



TOWN BOARD WORK SESSION

March 15, 2021 - 6:00 PM

Town Board Chambers, 301 Walnut Street, Windsor, CO 80550

Please click this URL to join. <https://windsorgov.zoom.us/j/97695711983>

OR join by telephone at (888) 788-0099 or (877) 853-5247

Webinar ID: 976 9571 1983

GOAL of this Work Session is to have the Town Board receive information on topics of Town business from the Town Manager, Town Attorney and Town staff in order to exchange ideas and opinions regarding these topics.

Members of the Public in attendance virtually are asked to be recognized by the Mayor before participating in any discussions of the Town Board

AGENDA

1. Water Resources Overview - L. Lesoing, Water Resource Administrator
2. Future Meetings Agenda

The Town of Windsor will make reasonable accommodations for access to Town services, programs, and activities and will make special communication arrangements for persons with disabilities. Please call (970) 674-2400 by noon on the Thursday prior to the meeting to make arrangements.



MEMORANDUM

Date: March 15, 2021
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From: Leif Lesoing, Water Resource Administrator
Re:
Item #: 1.

Background / Discussion:

Staff will present an overview of the Town's water resources. The presentation will include an update on water supply, non-potable systems, water conservation and water usage.

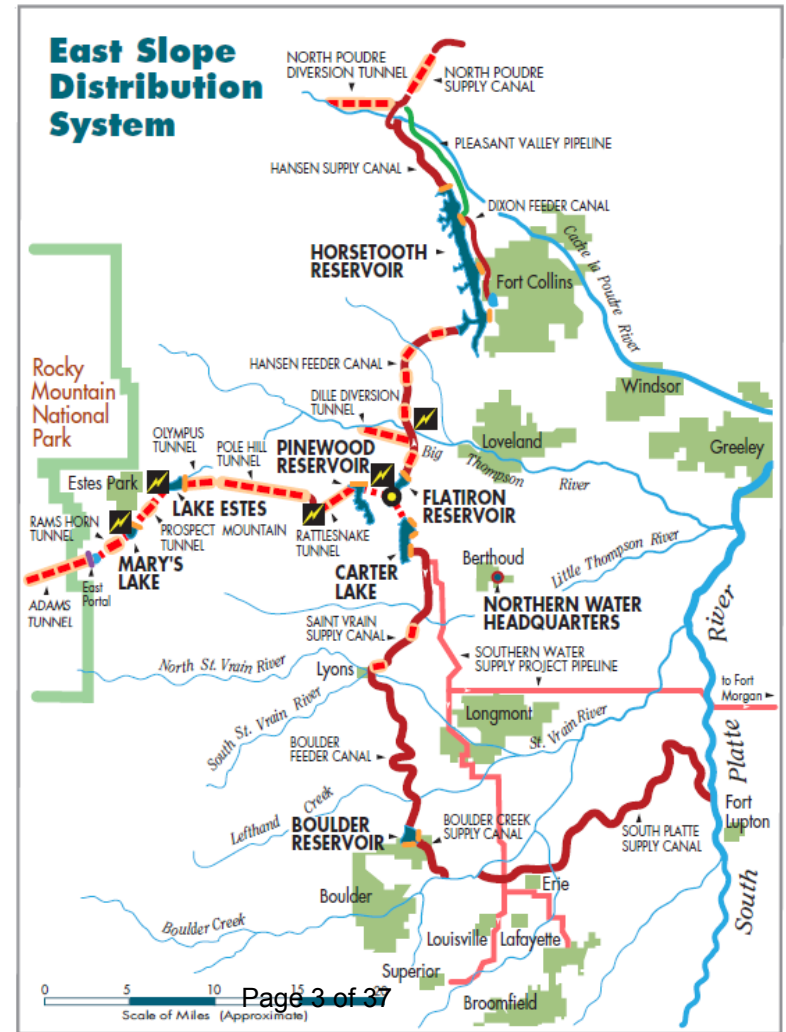
ATTACHMENTS:

- ▢ Water Resources Overview PowerPoint Presentation



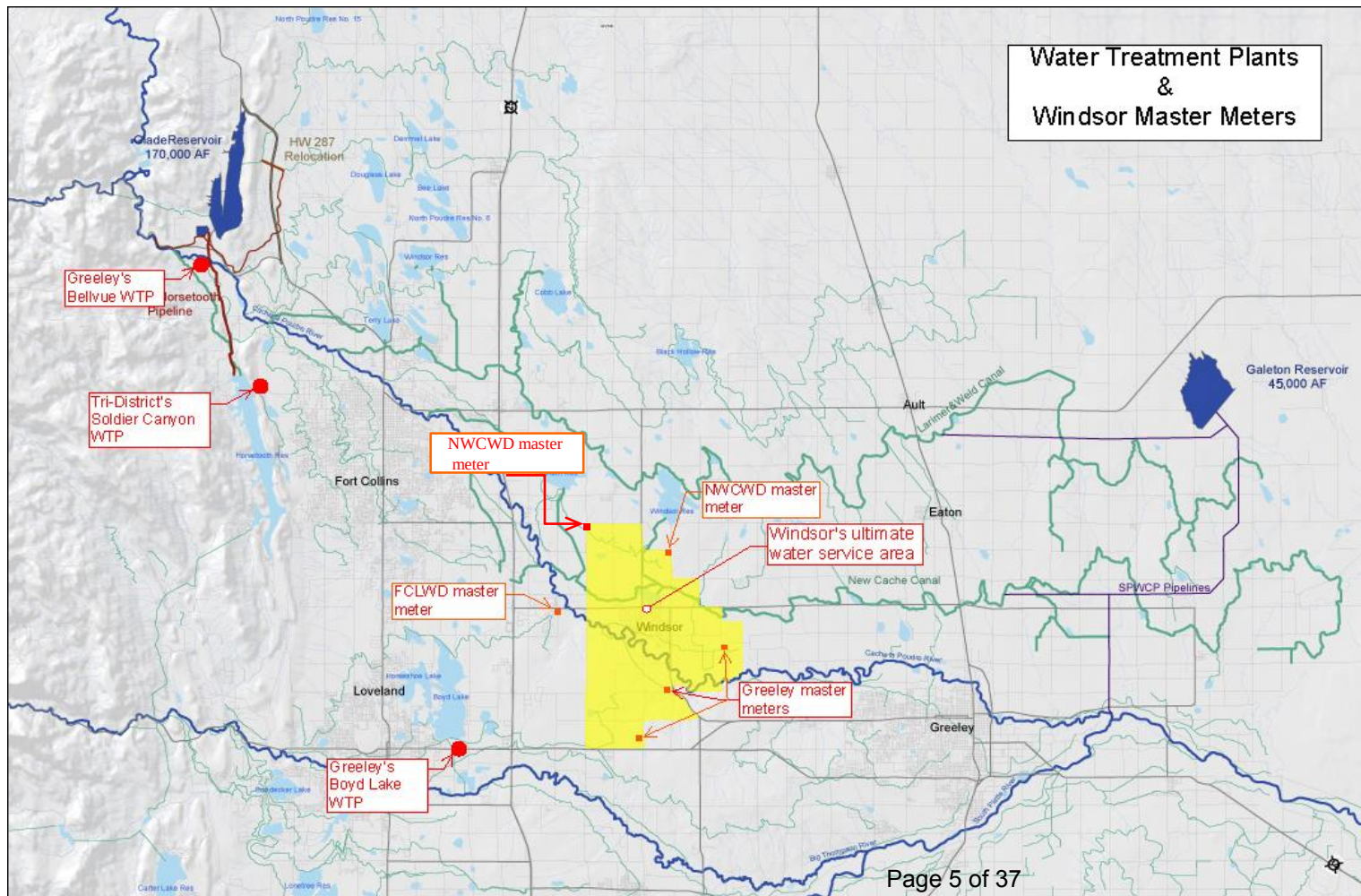
Windsor's Water Resources

John Thornhill
Leif Lesoing



Potable Water System Overview

Water Treatment Plants & Windsor Master Meters



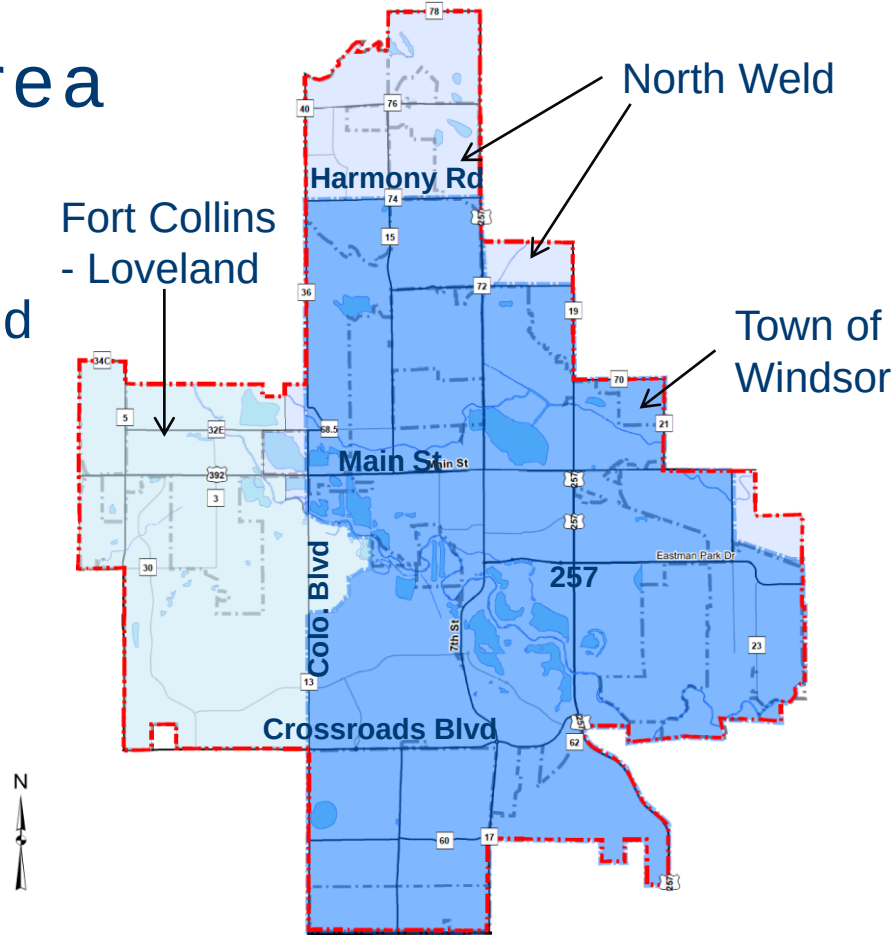


Water Service Area

- Average Daily Winter Demand ~ 1.3 mgd
- Peak Day Summer Demand ~ 4 mgd

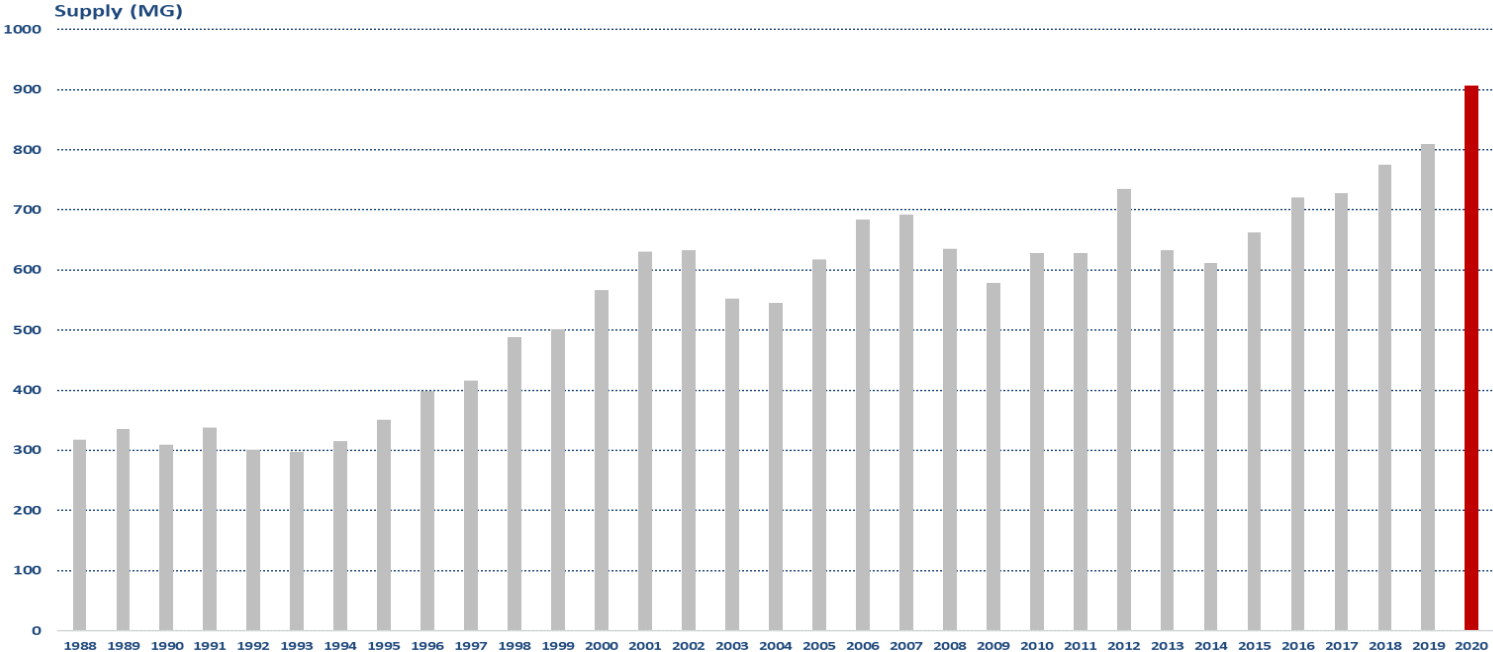
Windsor's Total Population
Estimate: 36,700

Windsor's Water Service Area
Population Estimate: 24,000 - 25,000





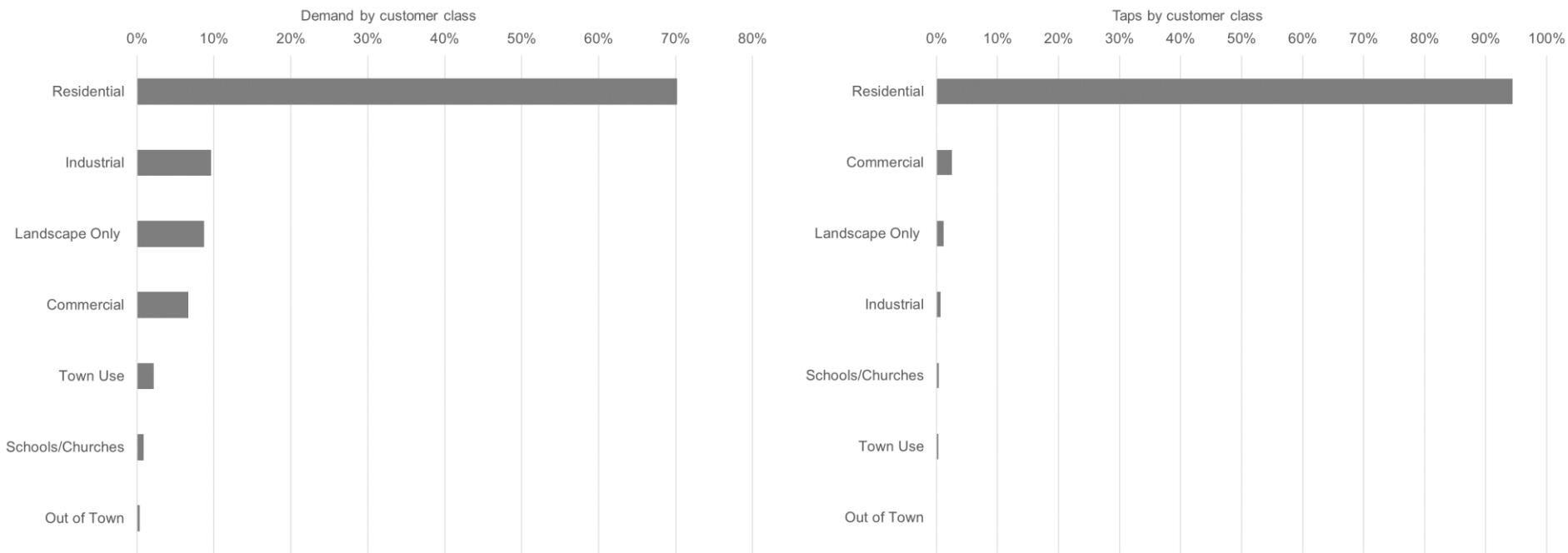
Annual Demand

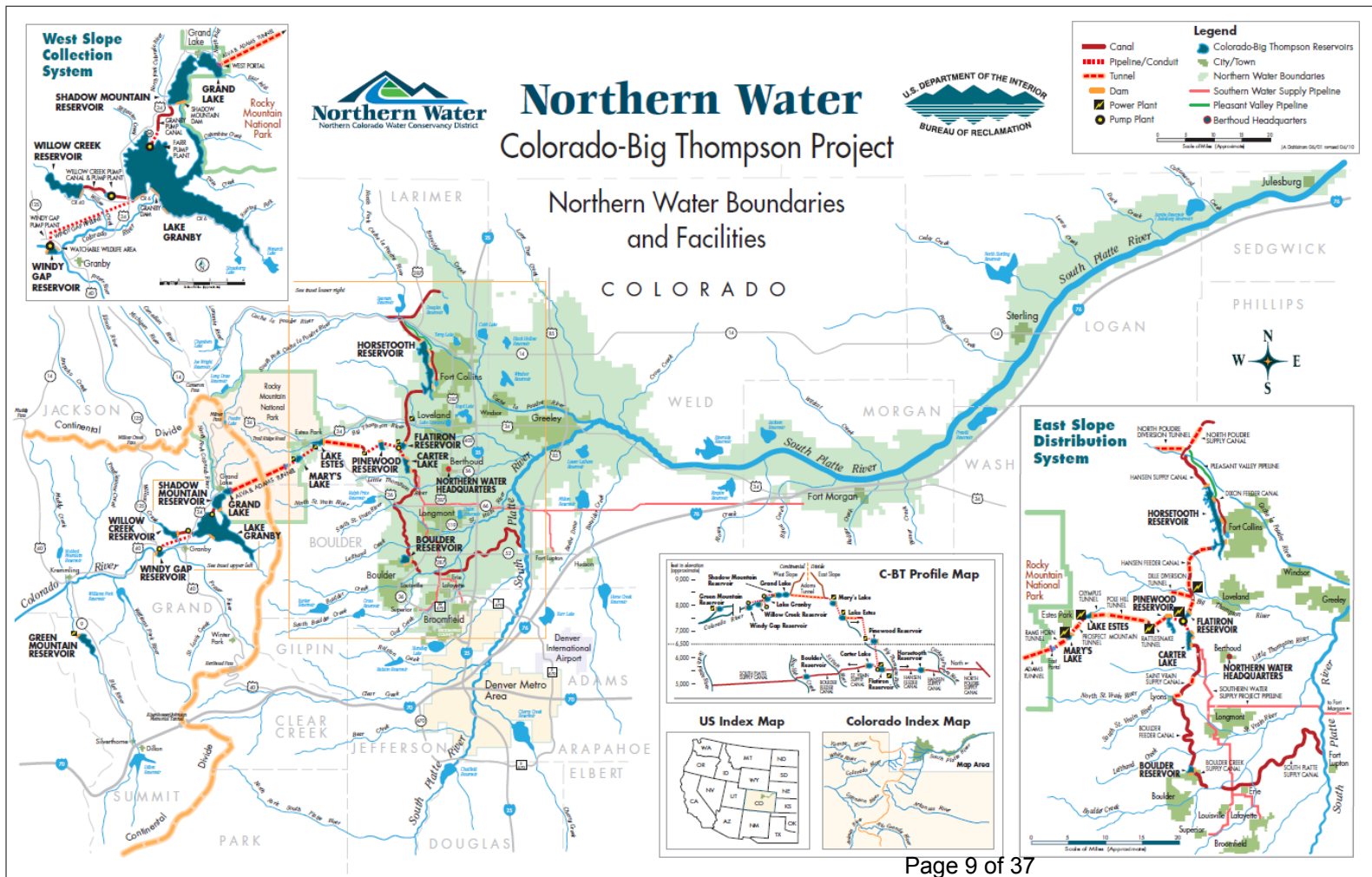


- Greeley: 212 million gallons
- FCLWD: 110 million gallons
- NWCWD: 588 million gallons



Water Use by Customer Class

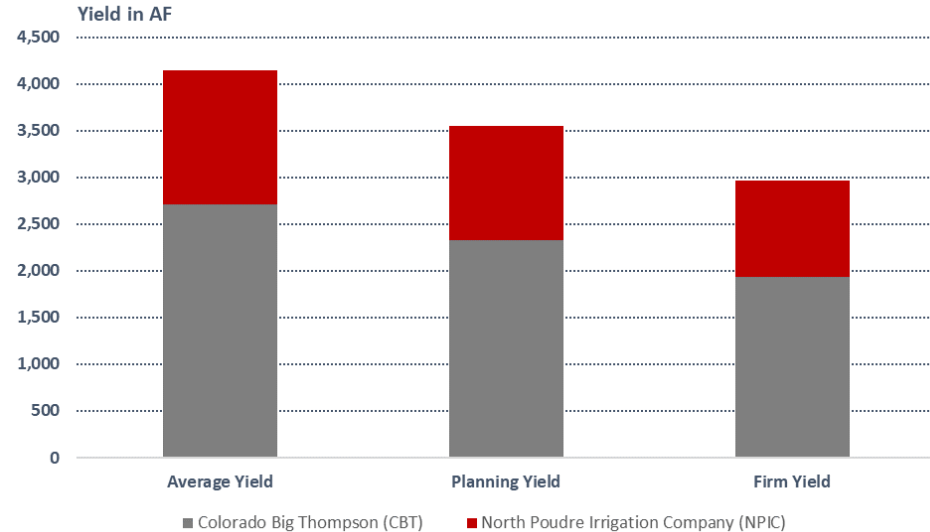






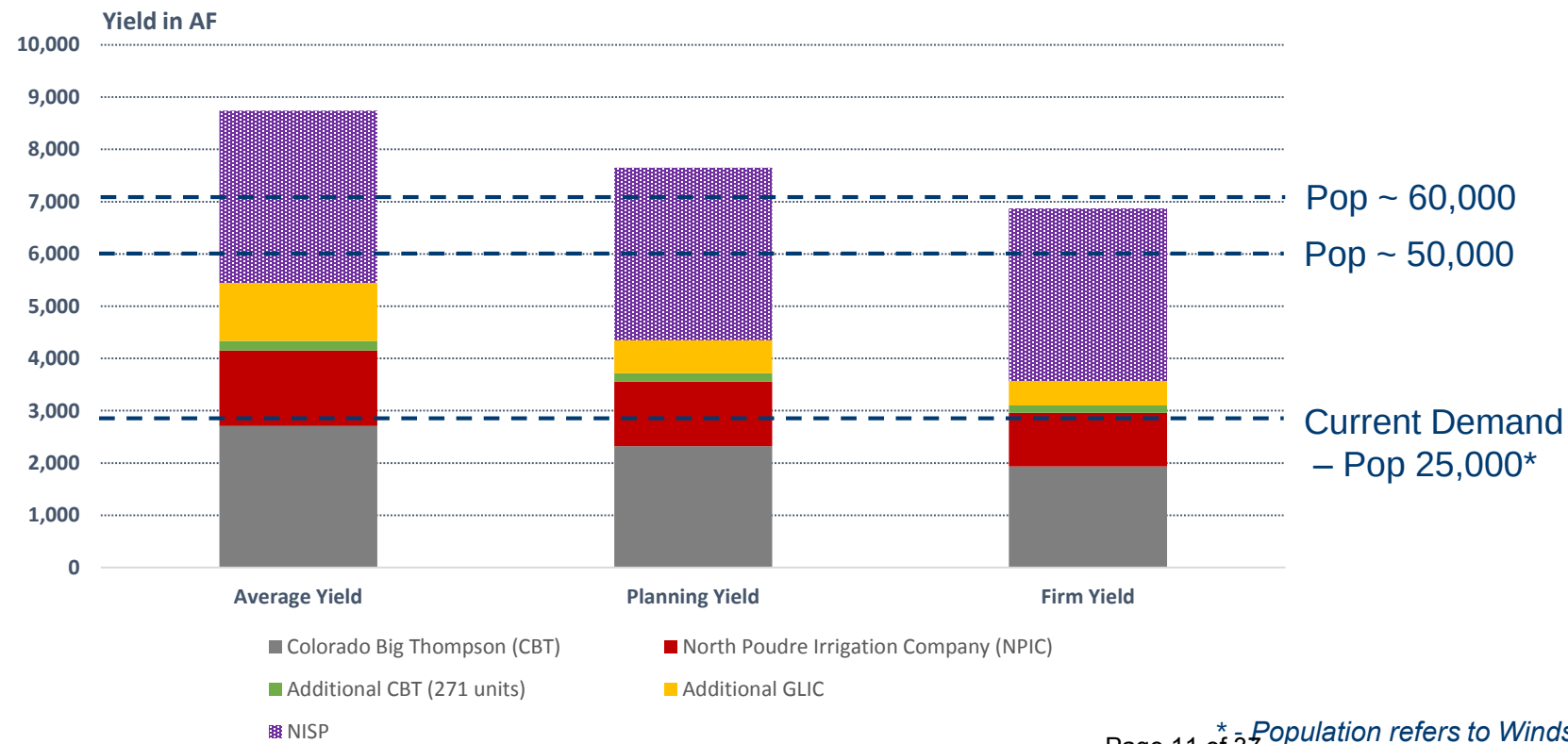
Treatable Water Sources

- Colorado Big Thompson Units
 - 3,969 units
 - Average Yield = 2,778 acre-feet
 - Firm Yield = 1,985 acre-feet
 - **Planning Yield = 2,381 acre-feet**
- North Poudre Irrigation Company
 - 533.75 shares (2,135 CBT units)
 - Average Yield = 1,495 acre-feet
 - Firm Yield = 1,068 acre-feet
 - **Planning Yield = 1,281 acre-feet**



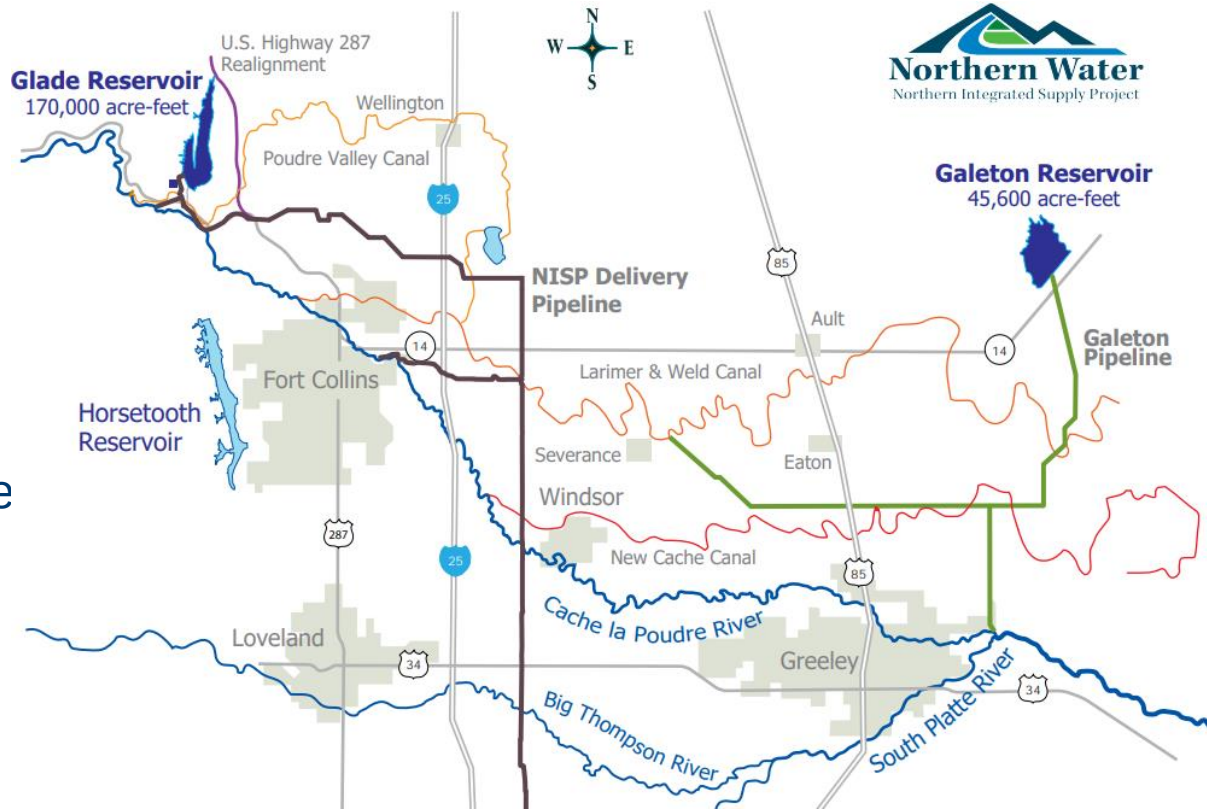


Current + Anticipated Supply



Northern Integrated Supply Project

- 3,300 acre-feet yield
- \$100+ million cost
- State of Colorado issued Water Quality Certification
- Larimer County Board of Commissioners approved the county 1041 permit
- Record of Decision (ROD) Spring 2021?





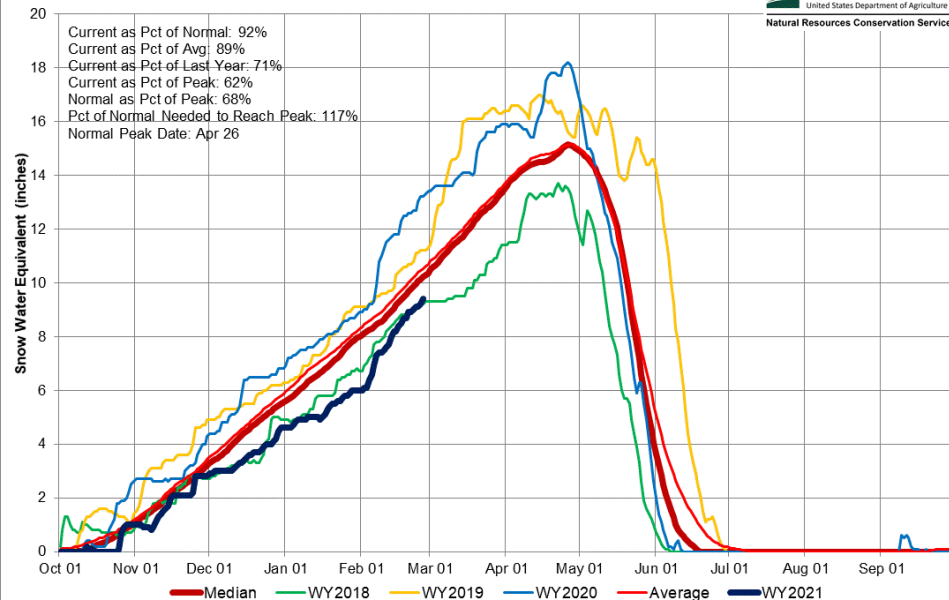
2021 Snowpack

Cache La Poudre Basin Snowpack Report March 1, 2021



South Platte River Basin Time Series Snowpack Summary

Based on Provisional SNOTEL data as of Feb 26, 2021



DWR Snow Courses

	SWE	Historic Average	% of Average	% of Last Year	Average Depth
Deadman Hill	11.4	12.1	94	83	43
Joe Wright Snotel	14.5	16.4	88	80	52
Long Draw	12.8	12.4	103	77	48
Hourglass	4.6	5.9	78	59	23
Lost Lake	9.7	9.6	101	88	39
Bennett Creek	3.7	5.8	64	55	20
Chambers Hill	5.9	7.5	79	65	25
Red Feather	6.5	5.8	112	84	26

Basin Average

92% 76%

NRCS Snow Courses

	SWE	30 yr Average	% of Average	% of Last Year	Average Depth
Cameron Pass	15.2	14.4	105	62	53
Deadman Hill Snotel	12.9	12.4	104	84	54
Chambers Lake	5.5	5.8	95	62	23
Big South	4.1	4.3	124	71	18

Basin Average

105% 69%



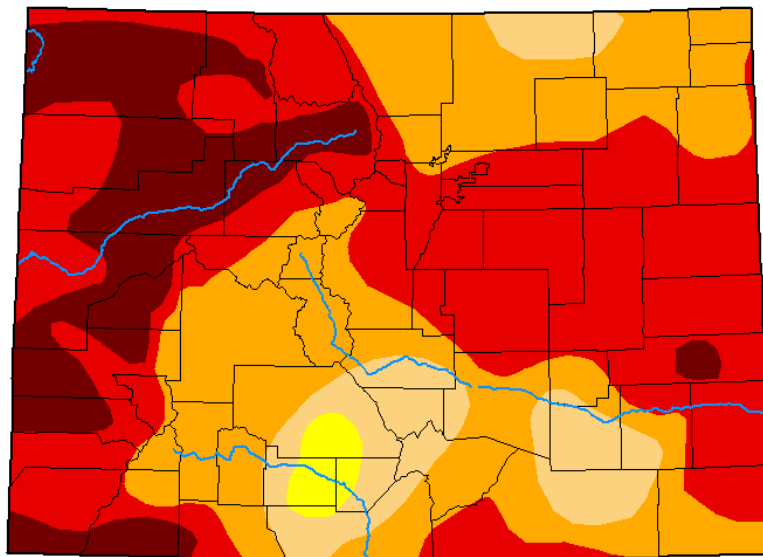
2021 Outlook

U.S. Drought Monitor Colorado

February 23, 2021

(Released Thursday, Feb. 25, 2021)

Valid 7 a.m. EST



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

David Miskus
NOAA/NWS/NCEP/CPC



Water Conservation Overview

Water Conservation Highlights

- Drought Management Plan
- Final year for washer and toilet rebates
- Mayor's Water Challenge
- Northern Water and Parks department audits
- Garden in a Box
- Landscape Bootcamp



Non-Potable Water System Overview



Private Non-Potable Dual – Use Systems



History

1994: Water Valley becomes Windsor's first development to propose building a dual water distribution system.

1995: Data for existing homes showed that approximately 50% of total water use was for indoor use.

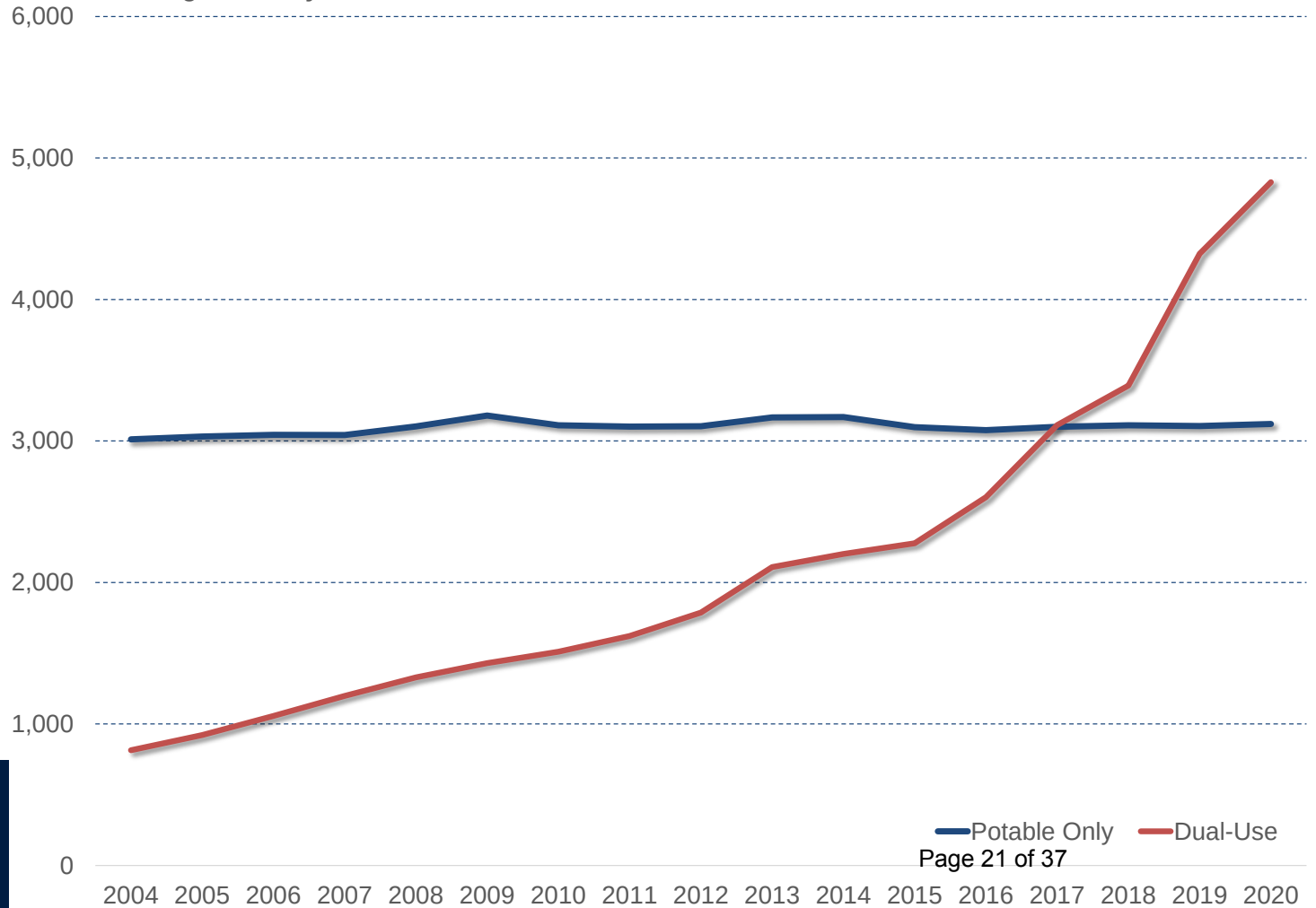
2003: Passed ordinance requiring secondary water systems for irrigation of new residential development within the Town of Windsor urban growth boundary.



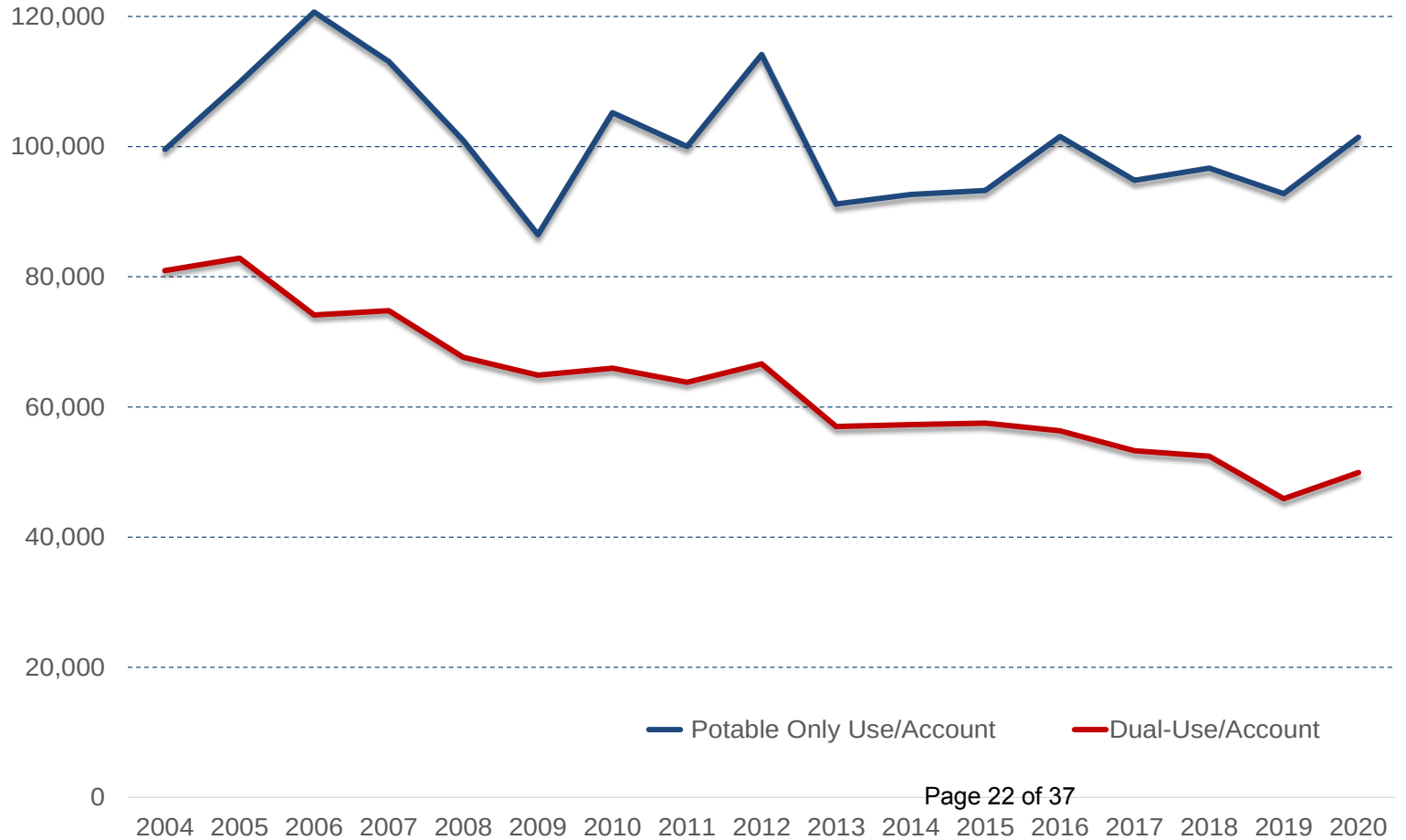
Ordinance

- Mandatory construction of non-potable secondary water systems for irrigation
- Systems privately managed by metropolitan districts, HOAs, or other public or private entity subject to approval by the Town of Windsor
- Established geographical areas where non-potable systems shall be required
- Construction of non-potable secondary water systems shall be a condition of annexation

of Single - Family Residential Accounts



Gallons/Year





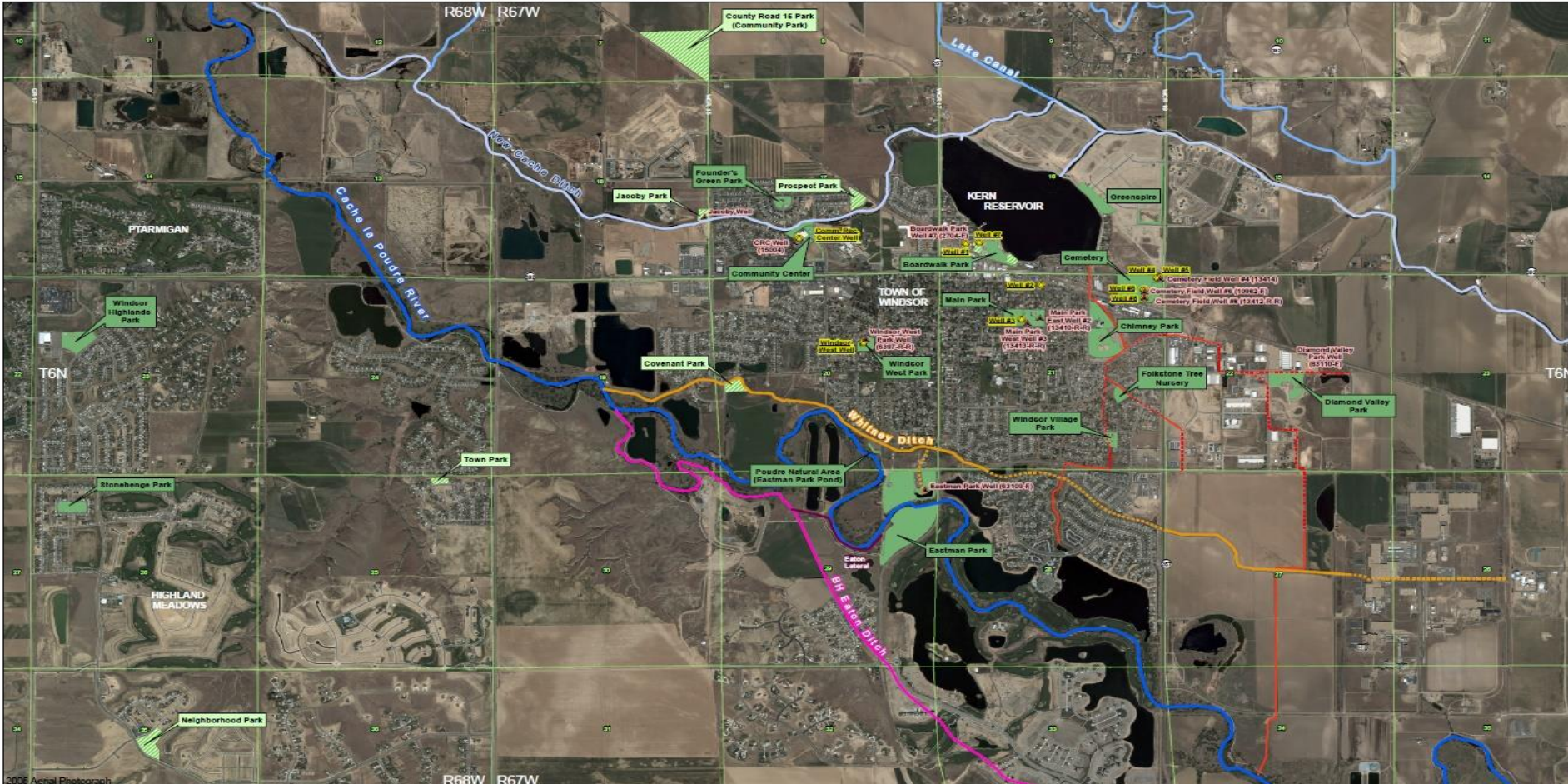
Benefits

- Benefits the ditch company and ag users – keeps water in the ditch
- Stretches the capacity of existing water treatment plants and delays the need to upgrade facilities or build new ones.

Benefits cont..

- Reduction in peak summer demands keeps costs of potable treatment lower.
- Keeps water in the river – supplies are not exchanged or diverted elsewhere for treatment.
- Environmental benefits – reduced chemical use, reduced transportation of supplies, reduction in harmful residuals processing

Town Non-Potable Use





clear water solutions
water rights • planning • engineering

FROM ORIGINAL MAP:
KERN RESERVOIR &
DITCH COMPANY
WINDSOR PLAN
FOR AUGMENTATION

Altergott Exhibit Town of Windsor

Date: 06-13-2017

Drawn by: NEA

Scale: As Shown

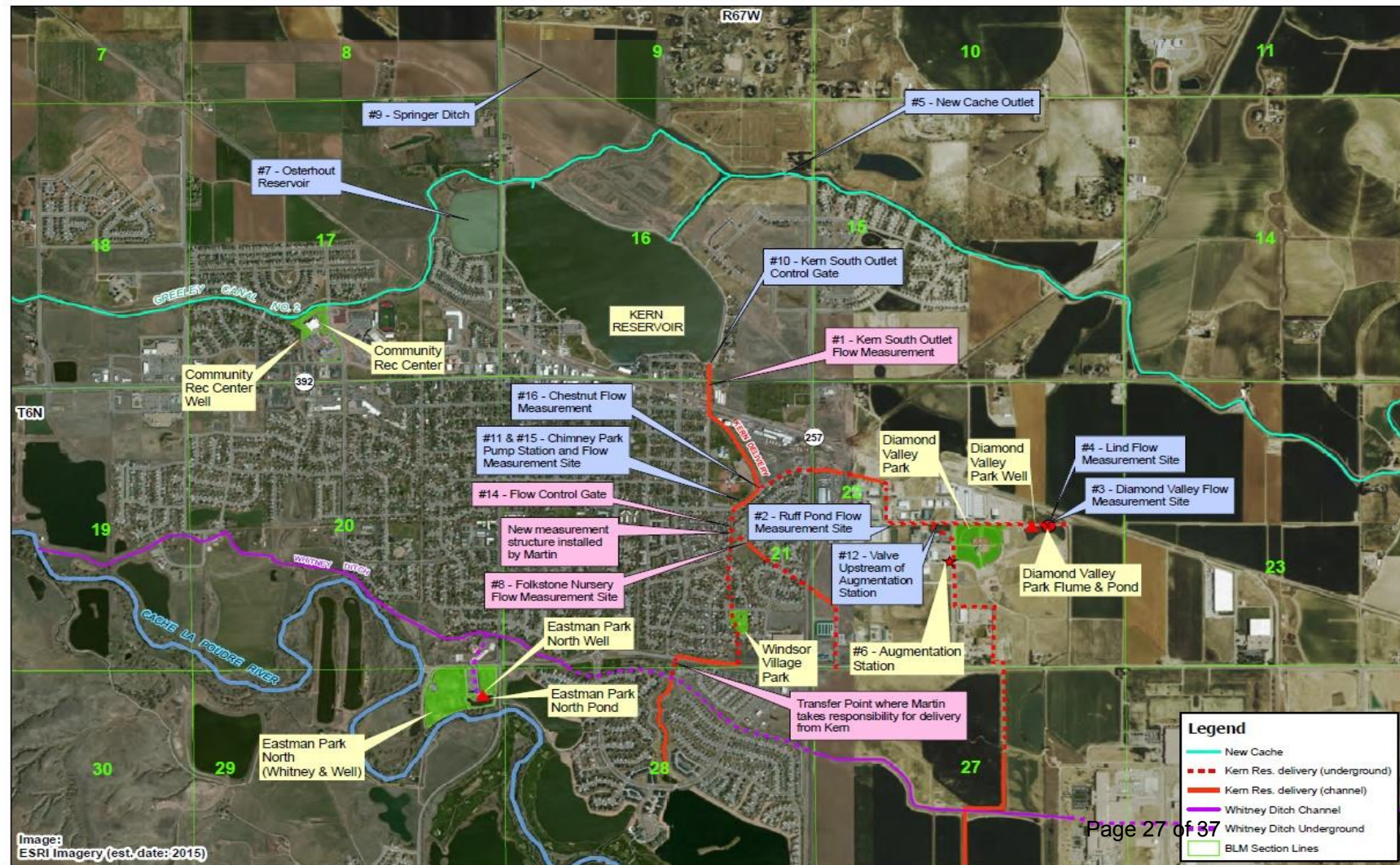
Job No.: 09-280



0 395 790 1,580
Feet

Legend

- New Cache
- Kern Res. delivery (underground)
- Kern Res. delivery (channel)
- Whitney Ditch Channel
- Whitney Ditch Underground
- BLM Section Lines



Kern Reservoir Water Rights

- Town owns 100% (100 shares) of the Kern Reservoir and Ditch Company
 - 1,800 acre-feet of storage
 - Irrigation of ~ 1,000 acres
 - Appropriation date of February 10, 1882
 - Case No. 02CW301
 - Annual Fill Limit of 1,277 acre-feet (1,048 average)
 - Return flow obligation of 518 acre-feet
 - Annual Consumptive Use Limit of 530 acre-feet
 - Front Range Energy 500 acre-feet augmentation lease
- Kern Junior Water Right
 - Case No. 02CW276
 - Reservoir enlargement in 2002
 - Claimed 1,966 acre-feet with right to fill and refill in priority



Kyger Reservoir

Lined Poudre River Storage

Kyger Reservoir

- 1,257 acre-feet of storage
- Water can be:
 - Gravity from river
 - Pumped from river
 - Pumped from reservoir
- 20 cfs flow (two pumps)
- Used for augmentation
 - Parks
 - School District
 - Kern RFO's
 - Non-potable irrigation
- Cost ~ \$5,000/AF





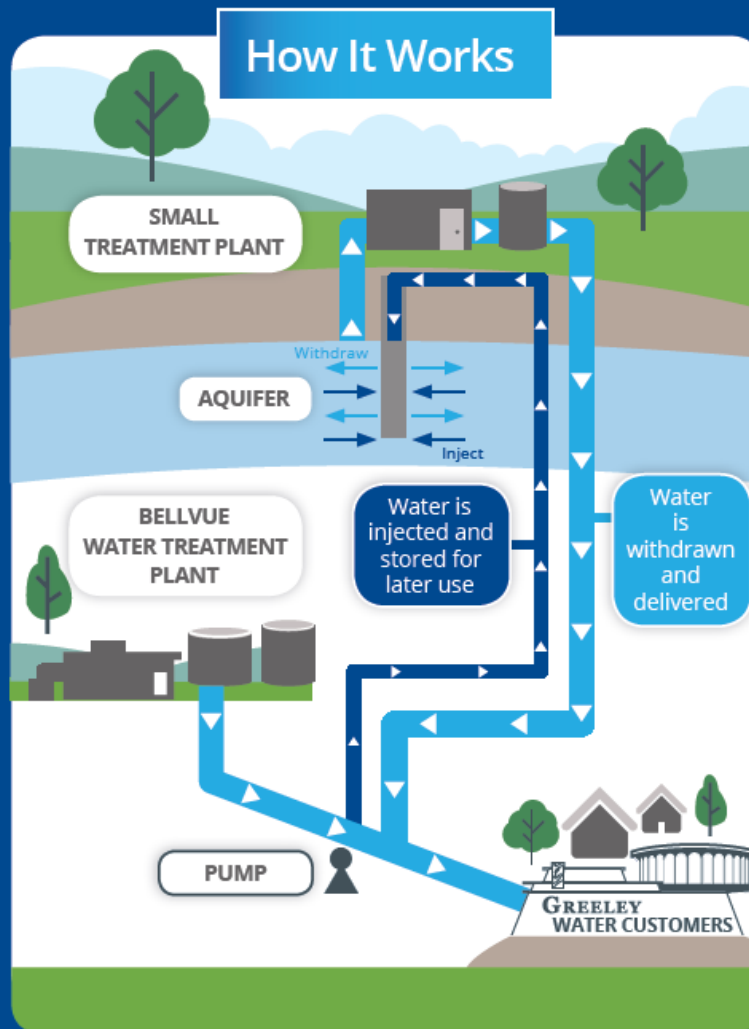
Challenges/Opportunities

- Windsor is growing rapidly
- Northern Integrated Supply Project (NISP)
 - Approval/Timing
 - Raw Water Dedication
 - Financing
- Regional Partnerships
 - Short-term treated water rentals
 - Water Treatment partnerships
- Wildfires
- Terry Ranch Project



Terry Ranch Project Aquifer Storage and Recovery (ASR)

- The Terry Ranch Project would develop approximately 1.2 million acre-feet of non-tributary groundwater from an underground aquifer located in northwest Weld County
- Terry Ranch would also help Greeley store water during wet years to be used in dry years
- Protection from forest fires
- Testing has shown that the Terry Ranch water has low levels of naturally occurring uranium, which can easily be treated and removed. Greeley's high mountain water also contains low levels of uranium.
- Greeley removes uranium and several other contaminants daily
- In a 30-day pilot test, Greeley proved it could treat Terry Ranch water to nondetectable limits of uranium





Thank you!



MEMORANDUM

Date: March 15, 2021
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From: Karen Frawley, Town Clerk
Re: Future Meeting Agenda
Item #: 2.

ATTACHMENTS:

- ▢ Future Meetings Agenda



FUTURE TOWN BOARD MEETINGS

March 22, 2021 5:30 p.m.	Town Board Work Session Broadband and Allo Town Hall Budget Discussion
March 22, 2021 7:00 p.m.	Town Board Regular Meeting
March 29, 2021	Cancelled – 5 th Monday
April 5, 2021 6:00 p.m.	Town Board Work Session Priority Based Budgeting MetroDPA Program Walnut Bikeway Back-in Parking Lot Program at Town Hall Poudre Express bus stop pads budget
April 12, 2021 5:30 p.m.	Town Board Work Session Board-Manager-Attorney Monthly Meeting Code Amendments for Reimbursements
April 12, 2021 7:00 p.m.	Town Board Regular Meeting
April 19, 2021 6:00 p.m.	Town Board Work Session Wastewater Treatment Plant Expansion Discussion Financing Options
April 26, 2021 5:15 p.m.	Town Board Work Session Eastman Park Site Visit and Over view Comprehensive Plan Review
April 26, 2021 7:00 p.m.	Town Board Regular Meeting
May 3, 2021 5:30 p.m.	Town Board Work Session Wastewater Treatment Plant Site Visit and Bio Solid Project Update
May 10, 2021 5:30 p.m.	Town Board Work Session Board-Manager-Attorney Monthly Meeting Park Fee Study NISP Public Art Commission
May 10, 2021	Town Board Regular Meeting

FUTURE TOWN BOARD MEETINGS

May 17, 2021 6:00 p.m.	Town Board Work Session Urban3 Analysis Preview Presentation
May 24, 2021 6:30 p.m.	Town Board Work Session 7 th Street Multimodal and Walnut Street Bikeway Check in
May 24, 2021 7:00 p.m.	Town Board Regular Meeting
May 31, 2021	Cancelled – Memorial Day Holiday
June 7, 2021 6:00 p.m.	Town Board Work Session
June 14, 2021 5:30 p.m.	Town Board Work Session Board-Manager-Attorney Monthly Meeting
June 14, 2021 7:00 p.m.	Town Board Regular Meeting
June 21, 2021 6:00 p.m.	Town Board Work Session
June 28, 2021 6:00 p.m.	Town Board Work Session
June 28, 2021 7:00 p.m.	Town Board Regular Meeting

Future Work Session Topics

- Joint Meeting with Town of Windsor, Town of Severance, Fire District and School District – Tentative for Spring of 2021
- Telecom Code (Pending FCC Rules)
- Regional Water Treatment Plant Site
- Proportional services and amenities for planned population
- Economic development/retail needs based on population levels (following retail assessment)