CITIZENS’ WATER ADVISORY COMMITTEE (CWAC) AGENDA
April 12, 2022, 6:00 p.m.

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. Aurora Water Drought Response Lauren Maggert 6:40 p.m.
7. Water Management Plan Greg Baker 7:00 p.m.
8. Economic Work Group Status Janet Marlow 7:15 p.m.
9. Summer Tours Greg Baker 7:20 p.m.
10. Review Follow-Up Questions Generated at this Meeting Greg Baker 7:25 p.m.
11. Confirm Next Meeting – Tuesday, May 10, 2022 Chair 7:30 p.m.
12. 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


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.
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
<table>
<thead>
<tr>
<th>BILL NUMBER</th>
<th>BILL TITLE (CO General Assembly Bill Search)</th>
<th>AURORA WATER</th>
<th>CML</th>
<th>CWC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senate Status Sheet</strong></td>
<td></td>
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<tr>
<td>SJR22-002</td>
<td>Water Projects Eligibility Lists</td>
<td>support if asked</td>
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<td>support</td>
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<td>SB22-002</td>
<td>Resources For Volunteer Firefighters</td>
<td>monitor</td>
<td>support</td>
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<tr>
<td>SB22-007</td>
<td>Increase Wildfire Risk Mitigation Outreach Efforts</td>
<td>actively support</td>
<td>monitor</td>
<td>monitor</td>
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<td>SB22-013</td>
<td>Boards &amp; Commissions</td>
<td>monitor</td>
<td>monitor</td>
<td>monitor</td>
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<tr>
<td>SB22-015</td>
<td>Douglas County On Urban Drainage Flood Control District</td>
<td>support if asked</td>
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<tr>
<td>SB22-028</td>
<td>Groundwater Compact Compliance Fund</td>
<td>support if asked</td>
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<td>SB22-029</td>
<td>Investment Water Speculation</td>
<td>monitor</td>
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<td>SB22-030</td>
<td>Water Resources Review Committee To Include Agriculture</td>
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<tr>
<td>SB22-080</td>
<td>Wildland Fire Investigations</td>
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<td>monitor</td>
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<tr>
<td>SB22-114</td>
<td>Fire Suppression Ponds Water Rights</td>
<td>actively support</td>
<td>monitor</td>
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<td>SB22-115</td>
<td>Clarifying Terms Related To Landowner Liability</td>
<td>support if asked</td>
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<tr>
<td>SB22-126</td>
<td>Prioritize South Platte Basin Storage Projects</td>
<td>support</td>
<td>oppose</td>
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<tr>
<td>SB22-131</td>
<td>Protect Health of Pollinators and People</td>
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<td>SB22-138</td>
<td>Reduce Greenhouse Gas Emissions in Colorado</td>
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<td>SB22-158</td>
<td>Species Conservation Trust Fund</td>
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<tr>
<td>SB22-169</td>
<td>Sensitive Species Data &amp; Public Records</td>
<td>monitor</td>
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<td>SB22-174</td>
<td>Sunset Review Criteria</td>
<td>in review</td>
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<tr>
<td>SB22-175</td>
<td>Mobile Electronic Devices &amp; Motor Vehicle Driving</td>
<td>in review</td>
<td>support</td>
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<tr>
<td><strong>House Status Sheet</strong></td>
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<tr>
<td>HB22-1007</td>
<td>Assistance Landowner Wildfire Mitigation</td>
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<td>HB22-1011</td>
<td>Wildfire Mitigation Incentives for Local Government</td>
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<td>HB22-1012</td>
<td>Wildfire Mitigation and Recovery</td>
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<td>support</td>
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<td>HB22-1092</td>
<td>Loans from Irrigation Districts to Landowners</td>
<td>monitor</td>
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<tr>
<td>HB22-1097</td>
<td>Dissolution of Special Districts</td>
<td>monitor</td>
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<tr>
<td>HB22-1132</td>
<td>Regulation &amp; Services For Wildfire Mitigation</td>
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<td>HB22-1148</td>
<td>Wildfire Camera Pilot Program</td>
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<td>HB22-1151</td>
<td>Turf Replacement Program</td>
<td>actively support</td>
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<td>HB22-1152</td>
<td>Prohibit Employer Adverse Action MJ Use</td>
<td>monitor</td>
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<td>HB22-1166</td>
<td>Incentives Promote CO Timber Industry</td>
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<td>oppose/amend</td>
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<td>HB22-1249</td>
<td>Electric Grid Resilience &amp; Reliability Roadmap</td>
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<td>monitor</td>
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<td>HB22-1297</td>
<td>Daylight Savings Time</td>
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<td>Bill Number</td>
<td>Bill Title</td>
<td>Status</td>
<td>Position</td>
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<tr>
<td>HB22-1301</td>
<td>Environmental Agricultural Facility As Agricultural Property</td>
<td>in review</td>
<td>monitor</td>
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<td>HB22-1316</td>
<td>CWCB Construction Fund Project</td>
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<td>HB22-1322</td>
<td>Regulation of Water Quality in the State</td>
<td>in review</td>
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<td>HB22-1323</td>
<td>Updates to CSFS Nursery</td>
<td>in review</td>
<td>monitor</td>
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<tr>
<td>HB22-1329</td>
<td>Long Bill (Budget)</td>
<td>in review</td>
<td>no position</td>
<td></td>
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<tr>
<td>HB22-1345</td>
<td>Perfluoroalkyl and Polyfluoroalkyl Chemicals</td>
<td>in review</td>
<td>monitor</td>
<td></td>
</tr>
<tr>
<td>HB22-1348</td>
<td>Oil &amp; Gas Chemicals (includes PFAS)</td>
<td>in review</td>
<td>deliberating</td>
<td></td>
</tr>
</tbody>
</table>

**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,
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.
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

AGENDA

- Current Drought and Water Supply Conditions
- Aurora’s Drought Action Team
  – 2021 Accomplishments and current priorities
CURRENT DROUGHT & WATER SUPPLY CONDITIONS

South Platte

[Map showing current snow water equivalent (SWE) % of normal for various regions in Colorado]

[Graph showing snow water equivalent in South Platte over time]
Colorado Water Year 2022 Precipitation as a Percentage of Normal
Oct 2021 - Feb 2022

Data from PRISM Climate Group

3 Month Precip & Temp Outlook

Seasonal Precipitation Outlook
Valid: Apr-May-Jun 2023
Issued: March 17, 2022

Seasonal Temperature Outlook
Valid: Apr-May-Jun 2023
Issued: March 17, 2022
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
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.

2021 Yield = 99% of Average

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

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

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**Drought Response Options Implemented & Recommended**

<table>
<thead>
<tr>
<th>Drought Option</th>
<th>Water Available (AFY)</th>
<th>Option Status</th>
<th>Implementation Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Dissolved Solids (TDS) Blending Change at Binney WTP</td>
<td>0, but reduced portion of mountain supply blend water by 7-19% Blend TDS target changed from 400ppm up to 480ppm</td>
<td>Approved &amp; Implemented</td>
<td>Began early 2021, and still in place in 2022</td>
</tr>
<tr>
<td>Denver Basin Groundwater Assessment</td>
<td>TBD, but assuming 11 wells could produce between 100-400 AFY, the yield would range 1,100 – 4,400 AFY</td>
<td>Recommendation memo sent to Planning &amp; Engineering on 4/2/2021</td>
<td>Start 2022, take 2-3 years Well rehab dependent on well assessment recommendations</td>
</tr>
<tr>
<td>Denver Basin GW Master Plan</td>
<td>TBD</td>
<td>Not Started</td>
<td>After IWMP2 and budget dependent. ~ 2024</td>
</tr>
<tr>
<td>Super Ditch Lease from the Lower Arkansas Basin</td>
<td>5,000–10,000 AFY (3 in 10 years)</td>
<td>Water Resources staff &amp; external counsel developing term-sheet for legal agreement with Super Ditch</td>
<td>2022 or 2023, pending execution of legal agreement</td>
</tr>
<tr>
<td>Patty Water lease from Denver Water</td>
<td>300 AFY of additional supply at Spinney or direct potable connection</td>
<td>Not started. Water Resources &amp; internal legal counsel to develop term-sheet for ISA. Currently delayed due to shortage of legal staff.</td>
<td>2022 or 2023, pending execution of legal agreement</td>
</tr>
</tbody>
</table>
# DAT Recommendations to Improve Drought Planning & Response

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

## Forecast Model

The forecast model is used to predict water levels and is updated regularly to ensure accurate predictions. The model takes into account various factors such as precipitation, snowpack data, and historical water usage patterns. The forecast is used to trigger drought response plans when water levels fall below certain thresholds.
QUESTIONS

"I can definitely attest to being unnerved by some of our findings."
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
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Aurora Water

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.
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.

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
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

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
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

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
# Current Triggers

## Water Availability Stage Conditions and Demand Reduction Recommendation

<table>
<thead>
<tr>
<th>Water Availability Stage</th>
<th>Stage I SEVERELY DRY</th>
<th>Stage II EXCEPTIONALLY DRY</th>
<th>Stage III EMERGENCY CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger - Months of supply based on current demand</td>
<td>Above 30 months</td>
<td>30-25 months</td>
<td>24-13</td>
</tr>
<tr>
<td>Demand Reduction Recommendation (outdoor use only)</td>
<td>0%</td>
<td>20%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Example based on 2015 reservoir levels

![Drought Stages for Aurora Water Reservoir System](image.png)
## Water Management Plan

### Delineate restrictions by customer class

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>NORMAL</th>
<th>SEVERELY DRY Stage I</th>
<th>EXCEPTIONALLY DRY Stage II</th>
<th>EMERGENCY CONDITIONS Stage III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turf Lawns</td>
<td>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.</td>
<td>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.</td>
<td>Allowed on 1 day/week schedule based on address (even/odd); No watering is permitted between 10 am and 6 pm from May 1 to September 30.</td>
<td>No irrigation of lawns.</td>
</tr>
<tr>
<td>Annuals (Flowers), Home Vegetable Gardens, Trees, Shrubs and Perennials</td>
<td>Gardens, when properly managed, typically require 50% less water than cool season turf. 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.</td>
<td>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.</td>
<td>May be watered by hand or drip, deep root mechanical bubblers or subsurface irrigation only.</td>
<td>No irrigation of plant material.</td>
</tr>
</tbody>
</table>

- **Car Washing at Home**: Allowed with shut-off nozzle and bucket. Not allowed.

### Questions?