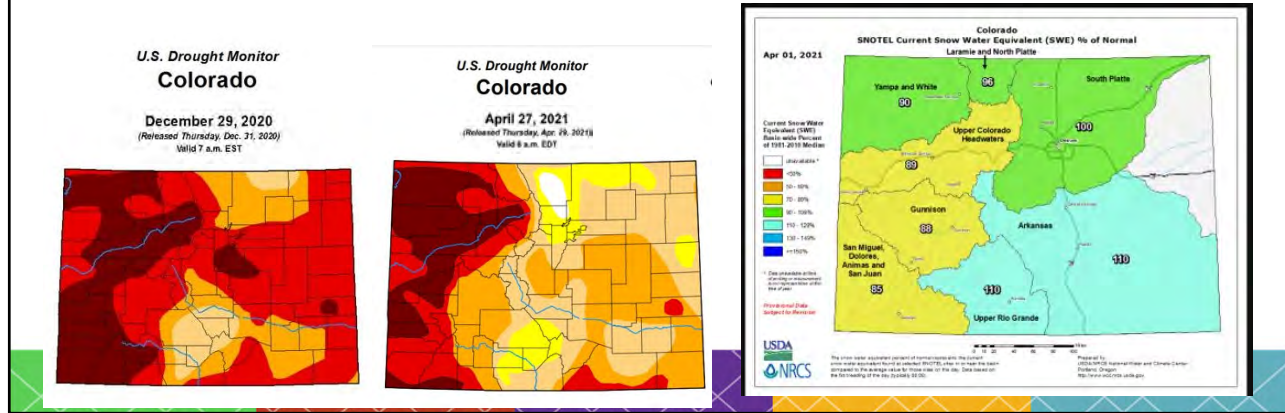
Who: 26 team members including Deputy Directors, key personnel and technical staff from each division



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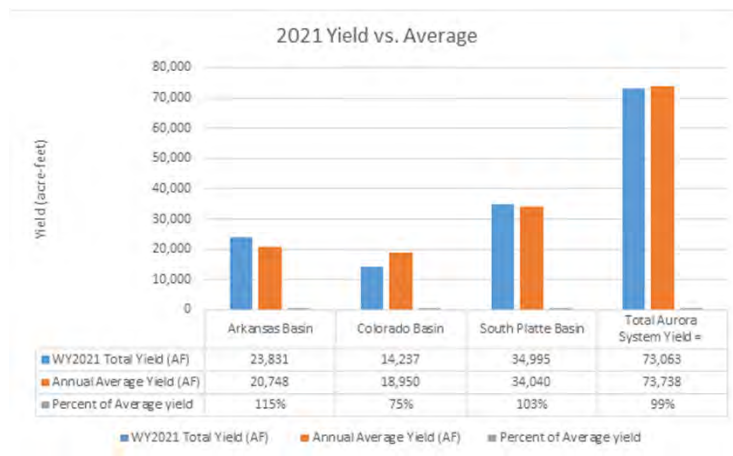
Drought Indicator Monitoring

- Provided regular drought update presentations at bi-monthly DAT meetings
- The DAT did not recommend implementing watering restrictions in 2021 due to average snowpack and forecasted average yield.



17

2021 Yield = 99% of Average



* The long-term average was calculated as the average yield from 2002 through 2020



18

Drought Mitigation Options

- DAT vetted over 40 Drought Mitigation Option to narrow down feasible options

Drought Mitigation Options
By: Lauren Nance, 3/17/2021

Option ID	Type of Project	Option Name	Brief Description	POC Responsible for Developing Option	Aurora Department Responsible for Implementation	Anticipated Capacity / Yield	Cost Estimate	Implementation Duration/ Date available	Operational Notes	Status
1	Groundwater	Groundwater Master Plan	Master plan to figure out how to incorporate Denver Basin groundwater as a drought-firming supply. It is recommended that the master plan address long-term operations and maintenance of Aurora's existing Denver Basin wells and how future wells would integrate into Aurora's water supply system. A groundwater operations and maintenance plan would help determine how to maximize utilization of these Denver Basin wells on an on-going basis, and how to balance the short-term cost of operating the wells with the long-term need of a drought-hardening water supply.	Suriname	Planning & Engineering	N/A	\$100K	Plan for 2023 Duration 1 yr	3-10-2021 - Memo to Planning Eng Groundwater Study	Planning & Engineering to put together RFP in 2022. Recommended to be completed in the next 1-2 years.
2	Groundwater	Denver Basin Well Assessment	Assess the viability of using Aurora's existing Denver Basin wells to supplement the City's water supplies during extended periods of drought. Scope: review each well's design & operational history, conduct assessment of each well's casing, production string, associated appurtenances, and electrical and control systems, identify performance testing, water quality testing, recommendations regarding each well's suitability for the intended purpose, and recommendations regarding any necessary well or system improvements.	Suriname	Planning & Engineering	N/A	\$900K	Plan for 2022 Duration 1-2 yrs	3-10-2021 - Memo to Planning Eng Groundwater Study	Planning & Engineering to put together RFP in 2022. Recommended consulting in the next 1-2 years.
3	Groundwater	Rehab Existing Wells (Senac, Quincy, Cherry Creek)	Senac Wells: Drill from Denver Basin within the Aquaplane basin. There are 3 existing wells located by Aurora Reservoir using non-tri-butary groundwater. Need complete overhaul within the well-rehab, controls, scale, etc. Well A-9 is in legal limbo. Quincy Wells: 1 well. Rehab Laraine Fav-Wells well at Quincy. Just casing and screen rehab. Located near Quincy Reservoir. Need gauging, pumps, electronics, and connection to Quincy. Cherry Cr. Deep Wells: Cherry Creek Deep (head new controls, but already being planned). DA-1 inoperable (will require rehab to become operational). Other wells available, but for unknown duration (will need rehab). LHM-1 produces ~250 GPD.	Ted H. Swanhoe Joshua Godwin Matt Allgood Sherry J. Owens	Operations / Source of Supply IG&I	1100-4000 AFY (assuming 100-400 AFY) well Senac - 400 AFY Cherry Cr - 400 AFY well	\$900K (\$1.5M) - 3-6 months		Senac: 5100K x 5 wells + 5500K + 5100K VFDs + 5100K Controls + \$350K Quickest Win. Water Quality implications, 550K acid & scrubbing, just existing equipment back in hole. 5100K acid scrubbing, replacement of all downhole equipment. Quincy: Build infrastructure to connect into Quincy Water Quality implications. Cherry: Wells restricted to going to Griswold. Water Quality implications. Griswold blending ratio constrains pumping. 5100K 4 wells + 5400K for total rehab.	Wait until completion of Denver Basin Well Assessment, where this option will be evaluated.
4	Groundwater	Rehab - Senac Groundwell	1 well. Rehab Laraine Fav-Wells well at Griswold. Just casing and screen rehab. Located south of Cherry Cr. Spillways. Need gauging, pumps, electronics.	Joshua Godwin Matt Allgood Sherry J. Owens	Operations / Source of Supply IG&I	200-400 gpd	~ 3-6 months		Planned to be abandoned 50% of work at Griswold. Water Quality implications.	Not a feasible option. Well to be abandoned.
5	Groundwater	Drill New Wells	Drill new Denver Basin (non-tri-butary) wells throughout the City. - Quincy - New well near Quincy, which already has transformer and meter set on left abutment of Quincy Reservoir. - Griswold - New well near Griswold, which already has a transformer set. - Cherry Cr - add additional deep wells and utilize existing pipeline to Griswold. - Near Distribution Storage wells where water could be directly introduced into the distribution system after chlorination. Denver-Aurora Water already has the legal right to use non-tri-butary groundwater beneath city limits.	Joshua Godwin Matt Allgood Sherry J. Owens	Operations / Source of Supply IG&I	Varies Griswold - 500AF/well Cherry Cr - 500-800AF/well	\$1-01.5M/well IG&I \$500K-1M/well	6-8 months	Implementation Time long - to complete engineering analysis, permitting, and construction. Water Quality implications should be considered. Costs will be higher and implementation longer during drought. Hydraulic analysis recommended to better understand drought implications, esp for Cherry Cr. New system controls recommended for Cherry Cr. to allow pumping for a longer duration.	Wait - until completion of the Groundwater Master Plan to determine how to incorporate new wells into Aurora's water supply system.



19

Drought Response Options Implemented & Recommended

Drought Option	Water Available (AFY)	Option Status	Implementation Timeline
Total Dissolved Solids (TDS) Blending Change at Binney WTP	0, but reduced portion of mountain supply blend water by 7-17% Blend TDS target changed from 400ppm up to 480ppm.	<u>Approved & Implemented</u>	Began early 2021, and still in place in 2022
Denver Basin Groundwater Assessment	TBD, but assuming 11 wells could produce between 100-400 AFY, the yield would range 1,100 - 4,400 AFY	<u>Recommendation memo sent to Planning & Engineering on 4/2/2021</u>	Start 2022, take 2-3 years Well rehab dependent on well assessment recommendations
Denver Basin GW Master Plan	TBD	Not Started	After IWMP2 and budget dependent. ~ 2024
Super Ditch Lease from the Lower Arkansas Basin	5,000-10,000 AFY (3 in 10 years)	Water Resources staff & external counsel developing term-sheet for legal agreement with Super Ditch	2022 or 2023, pending execution of legal agreement
Patty Water lease from Denver Water	300 AFY of additional supply at Spinney or direct potable connection	Not started. Water Resources & internal legal counsel to develop term-sheet for IGA. Currently delayed due to shortage of legal staff.	2022 or 2023, pending execution of legal agreement



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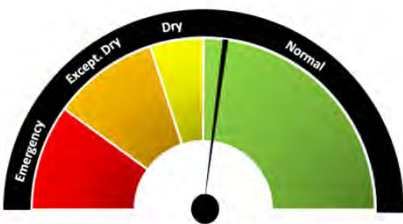
DAT Recommendations to Improve Drought Planning & Response

Recommendation	Description	Option Status as of March 2022	Implementation Timeline
Forecast Model Update and Training	Update forecast model, train staff, revise forecast to use snowpack data, and to match Water Management Plan triggers.	Completed	Completed Feb 2022.
Forecast Tool RFI	Request information about forecast models and/or tools to determine whether to develop something new.	Not started	Start Summer 2022, complete < 1 year
Communication Plan	Communication plan for internal and external stakeholders regarding drought and water shortage.	<u>Draft started</u>	In progress, complete by end of 2022
Schedule 3 DAT meetings annually	Discuss water supply conditions, drought conditions, project plans & schedules, and review past demand and yields	Implemented 2021, and will be scheduled for 2022	Ongoing, DAT to meet 3x year: early April, late August, early November
Water Shortage Indicators	Indicators to define drought and water shortage conditions	Not Started, to be task as part of Drought Management Plan project	Initiate with Drought Management Plan project
Drought Management Plan	Internal plan to outline drought indicators, when to activate DAT, drought response options with implementation plan	On Hold	Initiate after completion of IWMP2

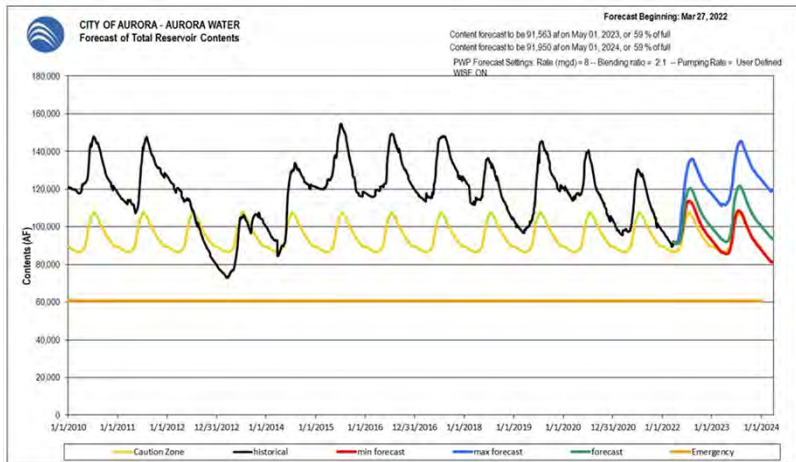


21

Forecast Model



Drought Trigger from Storage + Projected Inflow



22

QUESTIONS



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TO: Citizens’ Water Advisory Committee

THROUGH: Marshall Brown, General Manager, Aurora Water

FROM: Greg Baker, Manager of Public Relations, Aurora Water

DATE: April 12, 2022

SUBJECT: Water Management Plan overview

Purpose:

The Aurora Water Management Plan (WMP) provides a framework for Aurora’s water demand reductions in the event of drought or other water emergencies. This plan identifies supply and demand triggers that would require the implementation of drought stages. These stages define day per week watering restrictions and, at certain levels, result in rate surcharges as a means of reducing water demand across all customer classes. The WMP primarily impacts outdoor water use and is implemented by City Council through a “Water Availability” Resolution. This plan supports the outcome of the Drought Action Team’s recommendations.

Background:

Water Management Plans have been in place in Aurora since 2003. From 2004 to 2012, the plan was revised and presented to council for approval on an annual basis. In 2013, an on-going WMP was approved that is active until an amendment is required. At the time of approval, the City Council requested that Aurora Water simplify the plan’s language and presentation. Based on this request, as well as lessons learned from a drought from 2012 to 2013, Aurora Water presented a WMP to be in effect beginning in 2017 that reduced the water availability stages from six to four. This resulted in the removal of several intermediate stages that projected minimal water savings, yet required substantial outreach.

Action Required:

No action required. Informational item only.

Water Management Plan

Greg Baker
Public Relations Manager
Aurora Water



1

Purpose

The purpose of the Aurora Water Management Plan is to provide a framework for the City of Aurora’s water demand reductions in the event of drought or other water emergencies.



2

Authorization

Aurora City Code 138-223 (b)

- (2) The allowable citywide outdoor allocation shall be determined by city council and is a function of the reservoir levels, usage, and the projected yield of the water supply system and will be described in the current water management plan.
- (3) The water management plan shall refer to the rules and regulations established by the director of water regarding water allocation, usage restrictions, and conservation adopted pursuant to section 2-3.



3

Water Management Plan History

- Pre-2003
 - Reactive measures to drought & system emergencies
- 2002-03
 - Outdoor Water Use Program
 - Series of reactive restrictions
- 2004 – 2012
 - Annual Water Management Plan
- 2013 – 2016
 - On-going Water Management Plan
 - Six stages
- 2017 – Present
 - Reduced stages for six to four
 - Direction from Council – Simplify the plan



4

Water Management Plan Implementation

- “Water Availability” Resolution from City Council
- Use of “Water Availability” Stages
 - Limits outdoor water use only - Irrigation primarily
 - Day per week restrictions
 - Enforceable through fines attached to water bill
 - Can result in surcharges to rates



5

Demand Reduction

- Assumption
 - Days per week restrictions result in reduced outdoor use without need for rate surcharges
- Lesson learned in 2013
 - Many residents watered 2 day/week, but increased watering time per zone to compensate
 - Increased water wasting calls due to inefficient irrigation
 - Minimal water use reductions



6

Water Management Plan Implementation

- Current WMP Four stages
 - Normal – 3 day per week, non-fixed
 - Stage I – 2 day week, fixed days, surcharge, 20% reduction
 - Stage II – 1 day week, fixed day, surcharge, 50% reduction
 - Stage III – No outdoor water use, surcharge, 100% reduction
- Watering Variance Program for large properties



7

Triggers

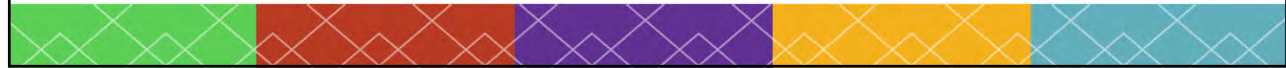
- Previously based on complex formula including reservoir levels, expected yield and demands
 - Public messaging challenging
- Now based on projected months of supply based on current demands



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Current Triggers

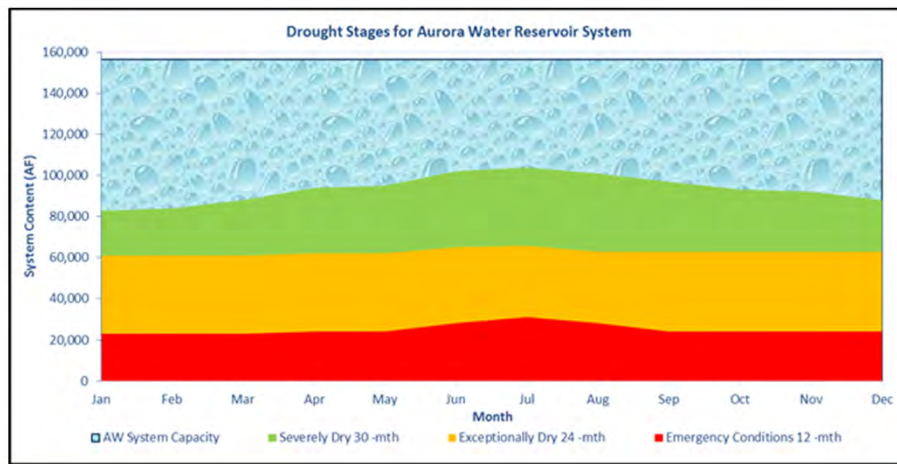
Water Availability Stage Conditions and Demand Reduction Recommendation				
Water Availability Stage	NORMAL	Stage I SEVERELY DRY	Stage II EXCEPTIONALLY DRY	Stage III EMERGENCY CONDITIONS
Trigger - Months of supply based on current demand	Above 30 months	30-25 months	24-13	12 months or less
Demand Reduction Recommendation (outdoor use only)	0%	20%	50%	100%



9

Current Triggers

Example based on 2015 reservoir levels



10

Water Management Plan

Delineate restrictions by customer class

Water Management Plan - Program Elements				
ELEMENT	NORMAL	SEVERELY DRY Stage I	EXCEPTIONALLY DRY Stage II	EMERGENCY CONDITIONS Stage III
Residential (Single-Family, Multi-Family)				
Turf Lawns Irrigation of existing lawns (in place prior to May 1) is permitted throughout the year unless restricted by Water Availability Resolution.	Irrigation of existing lawns, in place prior to May 1, is not to exceed 3 days per week from May 1 to Sept 30. No watering is permitted between 10 am and 6 pm from May 1 to September 30.	Irrigation of existing lawns, in place prior to May 1, is allowed on a 2 day per week schedule to be based on the home address (even/odd). No watering is permitted between 10 am and 6 pm from May 1 to September 30.	Allowed on 1 day/wk schedule based on address (even/odd). No watering is permitted between 10 am and 6 pm from May 1 to September 30.	No irrigation of lawns.
Annuals (flowers), Home Vegetable Gardens, Trees, Shrubs and Perennials <i>Gardens, when properly managed, typically require 50% less water than cool weather turf.</i>	May be watered by automatic system on any day, and by hand at any time. No automatic system irrigation from 10 am and 6 pm between May 1 and September 30.	May be watered by automatic system on any day, and by hand at any time. No automatic system irrigation between 10 am and 6 pm from May 1 and September 30.	May be watered by hand, drip, deep root mechanical bubblers or subsurface irrigation only.	No irrigation of plant material.
Car Washing at Home	Allowed with shut off nozzle and bucket.			Not allowed



11

Questions?



12