

CITIZENS' WATER ADVISORY COMMITTEE (CWAC) AGENDA

September 8, 2020, 6:00 p.m.

Webex

Public Participation through call in number (listen only)

1-720-650-7664

Access code: 146 111 3757

Meeting password: miw4xCPy

Members: Janet Marlow-Chair, Tom Coker-Vice Chair, Angie Binder, Jay Campbell, Richard Eason,  
William Gondrez, David Patterson

1. Approval of Minutes July 14, 2020	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. Council Budget Presentation Recap	Janet Marlow	6:20 p.m.
6. PFAS Regulation Update	Sean Lieske	6:30 p.m.
7. Quincy Reservoir Water Quality Update	Sean Lieske/ Rory Franklin	6:40 p.m.
8. First Creek Interceptor System	Andrea Long	6:55 p.m.
9. Proposed Half Day Committee Workshop	Marshall Brown	7:15 p.m.
10. Review Follow-Up Questions Generated at this Meeting	Chair	7:25 p.m.
11. Confirm Next Meeting – Tuesday, October 13, 2020	Chair	7:30 p.m.
12. Adjourn	Chair	7:35 p.m.

This  
Page  
Is  
Intentionally  
Left  
Blank

CITIZENS' WATER ADVISORY COMMITTEE (CWAC) MINUTES  
July 14, 2020, 6:00 pm

Members Present: Janet Marlow (Chair), Jay Campbell, Richard Eason, David Patterson, William Gondrez

Excused Absence: Tom Coker (Vice-Chair), was absent from the meeting.

Staff Present: Marshall Brown, Elizabeth Roberts, Kathy Kitzmann, Gail Thrasher, Greg Baker, Jo-Ann Giddings, Fernando Aranda Perozo, Rory Franklin, Sonya Gonzalez, Sandy Moore

Visitors Present: None.

---

The meeting was called to order at 6:02 p.m.

**1. Approval of Minutes –June 9, 2020**

The June 9, 2020 minutes were approved.

---

**2. Introductions/Public Invited to be Heard**

None.

---

**3. New/Old Business**

None.

---

**4. Communications Update**

G. Baker confirmed the cancellation of the Annual Chemical Roundup on September 12. Aurora Water will continue to expand its curbside pickup and the partisan fee associated with this service was lowered from twenty dollars (\$20.00) to ten dollars (\$10.00). We will also continue the promotion of all other alternatives to dispose of chemicals.

G. Baker reviewed the highlights of the Arkansas River Backup Diversion Upgrade for the Otero Pump Station. Working with Recreation, Colorado Parks and Wild Life and the Boating Community allowed for a new design. The new design allows for recreation and rafting from Leadville to Brown's Canyon which hadn't occurred previously due to design features of the old diversion, designed in the 1960's, and was also in bad shape. Grant funding was obtained from the Colorado Water Conservation Board. Colorado Public Radio (CPR) did an article on the project.

G. Baker explained the Whitney Reservoir and Eagle River Project located downstream of

Homestake Reservoir on the Western Slope. The project is a proposed component of the Eagle River Memorandum of Understanding (ERMOU) and is in the initial early exploration phase and early permitting process. A permit application for geotechnical work was submitted with the United States Forest Service (USFS) which included a timeframe for public comments. There are approximately 750 public comments, mostly in opposition. It was known the project would be a challenge.

G. Baker stated, Don Langley received his recognition plaque from the committee and has moved to Parker, Colorado.

---

## 5. 2020 Legislative Update

K. Kitzmann presented and reviewed updates of the 2020 State legislative efforts by Aurora Water. The second regular session of the 72<sup>nd</sup> Colorado General Assembly convened on January 8 and adjourned on June 15 after an unexpected ten-week hiatus due to the COVID-19 pandemic. Despite a disrupted session, the legislature introduced 651 bills compared to 598 last year. Aurora Water reviewed 59 introduced bills plus one draft bill of interest. There were four Interim Water Resources Review Committee bills and only one passed. It is unusual for Interim Committee Bills not to make it all the way through. The Interim Wildfire Matter Review Committee had five Interim Bills and three passed.

Aurora Water opposed House Bill 20-1157 Loaned Water Instream Flows Improve Environment. The bill expanded the timeline for which loaned water could be used. Previously, loaned water could only be used three (3) out of ten (10) years, after which water rights could no longer be used. The bill has expanded the timeline to five (5) years with a renewal of an additional ten (10) years two times. Not only could it be used for maintaining a stream to a reasonable degree, but it could also be used for enhancements to the stream flow rate. It expanded the program quite a bit.

Aurora Water monitored Senate Bill 20-155 Keep Presumption Noninjury Well on Divided Land. In the past if someone subdivided a piece of land of 35 acres or more, the well did not have the Presumption Noninjury. You can now divide land and the well will maintain a Presumption of Noninjury.

K. Kitzmann reviewed the three Per and Polyfluoroalkyl Substances (PFAS) House Bills that passed.

- HB20-1042 Per and Polyfluoroalkyl Substances (PFAS) Manufacturer Notice Requirements.
- HB20-1119 State Government Regulation of Per and Polyfluoroalkyl Substances (PFAS).
- SB20-2018 Colorado Department of Public Health and Environment (CDPHE) Hazardous Substance Response.

Water Quality Program legislation looked at bringing fees up to a current level in line with other states. Environmental Justice had an increase in fines. The Waste Grease Program Repeal program was eliminated. A Water and Wastewater Operators Certification Board was up for a Sunset

Review and an exception for construction dewatering that had been removed was added back in and supported.

Colorado Funding Bills. There were no issues with the Colorado Water Conservation Board Construction Projects, and the Water Projects Eligibility Lists passed. We paid close attention to the Species Conservation Trust Fund legislation. Initially there was \$4 million in funding divided between four programs that went towards species preservation. One of the programs is the South Platte Recovery Implantation Program which supports our Endangered Species Act (ESA) compliance for the South Platte. The funds were reduced from \$1.9 million to \$670 thousand. There are some reserves in the program to cover a year or two.

Miscellaneous Bills. The COVID-19 Utility Bill Payment Related Assistance. The Energy Outreach Colorado received \$10 million from the Federal Cares Act to put towards utility bill payment related assistance. It did not include payments for water bills. Energy Outreach Colorado committed to working with water providers to come up with a program with a meeting in two weeks. They do help with our Aurora Water Cares Program.

There are no Interim Committees due to budgetary reasons. House Bill 20-1157 Mobile Phone Bill Use, initially included two-way radios which would have prohibited the use of radios while driving. We worked to amend it and it failed. G. Baker explained the bill would have exempted police and fire, but it did not exempt utility use.

Allowing Seaplane landings in reservoirs did not come up in 2020. Allowing landings could be problematic for our maintenance and operation activities. Inspections for aquatic nuisance species might be more if they are going from one reservoir to another. Some other states are going through some of the same related issues. J. Campbell asked, who is trying to land seaplanes in Colorado? G. Baker replied, there are some Seaplane owners and operators that are based in Colorado. We are one of the few states that do not have a seaplane base and one of the few states that do not have an active aquatic nuisance species infestation as well.

K. Kitzmann stated, CPDHE proposed Dredge and Fill Permit Program legislation after the ten-week hiatus. Due to the complicated subject, water providers statewide and across various other industries opposed legislation that would create a new regulatory program in an abbreviated fashion. It would need robust stakeholder input, along with cost, and benefits analysis. The controversial draft legislation was not introduced. The proposed Dredge and Fill Permit Program may be an ongoing issue for the next couple of years and we may see some legislation introduced as early as next year.

---

## **6. 2021 Preliminary Budget**

G. Thrasher presented an overview of Aurora Water's 2021 preliminary budget and the Capital Improvement Budget for 2021-2025.

J. Campbell asked, in regard to the Wild Horse Reservoir, what does that \$113 million from this point in time and going to 2025 encompass, and is it all permitting work and surveying? J. Giddings stated, it was money we had already planned for in the budget, however, this is mostly for the

permitting. J. Campbell asked, do you anticipate anything happening between now and 2025? J. Giddings replied, yes. G. Baker added, there would be a presentation on Wild Horse Reservoir either in September or October.

J. Campbell asked, if there was more insight to where the pipeline was going to go due to the potential options? G. Baker replied, that we can have John Clark join the next meeting to talk about Wild Horse.

G. Baker stated, the primary purpose of CWAC is to get a presentation to the Board and Commissions on September 8 and request a letter to City Council outlying either support or opposition of the proposed budget. J. Giddings stated, in the past, she and Gail have reviewed the presentation together with the presenter if they choose and are available if need be.

D. Eason asked, are there funds budgeted for Quincy Reservoir improvements and is abandoning Quincy still being considered? M. Brown replied, there are some short-term plans with Quincy Reservoir regarding chemical treatments and the addition of infrastructure to try and manage the water quality in the short-term, we are still currently evaluating a long-term plan.

D. Eason asked, he saw a project for a Sand Creek Reclaimed Water Line where will it be going? M. Brown replied, we are looking at extending the Sand Creek Reclaimed Water Line into the Northeast region in order to meet some of the oil and gas demands associated with signed agreements. J. Campbell asked, is that taking up some of the capacity that the Fitzsimons Golf Course used to use? M. Brown replied, we have some capacity associated with Fitzsimons going offline and we have some capacity with Centre Hills that went offline a few years ago. There has always been winter capacity in that system, and we can take off three lower levels of treatment to meet some of those industrial needs.

J. Campbell asked, are the proceeds from borrowing of \$128 million related to the SEAM Facility? J. Giddings replied, yes. J. Marlow asked, is there an update on the SEAM Facility? G. Baker replied, not at this time, we are still in the design phase.

J. Marlow asked, if the Water Policy Committee meeting was on Wednesday, July 22 and whether she needed to create and present a report? M. Brown suggested doing a written report, but being present in case of follow-up questions from Counsel. J. Marlow added, she would write the report and send it to Greg.

---

## **8. Discussion of Water Policy Committee Quarterly Report**

None.

---

## **9. Confirm Next Meeting**

The next regular meeting will be held Tuesday, August 11, 2020, remotely via WebEx.

---

## 10. Adjourn

The meeting was adjourned at 7:00 p.m.

---

---

Janet Marlow, Chair  
Citizens' Water Advisory Committee

---

Submitted by: Sandy Moore  
Administrative Specialist, Aurora Water

Adopted: \_\_\_\_\_

This  
Page  
Is  
Intentionally  
Left  
Blank



**MEMORANDUM**



City of Aurora

Worth Discovering • auroragov.org

**TO:** Citizen's Water Advisory Committee

**THROUGH:** Marshall P. Brown, General Manager, Aurora Water *[Signature]*  
 Dan Mikesell, Director of Aurora Water Operations 33 *ON BEHALF OF DAN MIKESSELL*

**FROM:** Sean C. Lieske, Environmental Services Manager *[Signature]*

**DATE:** August 27, 2020

**SUBJECT:** Per- and Polyfluoroalkyl Substances (PFAS) Update

---

**Summary:**

Per- and Polyfluoroalkyl Substances (PFAS) Update

An informational brief was provided to the committee during the June 2020 meeting to provide background surrounding the PFAS compounds and to describe federal and state efforts surrounding PFAS contamination on a national and state scale. Several efforts have taken place since that time and this update will focus on providing information related to the State's adoption of Policy 20-1 and a recent monitoring effort undertaken by the Colorado Department of Public Health and Environment.

**Question:**

No action required. Informational item only.

This  
Page  
Is  
Intentionally  
Left  
Blank

# PFAS Informational Update (Per and Polyfluoroalkyl Substances)

*Citizen's Water Advisory Committee Meeting*

*Tuesday, September 8, 2020*

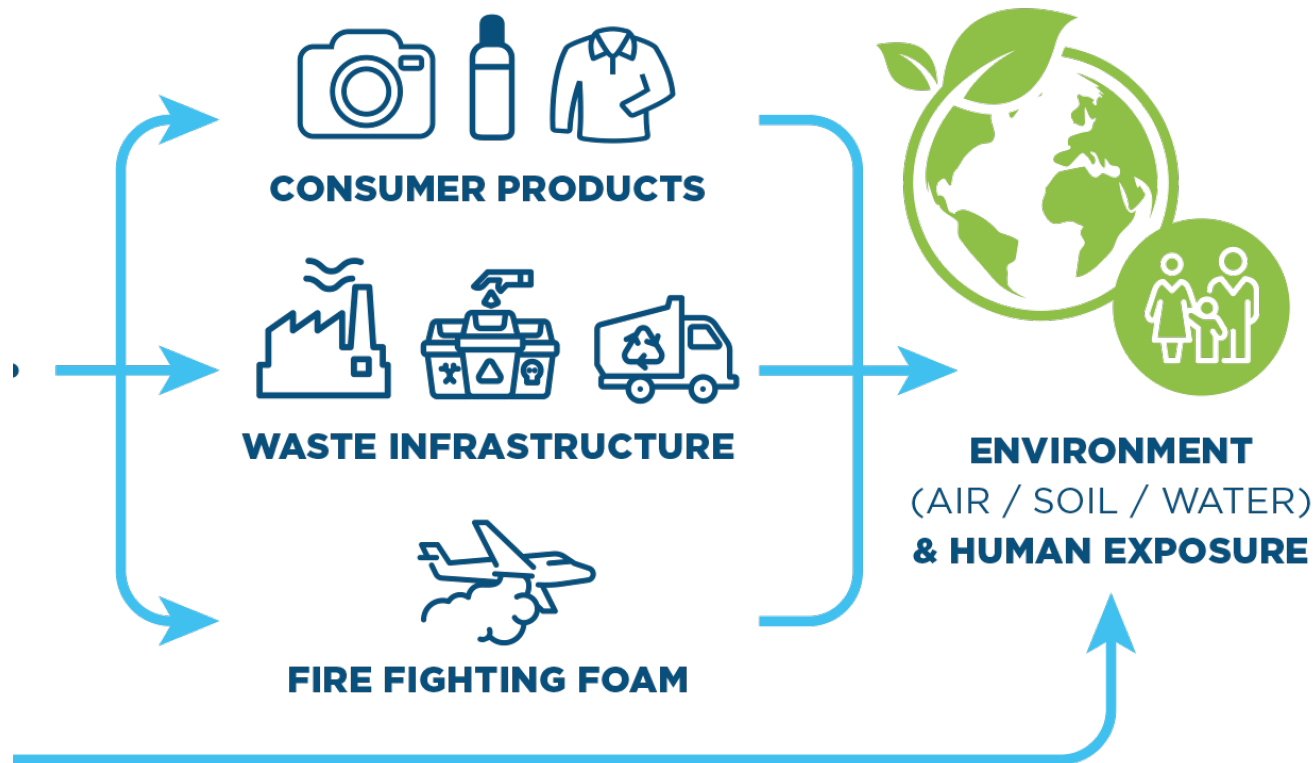
*Virtually via WebEx*

*6:00 PM – 7:30 PM*

*By: Sean Lieske, Manager of Environmental Services*



# PFAS (Per and Polyfluoroalkyl Substances)



- The Forever Chemicals
  - Manmade chemicals
  - Don't break down easily
  - Widely used in consumer products, including Teflon and firefighting foams
  - Highly resistant to heat, water and oil



# PFAS (Per and Polyfluoroalkyl Substances)

- A class of synthetic (man-made) chemicals
- PFOA (Perfluorooctanoic Acid) & PFOS (Perfluorooctane Sulfonate) are most common
- CDC & EPA Health Advisory @ 70 ppt for PFOS and PFOA individually or combined
- Everywhere in the environment and in the blood of nearly the entire US population



# What's the latest?

- Policy 20-1

- Adopted by Water Quality Control Commission on July 14
- Interpretive policy that translates a narrative based standard
- Requires certain dischargers to sample their effluent and conduct source investigations if results above reporting level

PFAS	Translation Level (ng/L or ppt)
PFOA <sup>1</sup>	70
PFOA parent constituents	
PFOS <sup>1</sup>	
PFOS parent constituents	
PFNA <sup>1</sup>	
PFHxS <sup>1</sup>	700
PFBS <sup>1</sup>	400,000

<sup>1</sup>Reporting level would be 2 ng/L (ppt)



# What's the latest?

- **PFAS Survey**

- Issued to all Colorado Discharge Permits System permit holders
  - Questions focused on identification of potential sources
- Required to respond by August 24
  - Aurora responded on Friday, August 21
  - Provided data we had obtained from Sand Creek Water Reuse Facility

- **Buckley AFB**

- No update



# National Results

## UCMR 3 Results (2013 - 2015)<sup>1</sup>

Contaminant	MRL (ng/L)	Reference Conc. (ng/L)	Total # Results	Results >MRL	Results > Refer Conc.
PFOS	40	200	29,076	234	31
PFOA	20	400	29,076	287	0
PFNA	20	NA	29,076	17	NA
PFHxS	30	NA	29,076	176	NA

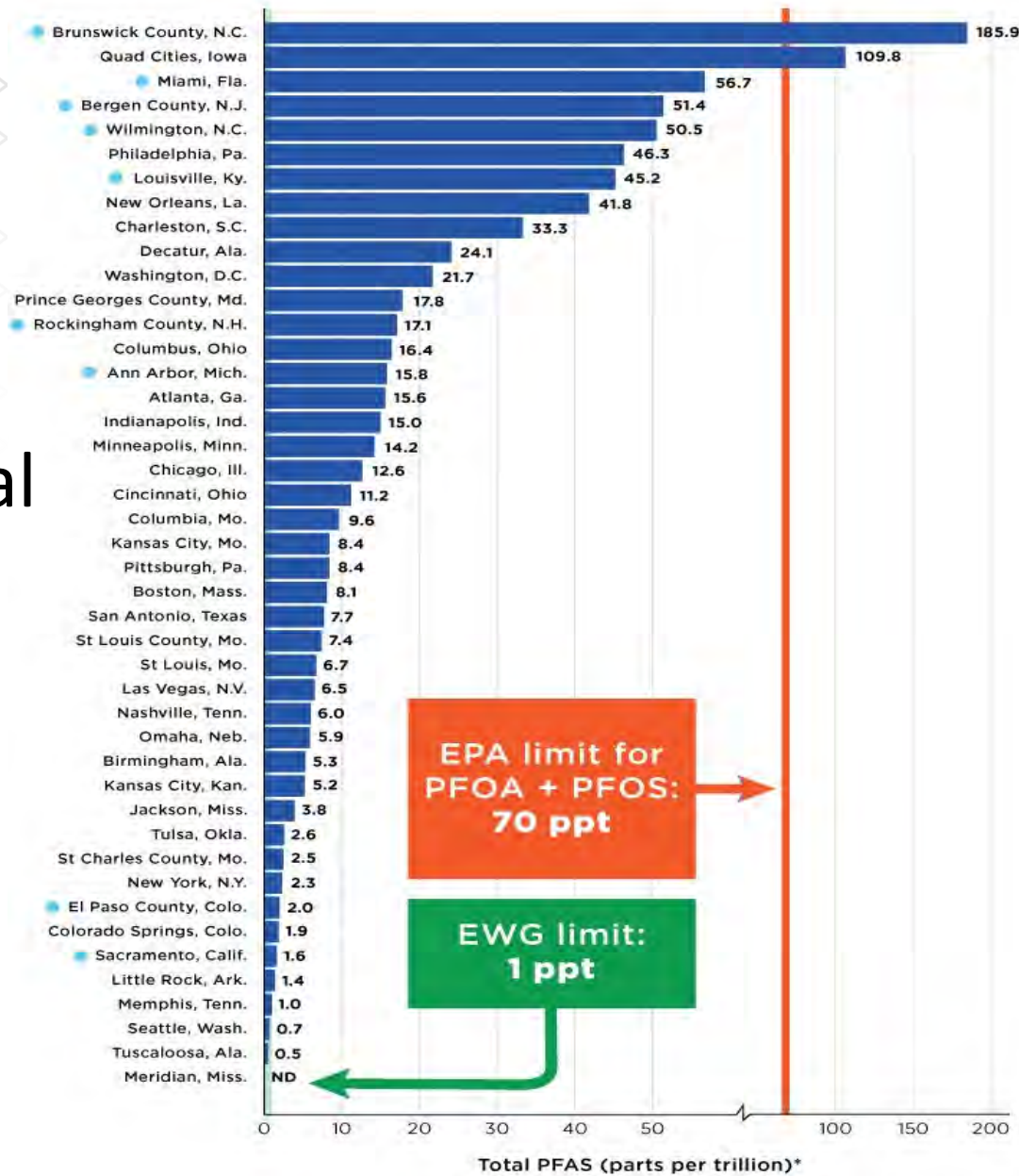
<sup>1</sup>MRL was ~10x higher than what it is today.





# National Results

## Environmental Working Group (EWG)



Source: EWG, from samples taken between May and December 2019

- PFAS previously reported by EPA or State

\*Sum of detections of 30 types of PFAS

Samples were taken by either EWG staff or local volunteers and analyzed by an independent accredited laboratory using a modified version of EPA Method 537.



AURORA WATER

# State-wide Results

Across the state, CDPHE sampled for 18 types of PFAS at:

400  
Drinking water systems

15  
Fire station districts

71  
Surface water sites

Drinking water with PFAS levels *above* the EPA's health advisory was found at:

0  
Drinking water systems

0  
Fire station districts

Untreated water, such as groundwater, rivers, streams and lakes, did have PFAS levels *above* the health advisory at:

2  
Drinking water systems

2  
Fire station districts

1  
Surface water sites

## Source:

[https://cohealthviz.dphe.state.co.us/t/EnvironmentalEpidemiologyPublic/views/PFAS\\_results\\_DRAFT/SamplingSummary?%3AshowAppBanner=false&%3Adisplay\\_count=n&%3AshowVizHome=n&%3Aorigin=viz\\_share\\_link&%3AisGuestRedirectFromVizportal=y&%3Aembed=y](https://cohealthviz.dphe.state.co.us/t/EnvironmentalEpidemiologyPublic/views/PFAS_results_DRAFT/SamplingSummary?%3AshowAppBanner=false&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3AisGuestRedirectFromVizportal=y&%3Aembed=y)



# Aurora's Results

Analyte	05/07/2019 <sup>1</sup>		08/05/2019 <sup>1</sup>						03/18/2020 <sup>2</sup>		03/20/2020 <sup>2</sup>
	Cherry Creek Wells	FRA Raw	Binney EP	Binney Adsorber Eff	Binney SPT Forebay	RBF Wells Combo	Sand Creek Effluent	South Platte - NC	Binney EP	Front Range Airport EP	Wemlinger EP
6:2 FTS	<2	<2	<2	2.5	3	4	<2	5			
PFBA	8.1	<2	6.6	17	17	17	9.9	10			
PFBS	11	<2	3.4	10	11	9.9	5.1	6.3	3.4	<0.48	<0.41
PFDA	<2	<2	<2	<2	<2	2.4	<2	2.8	<0.44	<0.48	<0.41
PFHpA	3	<2	2	7	7	6	3	5	2	<0.48	<0.41
PFHxA	9.1	<2	5.8	19	18	15	22	16	8	<0.48	0.48 JB
PFHxS	5.6	<2	3.3	11	14	12	11	7.5	2.6	<0.48	<0.41
PFNA	<2	<2	<2	<2	2.2	2.1	3.7	2.1	<0.44	<0.48	<0.41
PFOA	7.4	<2	3.8	11	14	13	9.6	12	3.2	<0.48	<0.41
PFOS	9.7	<2	3.4	11	19	18	6.4	10	2.1	<0.48	<0.41
PFPeA	9.4	<2	6.9	22	22	18	12	16			

<sup>1</sup>Tested for 47 PFAS compounds. Compounds not listed were non-detects using current analytical method

<sup>2</sup>Tested for 18 PFAS compounds. Compounds not listed were non-detects using current analytical method

# What's Next?

- Policy 20-1 Implementation
- Legislation?
- Survey Follow-up?



Thank You

Questions

?




AURORA  
WATER

This  
Page  
Is  
Intentionally  
Left  
Blank

**MEMORANDUM**



**TO:** Citizen’s Water Advisory Committee

**THROUGH:** Marshall P. Brown, Director, Aurora Water   
Dan Mikesell, Director of Aurora Water Operations \_\_\_\_\_

**FROM:** Sean C. Lieske, Environmental Services Manager \_\_\_\_\_

**DATE:** September 8, 2020

**SUBJECT:** Quincy Water Quality

---

**Summary:**

The water quality within Quincy Reservoir has been slowly degrading over time creating hazardous conditions within the reservoir. As a result of this degrading water quality, the department embarked on a study to evaluate future options related to the reservoir. Part of that study has involved evaluating in-reservoir treatment options aimed at improving the water quality within the reservoir to prevent hazardous algal blooms and increase treatability. Some of those options are being implemented in order to manage the water quality and attempt to prevent conditions that would allow the hazardous blooms to proliferate and produce hazardous toxins.

This update will focus on the in-reservoir treatments that took place earlier this year and upcoming treatments that will hopefully improve the water quality within the reservoir for years to come. Past treatments have included dosing with hydrogen peroxide. Future treatments include additional hydrogen peroxide treatment followed by dosing with alum (aluminum sulfate). The latter effort had to be permitted by the Colorado Department of Public Health and Environment and is one of the first of its kind in the state.

**Question:**

No action required. Informational item only.

# Public Outreach

- Postcard mailer to Aurora Water customers within a five-mile radius of the reservoir.
- City e-newsletters – This is Aurora, PROS
- Social media, including Nextdoor, Facebook and Twitter
- Web pages, including Aurora Water, PROS and News section (on the front of AuroraGov.org)





# Public Outreach

- Email HOAs and neighborhood leaders through Community Services' listserve
- Wallet cards for park rangers with talking points
- Information sheet for calls to Access Aurora/Billing
- Information sheet for water frontline staff (operations, flow control center)



# Public Outreach

Additional outreach for the alum application is required by the state.

- Public notification in The Sentinel one week prior to the alum application.
- Posting signs at the north, south, east and west “entrances” of the reservoir one week prior to the alum application.
- Flyers available at the reservoir.



# MEMORANDUM

City of Aurora



Worth Discovering • [auroragov.org](http://auroragov.org)

**TO:** Citizen's Water Advisory Committee

**THROUGH:** Sarah Young, Deputy Director of Planning and Engineering, Aurora Water

**FROM:** Andrea Long, Project Manager in Project Delivery Services, Aurora Water

**DATE:** August 25, 2020

**SUBJECT:** First Creek Interceptor System

---

**Purpose:**

Sanitary sewer conveyance capacity within the City of Aurora's First Creek Basin is currently limited, and additional developments within the basin are imminent. The City's First Creek Interceptor (FCI) system project, was initiated to provide a gravity solution to wastewater conveyance limitations within the basin.

**Background:**

The FCI system project was identified and planned as a part of Metro Wastewater Reclamation District's (MWRD) Regional Master Plan (RMP) in 2017. The FCI system will discharge into MWRD's Second Creek Interceptor system, which routes all flow by gravity to MWRD's new Northern Treatment Plant. The FCI System, when completed, will eliminate two wastewater lift stations from Aurora's sanitary system.

The FCI System is broken out into seven segments: 0, 0A, 1A, 1B, 1C, 1D, and 1E. An overview of the basin's gravity wastewater conveyance in relation to FCI 1BCD is shown in the attachment. Segment 0 and 1A of the system is currently under construction, and Segments 0A and 1E construction are complete. Aurora has hired an engineer to design Segments 1B, 1C, and 1D of the FCI System - this portion of the FCI System connects to Segment 1A at the upstream end near the City's First Creek Lift Station and connects to Segment 1E at the downstream end near the City's High Point Lift Station.

Design of Segments 1B, 1C, and 1D is slated for 2020 to 2021 and construction will take place 2022 through 2024. The FCI System will be active in early 2024.

**Questions:**

Informational item only. No action required.

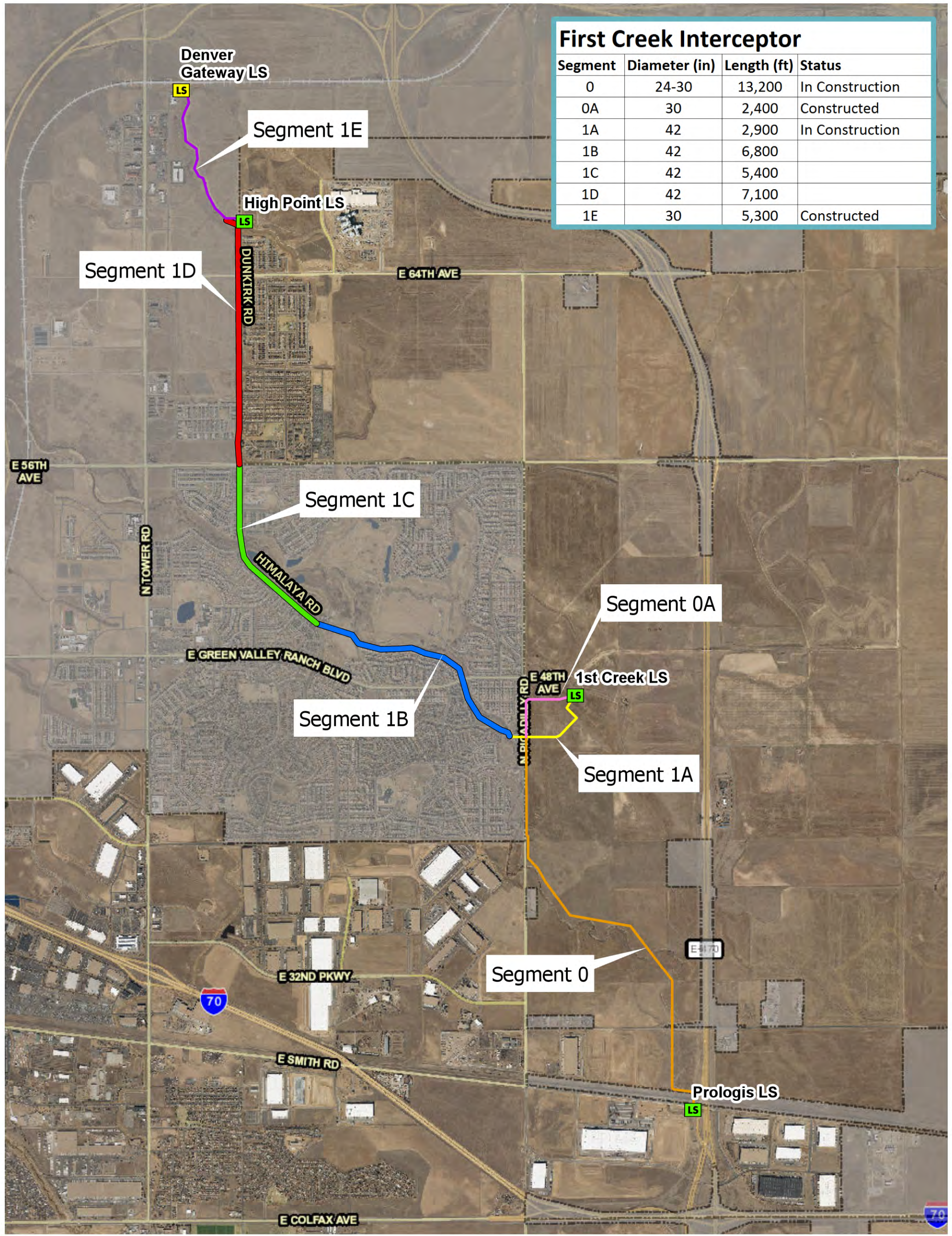
**Attachments:**

First Creek Interceptor System Map

This  
Page  
Is  
Intentionally  
Left  
Blank

# First Creek Interceptor

Segment	Diameter (in)	Length (ft)	Status
0	24-30	13,200	In Construction
0A	30	2,400	Constructed
1A	42	2,900	In Construction
1B	42	6,800	
1C	42	5,400	
1D	42	7,100	
1E	30	5,300	Constructed



## First Creek Interceptor

### Segments 1B, 1C, & 1D

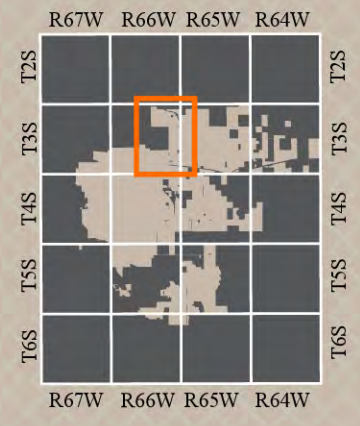
15151 E. Alameda Pkwy, Aurora, CO 80012 USA  
 GIS@auroragov.org | 303-739-7370  
 www.auroragov.org



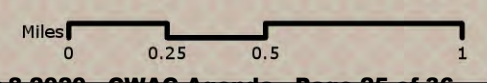
Aurora is Worth Discovering!



August 2, 2019



Legend	
<span style="color: green;">■</span> LS	Aurora Lift Station
<span style="color: yellow;">■</span> LS	Denver Lift Station
<span style="color: orange;">—</span>	Segment 0
<span style="color: pink;">—</span>	Segment 0A
<span style="color: yellow;">—</span>	Segment 1A
<span style="color: blue;">—</span>	Segment 1B
<span style="color: green;">—</span>	Segment 1C
<span style="color: red;">—</span>	Segment 1D
<span style="color: purple;">—</span>	Segment 1E



DISCLAIMER: The City of Aurora, Colorado, makes no warranties or guarantees, express or implied, as to the completeness, accuracy, or correctness of this data, nor shall the City incur any liability from any incorrect, incomplete, or misleading information contained therein. The City makes no warranties, either express or implied, of the value, design, condition, title, merchantability, or fitness for a particular purpose. The City shall not be liable for any direct, indirect, incidental, consequential, punitive, or special damages, whether foreseeable or unforeseeable, arising out of the authorized or unauthorized use of this data or the inability to use this data or out of any breach of warranty whatsoever.

This  
Page  
Is  
Intentionally  
Left  
Blank

# First Creek Interceptor System

*Andrea Long*

*Aurora Water – Project Delivery Services*



# Agenda

- Sanitary Systems
  - What is a wastewater interceptor?
  - What is a lift station?
  - What is a forcemain?
- First Creek Interceptor System
- Questions





# Sanitary Sewer System



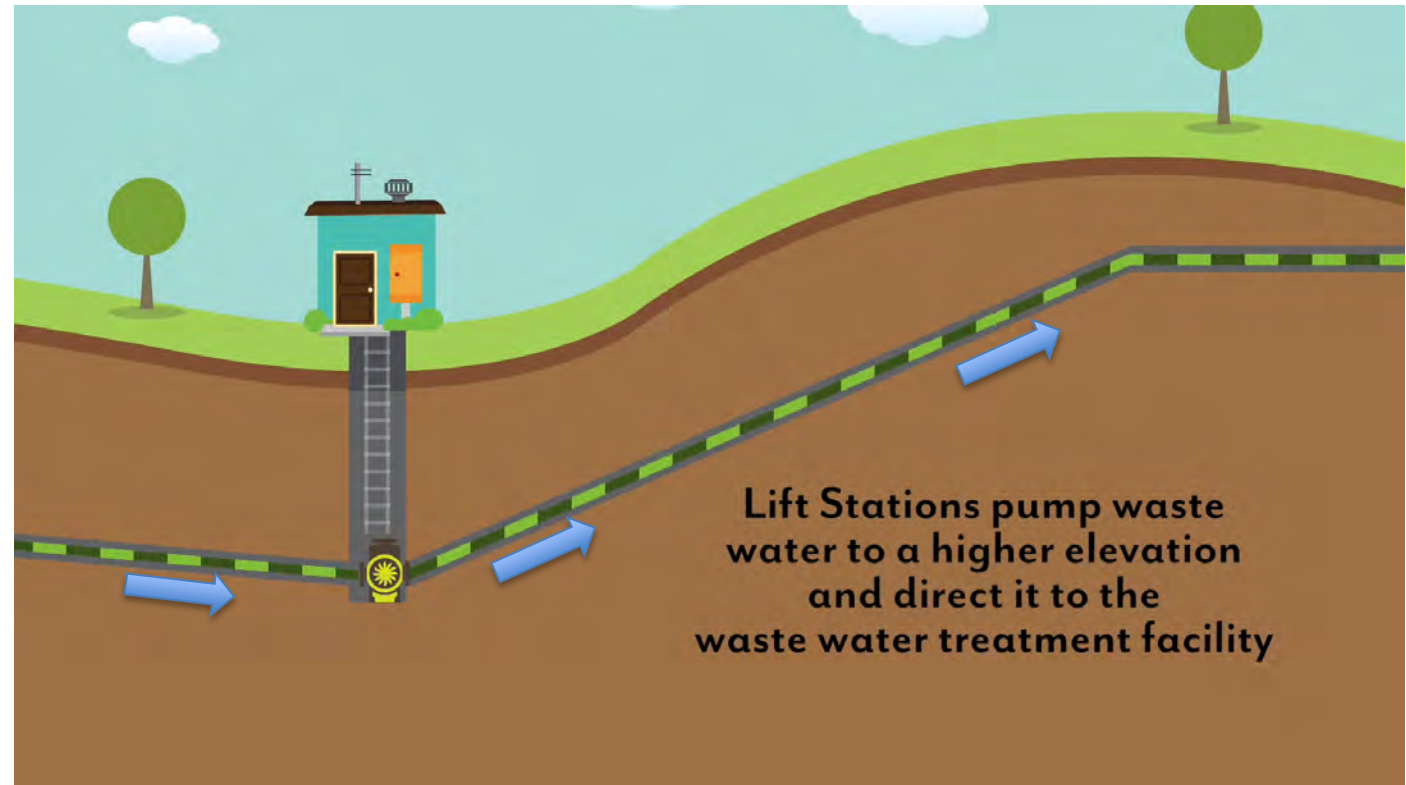
## Sanitary Systems

- What is a wastewater interceptor?
- Aurora Assets
  - 1,113 miles of gravity mains
  - 29,675 manholes



# Sanitary Systems

- What is a lift station?
- What is a forcemain?
- Aurora Assets
  - 13 stations (50 pumps)
  - 23.8 miles FM





First Creek Interceptor			
Segment	Diameter (in)	Length (ft)	Status
0	24-30	13,200	In Construction
0A	30	2,400	Constructed
1A	42	2,900	In Construction
1B	42	6,800	
1C	42	5,400	
1D	42	7,100	
1E	30	5,300	Constructed

# First Creek Interceptor System

- Location – NE Aurora (Picadilly and Green Valley Ranch Blvd)
- Goal → allow development in the First Creek area and increase wastewater conveyance capacity
- Conveys flow to MWRD Northern Treatment Plant



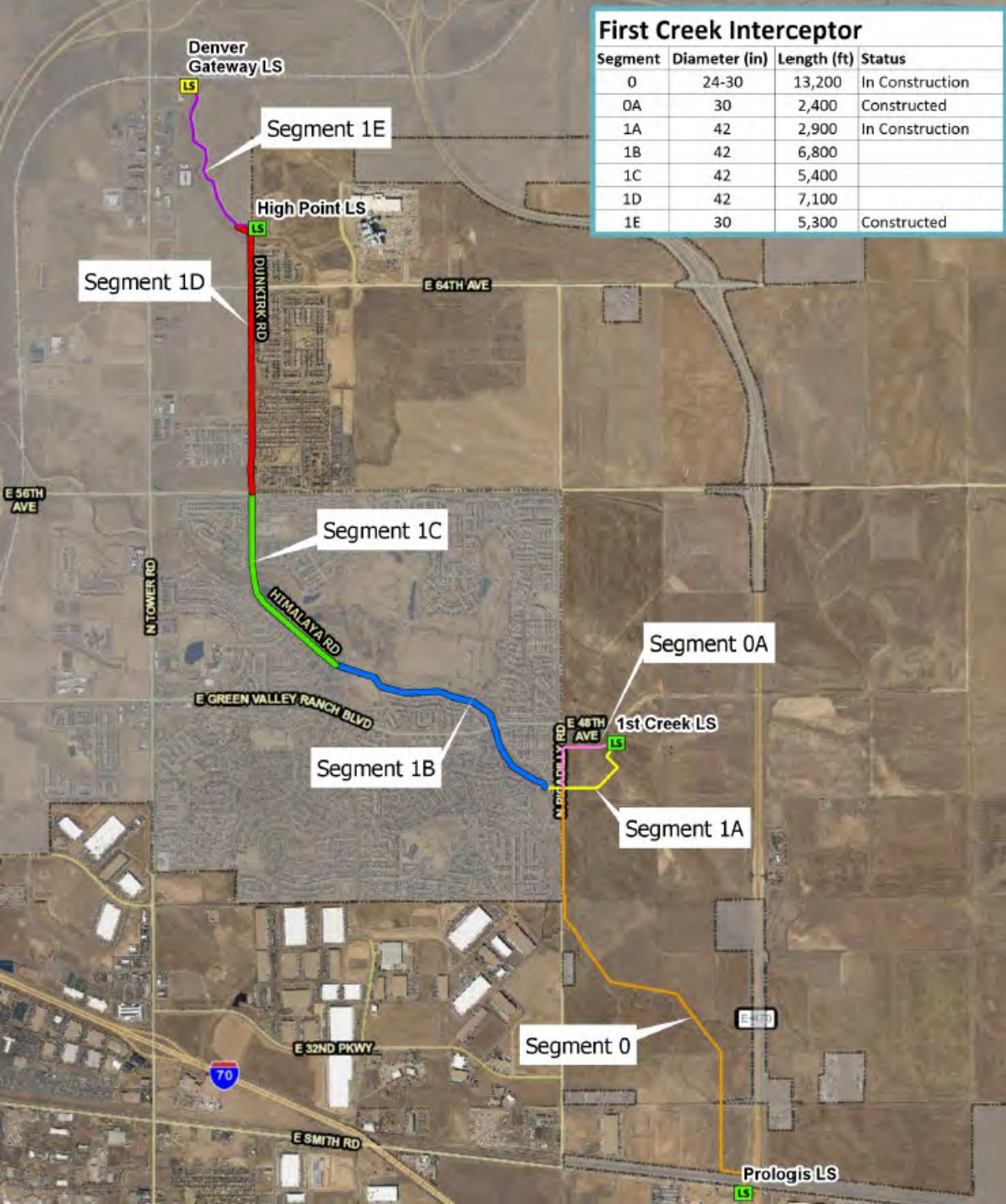


First Creek Interceptor			
Segment	Diameter (in)	Length (ft)	Status
0	24-30	13,200	In Construction
0A	30	2,400	Constructed
1A	42	2,900	In Construction
1B	42	6,800	
1C	42	5,400	
1D	42	7,100	
1E	30	5,300	Constructed

# First Creek Interceptor System

- ~8 miles gravity sanitary sewers
- 7 segments (0, 0A, 1A, 1B, 1C, 1D, and 1E)
  - Segment 0A and 1E constructed
  - Segment 0 and 1A under construction
  - Segments 1BCD in design





First Creek Interceptor			
Segment	Diameter (in)	Length (ft)	Status
0	24-30	13,200	In Construction
0A	30	2,400	Constructed
1A	42	2,900	In Construction
1B	42	6,800	
1C	42	5,400	
1D	42	7,100	
1E	30	5,300	Constructed

# First Creek Interceptor System

- 24-inch to 42-inch diameter
- Eliminates 2 AW lift stations
- Schedule critical
  - 2020 to 2021 Design
  - 2022 to 2023 Construction
  - 2024 Active



# First Creek Interceptor System

- Multiple stakeholders
  - City and County of Denver
  - Denver Parks
  - Businesses
  - Homeowners
  - Metro Districts
  - Metro Wastewater Reclamation District



# First Creek Interceptor System

Segment	Diameter (in)	Length (ft)	Status
0	24-30	13,200	In Construction
0A	30	2,400	Constructed
1A	42	2,900	In Construction
1B	42	6,800	
1C	42	5,400	
1D	42	7,100	
1E	30	5,300	Constructed



- Constructability
  - Depth +30ft
  - High groundwater
  - Multiple tunnels (orange stars)



# First Creek Interceptor System

- Benefits to the First Creek Interceptor System
  - Continued growth for the City
  - Eliminate two LS (save on O&M costs)
  - Frees up capacity elsewhere in the system by diverting flows to Metros NTP





# Questions



AURORA  
WATER