WATER & SEWER BOARD AGENDA

Wednesday March 18, 2020
2:00 p.m.

GREELEY CITY CENTER
1001 11TH Avenue
Greeley, CO 80631

1. Roll Call:

_____ Chairman Harold Evans	_____ Vice Chairman Mick Todd
_____ Mr. Bob Ruyle	_____ Mr. Fred Otis
_____ Mr. Joe Murphy	_____ Mr. Tony Miller
_____ Mr. Manuel Sisneros	_____ Mayor John Gates
_____ Mr. Roy Otto	_____ Mrs. Renee Wheeler

2. Approval of Minutes

3. Approval of and/or Additions to Agenda

Consent Agenda

The Consent Agenda is a meeting management tool to allow the Board to handle several routine items with one action.

The Board or staff may request an item to be "pulled" off the Consent Agenda and considered separately under the next agenda item in the order they were listed.

4. No Items on Consent Agenda

End of Consent Agenda

5. Welcome New Employees

6. 4th Quarter CIP Update

7. Farm and Water Lease Report

8. Legal Report

9. Executive Session
   - Water Market Update
   - Matters Related to Potential Acquisition of Water Storage

12. Director's Report
   - Summer Tour Dates
   - Non-Potable Conversion Project
   - Life After Lawn

If, to effectively and fully participate in this meeting, you require an auxiliary aid or other assistance related to a disability, please contact Shannon Metcalf at 970-350-9818.

- Water Smart Grant
- COVID-19 Update

13. Such Other Business That May Be Brought Before the Board and Added to This Agenda by Motion of the Board-

If, to effectively and fully participate in this meeting, you require an auxiliary aid or other assistance related to a disability, please contact Shannon Metcalf at 970-350-9818.

City of Greeley
Water and Sewer Board
Minutes of February 19, 2020
Regular Board Meeting

Chairman Harold Evans called the Water and Sewer Board meeting to order at 2:00 p.m. on Wednesday, February 19, 2020.

1. Roll Call

The Clerk called the roll and those present included:

Board Members:

Chairman Harold Evans, Vice Chairman Mick Todd, Fred Otis, Joe Murphy, Bob Ruyle, Tony Miller, Manny Sisneros, and Roy Otto

Water and Sewer Department Staff:

Director Sean Chambers, Deputy Director Water Resources Adam Jokerst, Deputy Director of Operations Nina Cudahy, Utility Finance Manager Erik Dial, Water Resources Manager Jen Petrzelka, Special Projects Engineer Mary Gearhart, Water Resources Planning Manager Kelen Dowdy, Water Resource Admin. I Leah Hubbard, Water Resource Admin. II Cole Gustafson, Water Resource Analyst Alex Tennant, Rates and Budget Analyst Kalen Myers, Development Reviewer Derek Gannon, , Administrative Specialist II Crystal Sanchez and Office Manager Shannon Metcalf

Legal Counsel:

Counsel to Water & Sewer Board Attorney Carolyn Burr, Environmental and Water Resources Attorney Jerrae Swanson, Environmental and Water Resources Attorney Dan Biwer

2. Approval of Minutes

Mr. Miller moved, seconded by Vice-Chairman Todd, to approve the January 20, 2020 Water and Sewer Board meeting minutes. The motion carried 7-0.

3. Approval of and/or Additions to Agenda

Mr. Otis asked that the Thayer Farm Lease be moved from the Consent Agenda to the regular Agenda.

******Consent Agenda******

4. Ratify Purchase and Sale Agreement for Star Pit Gravel Pit

******End of Consent Agenda******

Mr. Otis moved, seconded by Mr. Miller, to approve the item remaining on Consent Agenda including staff recommendations. The motion carried 7-0.

5. Thayer Farm Lease

Mr. Cole Gustafson explained that The City recently acquired approximately 129 acres of irrigated farm land along with 3 shares of Larimer and Weld Irrigation Company and 4 shares of Windsor Reservoir and Canal Company. In order to secure continued agricultural use of the water rights and maintenance of the land, staff negotiated a Farm Lease Agreement with Bartmann Complete Hay Services, Inc. The initial lease term is for 10 years with an option to renew for 4 consecutive 1 year terms. The lease amount has been set at $100 per acre for a total of $12,900.00 the first year. Every year thereafter, the lease amount will increase in accordance with the increase in the CPI.

Mr. Otis said he thinks the 10 year term is too long.

Mr. Ruyle made motion, seconded by Vice-Chairman Todd to approve the Thayer Farm Lease. The motion carried 6-1.

6. Welcome New Employees

Mr. Chambers provided an introduction of new Water and Sewer Department employees starting this month.

7. Approve Irrigation Water Lease (Kaltenberger)

Mr. Tennant explained that this is an Irrigation Water Lease Agreement with Robin and Doug Kaltenberger. The Kaltenbergers purchased a parcel of real property subdivided from a larger parcel that was commonly known as the Waag Farm, and would like to lease back one 1 of the WSSC shares that historically irrigated this farm. The share has already been changed by the City in water court.

Mr. Miller made motion, seconded by Mr. Sisneros to approve the Irrigation Water Lease Agreement with Robin and Doug Kaltenberger as presented, and to delegate authority to

Water and Sewer staff to amend this lease in the future to include one or more additional shares of WSSC. The motion carried 7-0.

8. 2019 Financial Report

Mr. Dial presented the year-end summary for water and sewer expenditures and revenues. Water Plant Investment Fee revenue totaled $4,450,604 through the end of 2019. This represents 87% of the anticipated budget of $5,096,648. Sewer Plant Investment Fee revenue totaled $2,243,300 through the end of 2019. This represents 48% of the anticipated budget of $3,044,609. Operating expenditures for both water and sewer were within their budgets at year-end.

9. Legal Report

Carolyn Burr of Welborn, Sullivan, Meck & Tooley provided this month's legal report to the Board.

1. **Statements of Opposition:** Based on review of the December 2019 Water Court Resume, Mrs. Burr reported that staff and water counsel recommend that the Board authorize filing a statement of opposition in the following cases:

   a. Case Number: **19CW3246** Application of Fort Morgan Farms, LLC and High Plains Grazing, LLC for conditional storage rights in the amount of 12,000 AF per year. The applicant is seeking to develop gravel pits near the confluence of the Platte and Poudre rivers. Water would be diverted from both rivers to fill the gravel pits at rates of up to 100 cfs. The uses include irrigation, augmentation and recharge. The appropriation date of the water right is Aug. 2019. We recommend that Greeley file a statement of opposition to stay fully informed regarding the operation of Fort Morgan Farms augmentation plans, including the new, conditional storage right, and to protect Greeley's rights on the Poudre River.

   b. Case Number: **19CW3253** Application of Parker Water and Sanitation District and Lower South Platte Water Conservancy District for a large, junior conditional water project in Water Districts 1 and 64. Included in the application is a right for Fremont Butte Reservoir for 72,000 a.f. plus refill and diversion from the Platte at 1000 cfs. The project involves pumped storage between Pruitt Reservoir and the Fremont Butte Reservoir. This size of project could impact South Platte River administration, including on the Poudre, as well as Colorado's capped diversions under the South Platte River Recovery Plan. We recommend that Greeley file a statement of opposition to stay fully informed regarding this large project and its potential effects on all other South Platte water users.

Vice Chairman Todd made a motion, seconded by Mr. Miller, that the Board authorize the filing of a statement of opposition in Case Nos. 19CW3246 and 19CW3253 and for staff

and legal counsel to seek resolution of issues raised by these cases consistent with Water and Sewer Board Resolution No. 3 (2015). The motion carried 7-0.

Mrs. Burr also gave an update on 17CW3020 – Joint Application of Greeley and Leprino. Only remaining opposer is Central. Greeley filed a motion for determination of law to address an issue raised by Central alleging that the industrial return flow generated from processing milk into cheese was tributary to the river. Greeley and Leprino claimed this water as a fully consumable return flow that could be exchanged into Greeley's system and used to offset depletions and return flow obligations. The water court issued an order on Jan. 30 ruling in favor of Greeley and Leprino.

10. Executive Session

Vice Chairman Todd moved, seconded by Mr. Miller, to hold an executive session to address the following matters, as provided by C.R.S. § 24-6-402(4)(a), (b) and (e) and Greeley Municipal Code § 2.04.020(a) (1), (2) and (5):

1. To receive advice from their attorney and determine positions relative to matters that may be subject to negotiations, developing strategy for negotiations and instructing negotiators on matters related to potential acquisition of water storage.

2. To receive advice from their attorney and determine positions relative to matters that may be subject to negotiations, developing strategy for negotiations and instructing negotiators on matters related to the Draft Environmental Impact Statement for Halligan Water Supply Project.

The motion carried 7-0.

Present during the executive session were:

Chairman Harold Evans, Vice Chairman Mick Todd, Fred Otis, Bob Ruyle, Manual Sisneros, Tony Miller, Joe Murphy, Roy Otto, Director Sean Chambers, Deputy Director Water Resources Adam Jokerst, Utility Finance Manager Erik Dial, Water Resources Operations Manager Jennifer Petrzelka, Water Resources Planning Manager Kelen Dowdy, Counsel to Water and Sewer Board Carolyn Burr, Environmental and Water Resources Attorney Jerrae Swanson, Environmental and Attorney Dan Biwer, and Office Manager Shannon Metcalf

Mr. Jokerst left the meeting at 3:31 p.m.

This executive session was authorized by Subsections (a),(b) and (e) of Section 24-6-402(4) of the Colorado Revised Statutes, and Subsections (1), (2) and (5) of Section 2.04.020 (a) of the Greeley Municipal Code.

The Executive Session ended at 3:54 p.m. and the regular meeting resumed.

11. Director's Report

Mr. Chambers reported on the following items:

- Council Petition - Non-Potable Memo
- Board/Council Tour – Friday, August 23rd
- Meet with Windsor (Council to tour Bellvue)
- Colorado Water Congress Sponsorship was a Success!
- Greeley Water Rental Round Up
- Thank You Letter SAE Sponsorship

12. Such Other Business That May be Brought before the Board and Added to This Agenda by Motion of the Board

There were no additional items brought before the Board and added to the agenda.

Chairman Evans adjourned the meeting at 4:03 p.m.

****

_____
Harold Evans, Chairman

_____
Shannon Metcalf, Office Manager

WATER & SEWER BOARD AGENDA MARCH 18, 2020

ENCLOSURE _____ NO ENCLOSURE __X__

ITEM NUMBER: 4

TITLE: WELCOME NEW EMPLOYEES

RECOMMENDATION: INFORMATIONAL ONLY

ADDITIONAL INFORMATION:

WATER & SEWER BOARD AGENDA MARCH 18, 2020

ENCLOSURE _____ NO ENCLOSURE __X__

ITEM NUMBER: 5

TITLE: 4th QUARTER CIP UPDATE

RECOMMENDATION: INFORMATION ONLY

ADDITIONAL INFORMATION:

Staff will provide an update.

4th QUARTER CIP UPDATE

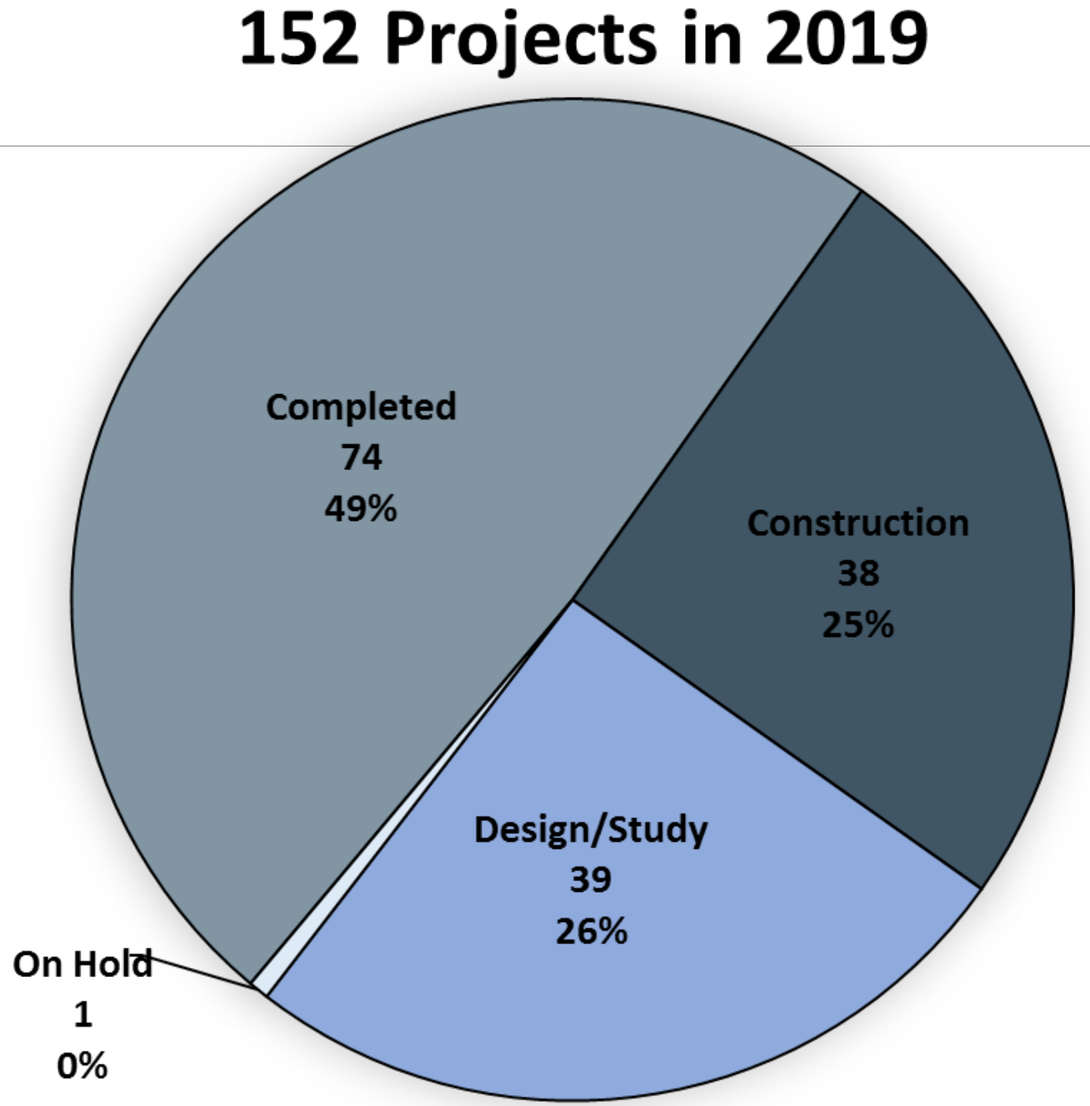
COUNCIL MEETING

April 7, 2020

2019 PROJECTS

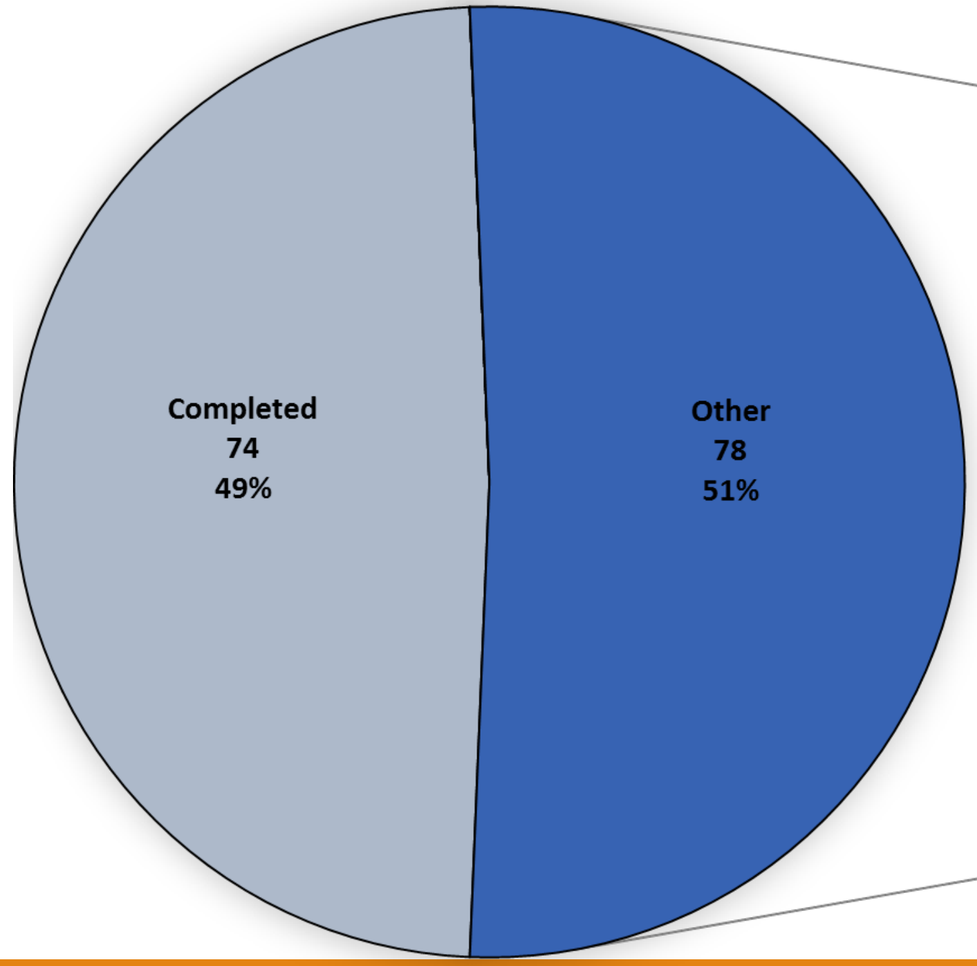
FUND	# PROJECTS	2019 BUDGET	2019 EXPENDITURES	# COMPLETE
Fund 301 - Public Improvement	10	$ 29,845,755	$ 22,901,844	3
Fund 304 - Food Tax	28	$ 5,943,450	$ 4,596,425	18
Fund 312 - Transportation Development	11	$ 13,077,563	$ 8,577,472	2
Fund 316 - Trails Development	3	$ 1,024,417	$ 50,169	2
Fund 318 - Quality of Life	15	$ 14,040,969	$ 6,912,472	5
Fund 320 - FASTER	4	$ 1,331,690	$ 1,065,634	2
Fund 321 - Keep Greeley Moving	9	$ 13,341,606	$ 12,886,138	8
Fund 322 - 2016 City Center	1	$ 7,000,800	$ 6,289,368	0
Fund 402 - Sewer Construction	6	$ 7,282,689	$ 4,178,951	4
Fund 403 - Sewer Capital Replacement	12	$ 12,851,180	$ 8,374,083	7
Fund 405 - Water Construction	7	$ 66,046,618	$ 9,886,329	3
Fund 406 - Water Capital Replacement	28	$ 37,125,170	$ 28,774,560	17
Fund 407 - Water Rights Acquisition	5	$ 12,251,158	$ 3,665,561	0
Fund 412 - Stormwater Construction	6	$ 8,172,119	$ 7,309,660	2
Fund 413 - Stormwater Replacement	7	$ 1,593,221	$ 931,179	1
Grand Total	152	$ 230,928,405	$ 126,399,846	74

PROJECT STATUS



PROJECT STATUS

152 Projects in 2019



Other Includes:

Multi Year	77
On Hold	1

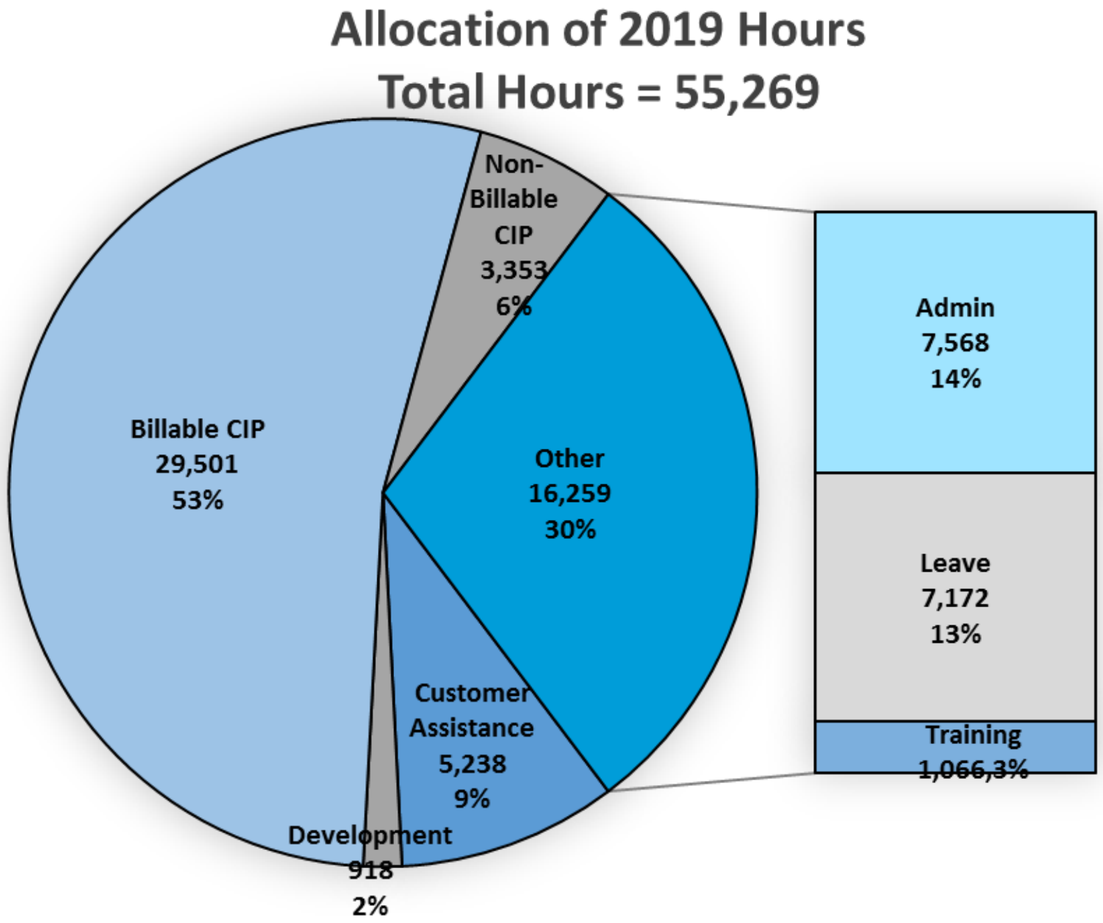
PROJECTS On Hold

Fund	Project Title	Budget
Fund318 - Quality of Life	Northridge Estates Neighborhood Park and Trailhead	1,475,000
Grand Total		**$1,475,000**

PERFORMANCE MEASURES

MEASURE	ACTUAL	TARGET
1. Billable CIP Time	53%	55% of staff time is spent on billable CIP projects
2. Budget	97% ✓	90% of CIP projects that are completed within adopted budget.
3. Schedule	91% ✓	80% of CIP projects constructed within construction contract schedule.
4. Change Orders	91% ✓	90% of CIP projects with cumulative change orders less than 10% of original contract

PERFORMANCE MEASURES



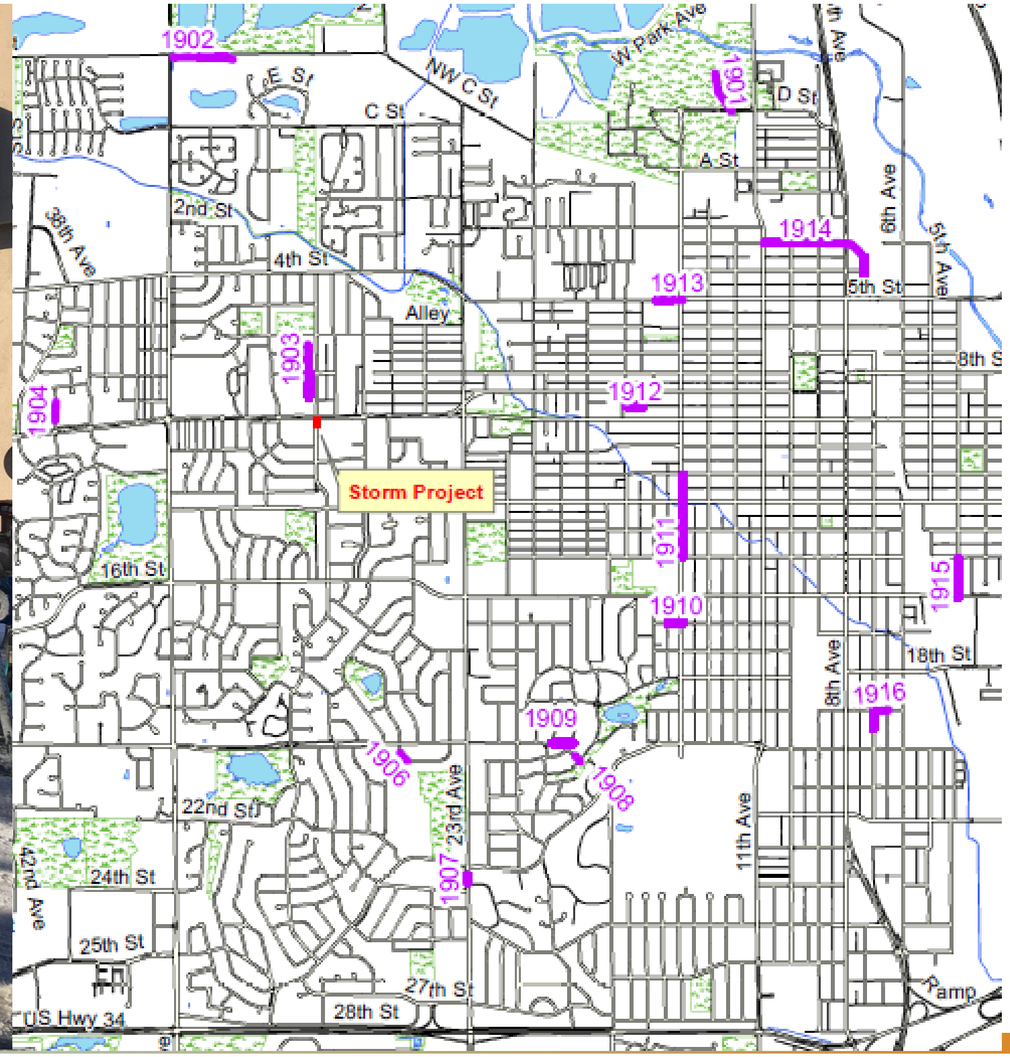
BILLABLE CIP TIME

Target: 55%

Actual: 53%

- 15% on non-billable CIP and citizen requests

TRENCHLESS MAIN & COLLECTOR REHABILITATION



2019 Budget: $650,518

POUDRE RIVER MONFORT SEWER REPAIR

Construction of Sewer Protection

Completed Project

2019 Budget: $298,000

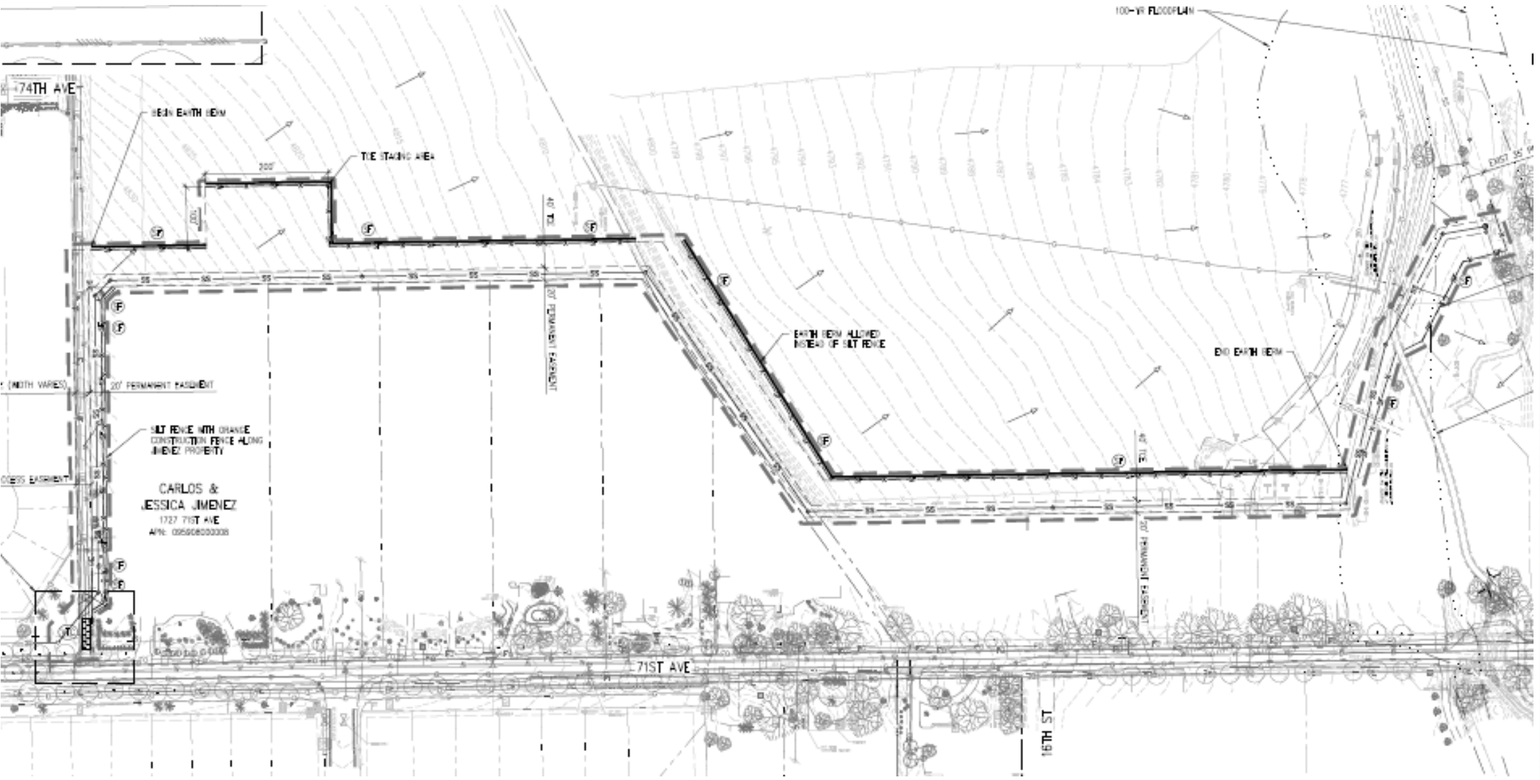
NORTH GREELEY SEWER IIA

Boring Pit UPRR

Boring Shaft UPRR Guided Pipe Hammer

2019 Budget: $2,558,253

ASHCROFT DRAW SEWER PHASE II



2019 Budget:$1,959,913

ASHCROFT LIFT STATION

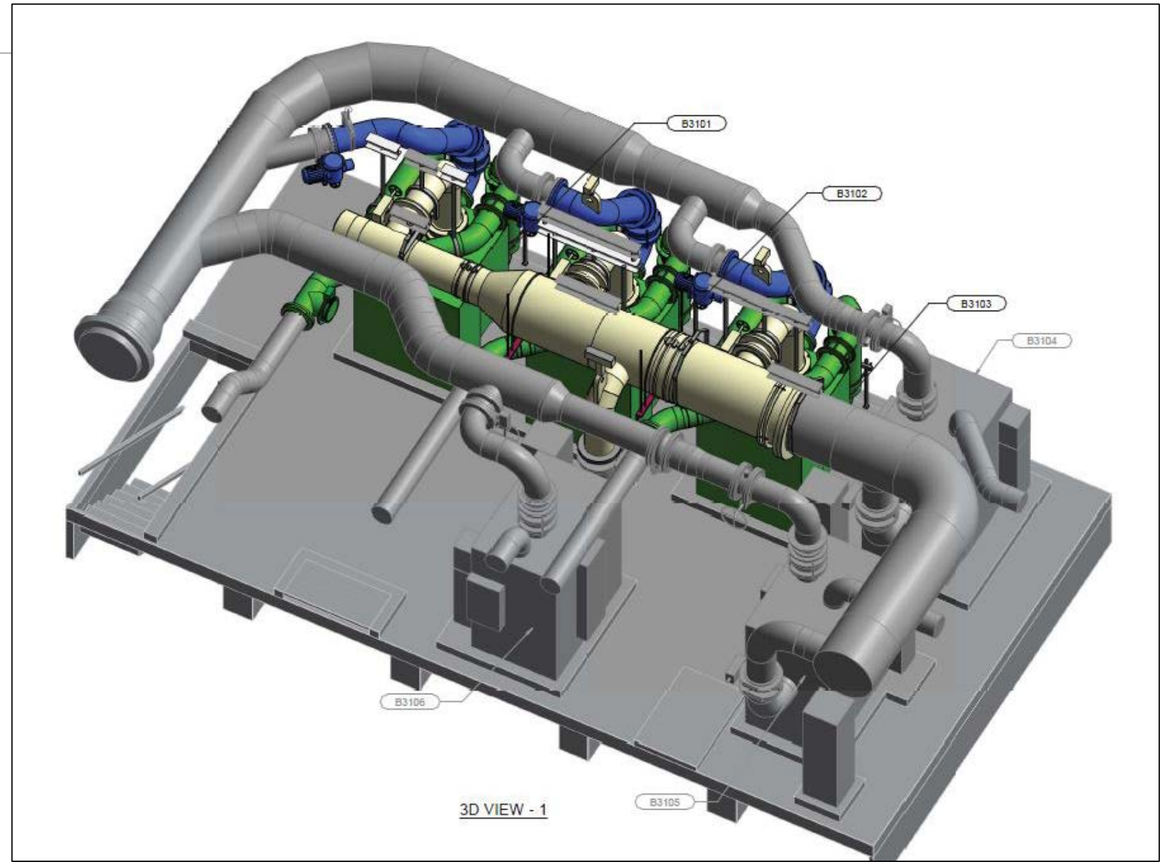
Subsurface Utility Investigation

Proposed Location

2019 Budget: $770,000

WPCF BLOWER REPLACEMENT PROJECT

New Sulzer Blower Units

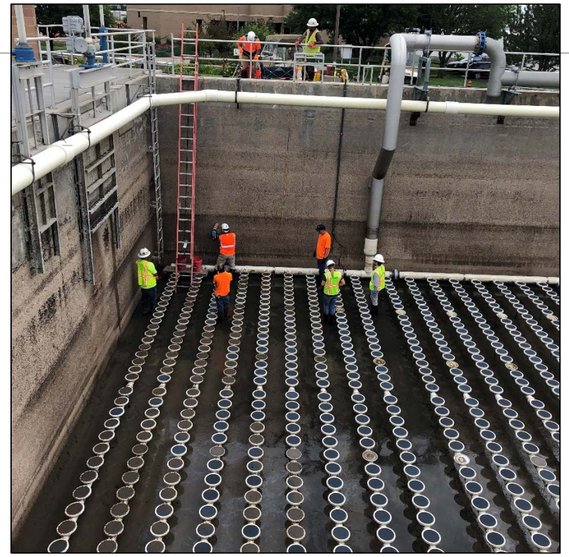


3D Model of Blower Room

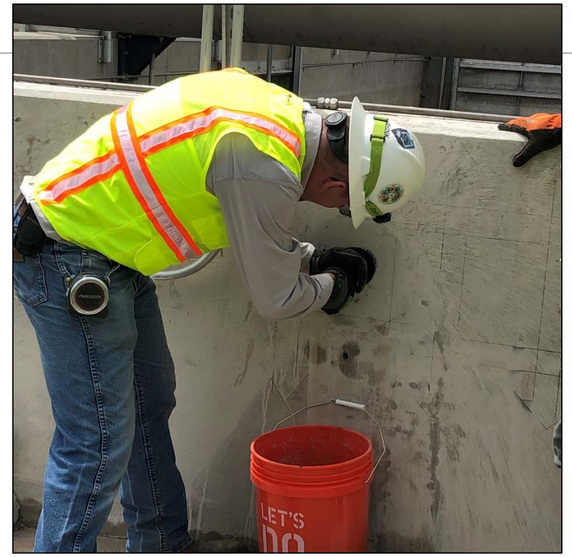
2019 Budget: $1,618,791

NITRIFICATION PROJECT – PHASE 2

Evaluation of Aeration Utilization



Efficiency of Aeration Diffusers

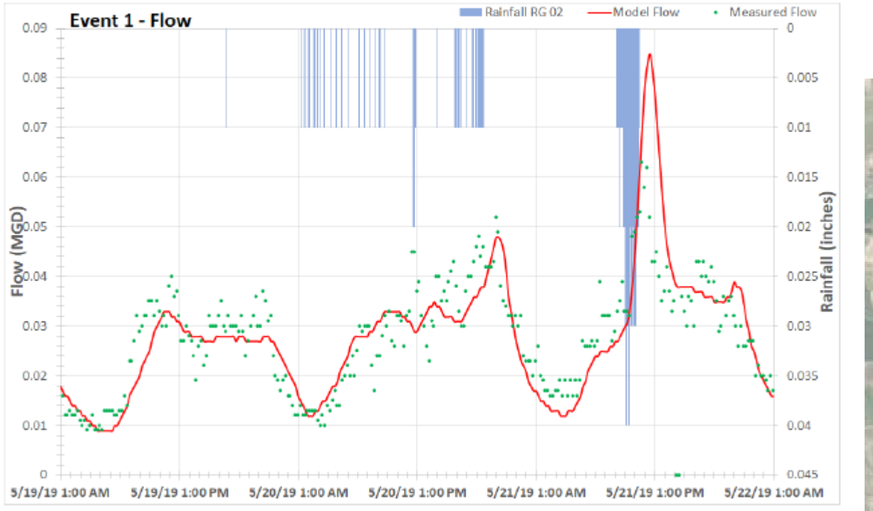


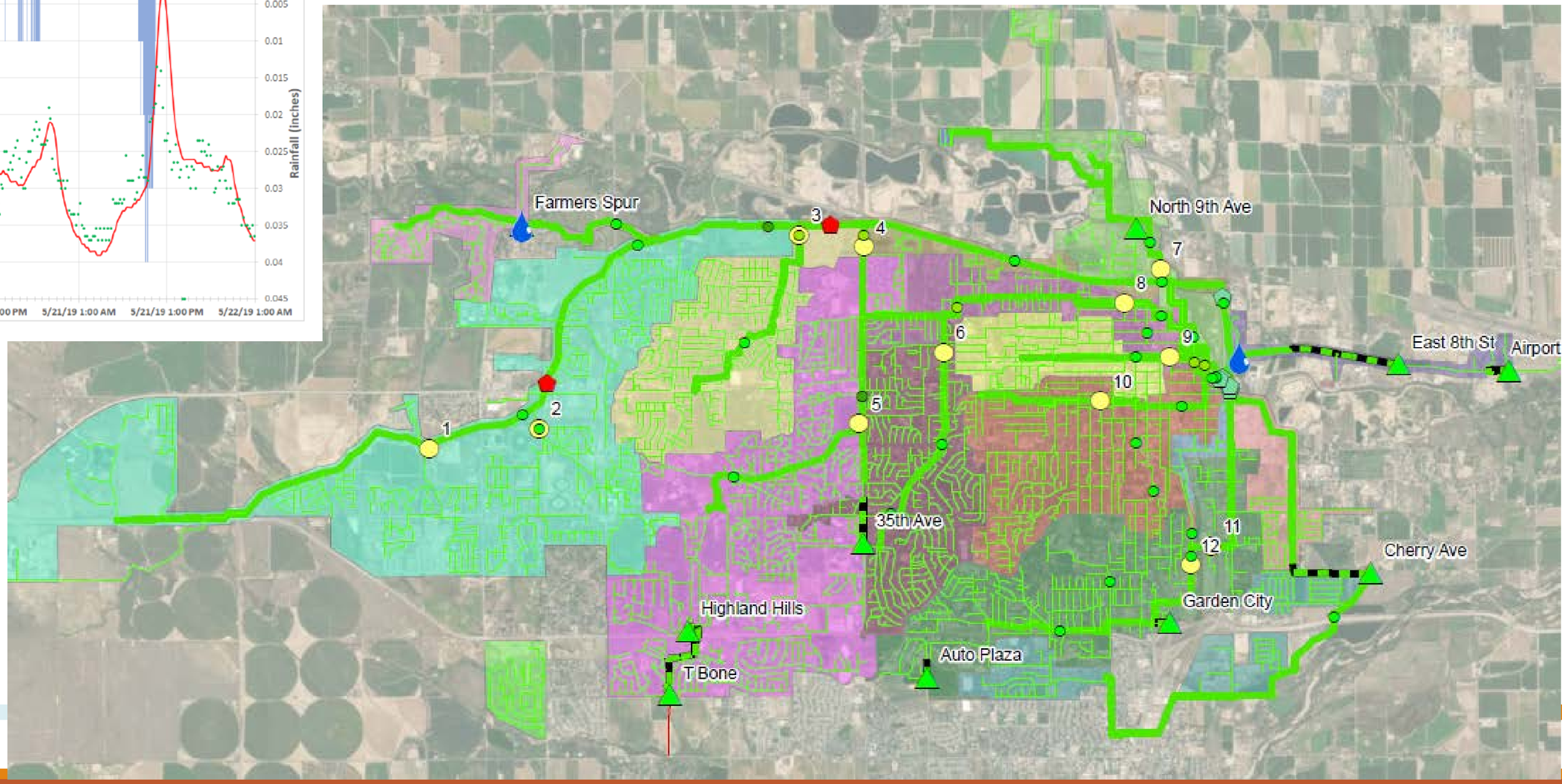
Coring Concrete to Determine Structural Strength

On Going Electrical and SCADA System Replacement

2019 Budget: $78,453

SANITARY SEWER MASTER PLAN UPDATE





2019 Budget: $7,091

7th AVE IMPROVEMENTS

New sewer line manhole installation

New water main installation

2019 Budget: $1,374,337

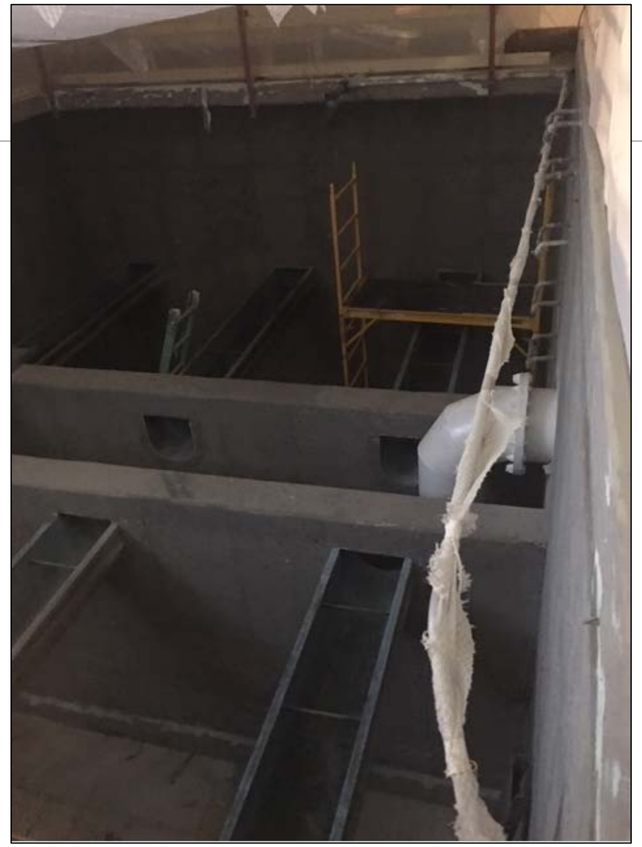
DISINFECTION OUTREACH and VERIFICATION

2019 Budget: $2,696,554

DISINFECTION OUTREACH and VERIFICATION

2019 Budget: $2,696,554

BOYD FILTER MEDIA REPLACEMENT



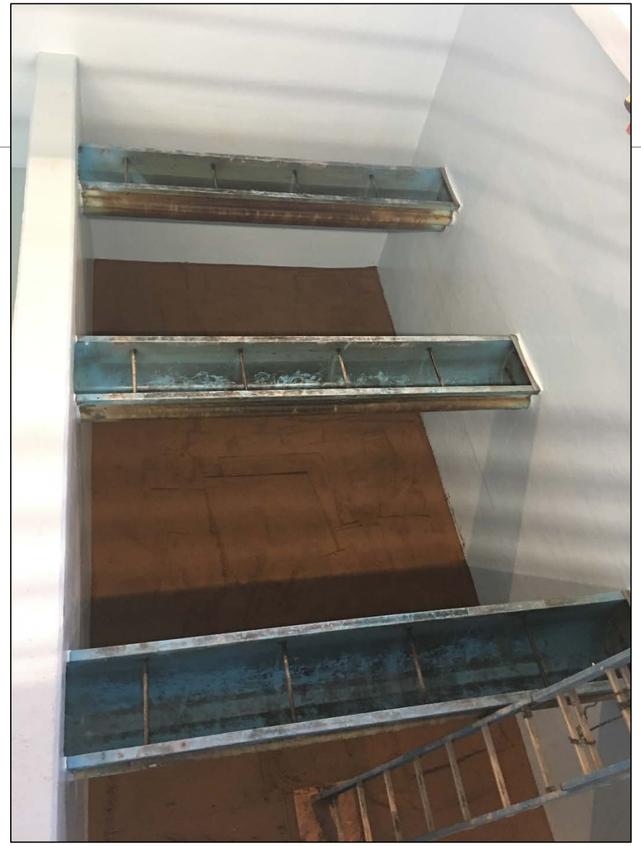
Filter Sand Blasted

Anthracite & Sand Media – 17,000 Cubic Feet or 724 tons of media

2019 Budget: $1,524,000

BOYD FILTER MEDIA REPLACEMENT

Raw Bags of Media

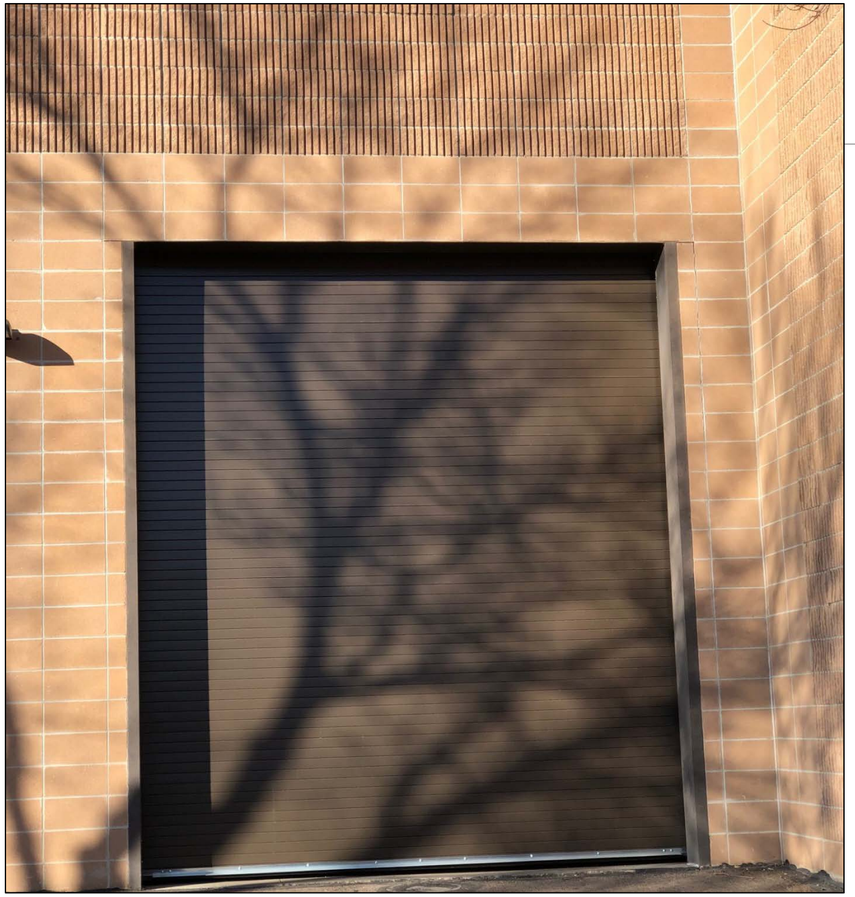


Finished Sand Installation

Installation of Anthracite

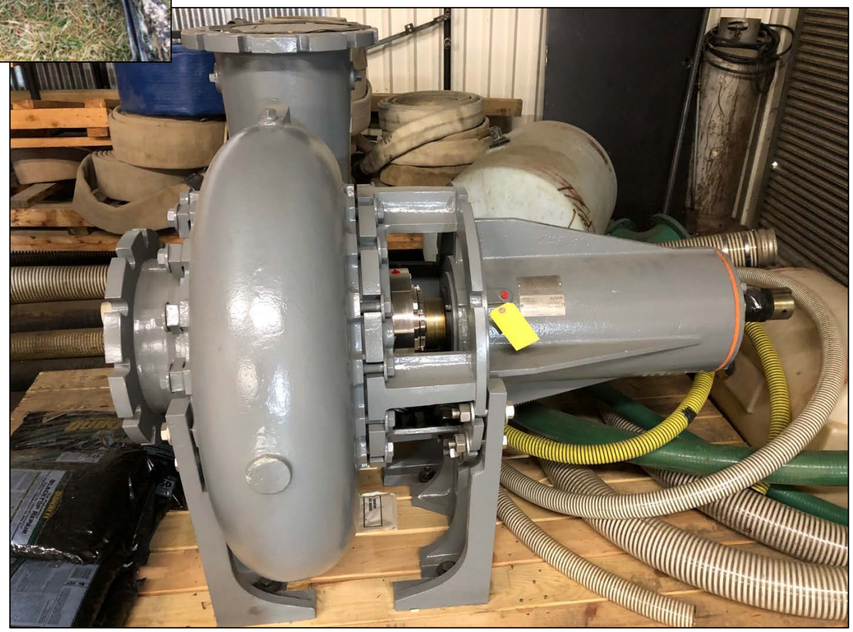
2019 Budget: $1,524,000

WTRF GENERAL REHABILITATION



New Rolling Door

New UV Gate



Replace the RAW Pump

2019 Budget: $984,432

BELLVUE GENERAL REHABILITATION

Building Roof Replacement

Chemical Building Roof Replacement

New House Water Pump

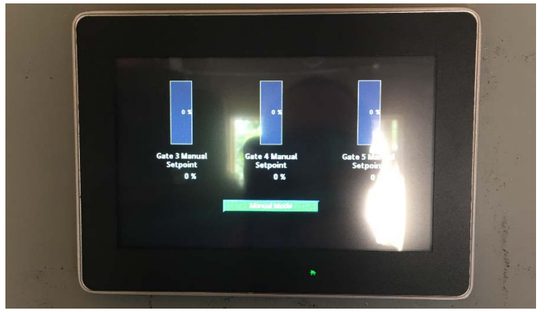
2019 Budget: $883,561

BOYD GENERAL REHABILITATION

Building Roof Replacement

Filter Building Roof Replacement

New Fuel Station



New SCADA Controls at Lake Loveland

2019 Budget: $955,259

MILTON SEAMAN HYDRAULIC LINES

Shotcrete Protection of Hydraulic Lines

Existing Gates at Bottom of Reservoir

2019 Budget: $415,000

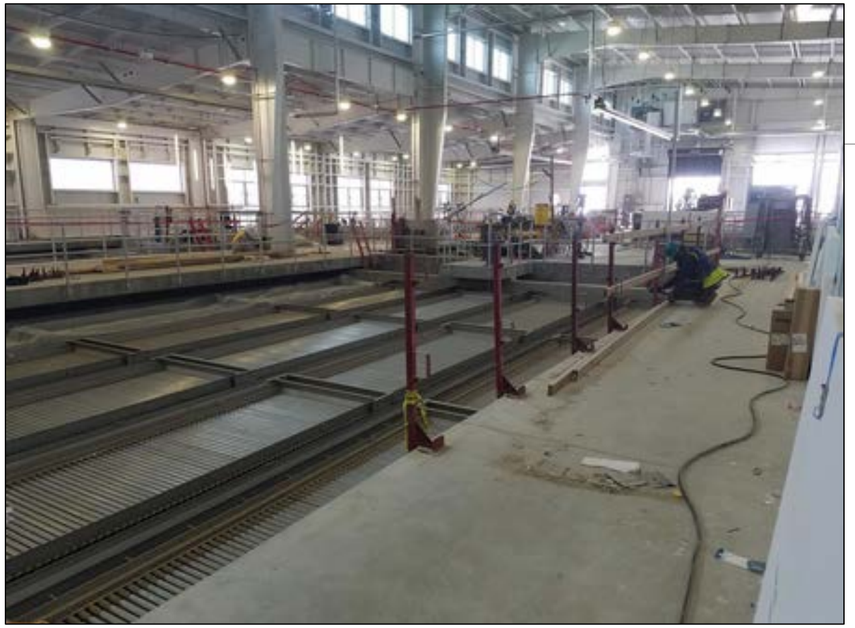
BELLVUE NEEDS ASSESSMENT PROJECTS

TB1 Building Currently

WTP New Design

2017-2020 Budget $25,457,710

BELLVUE NEEDS ASSESSMENT PROJECTS



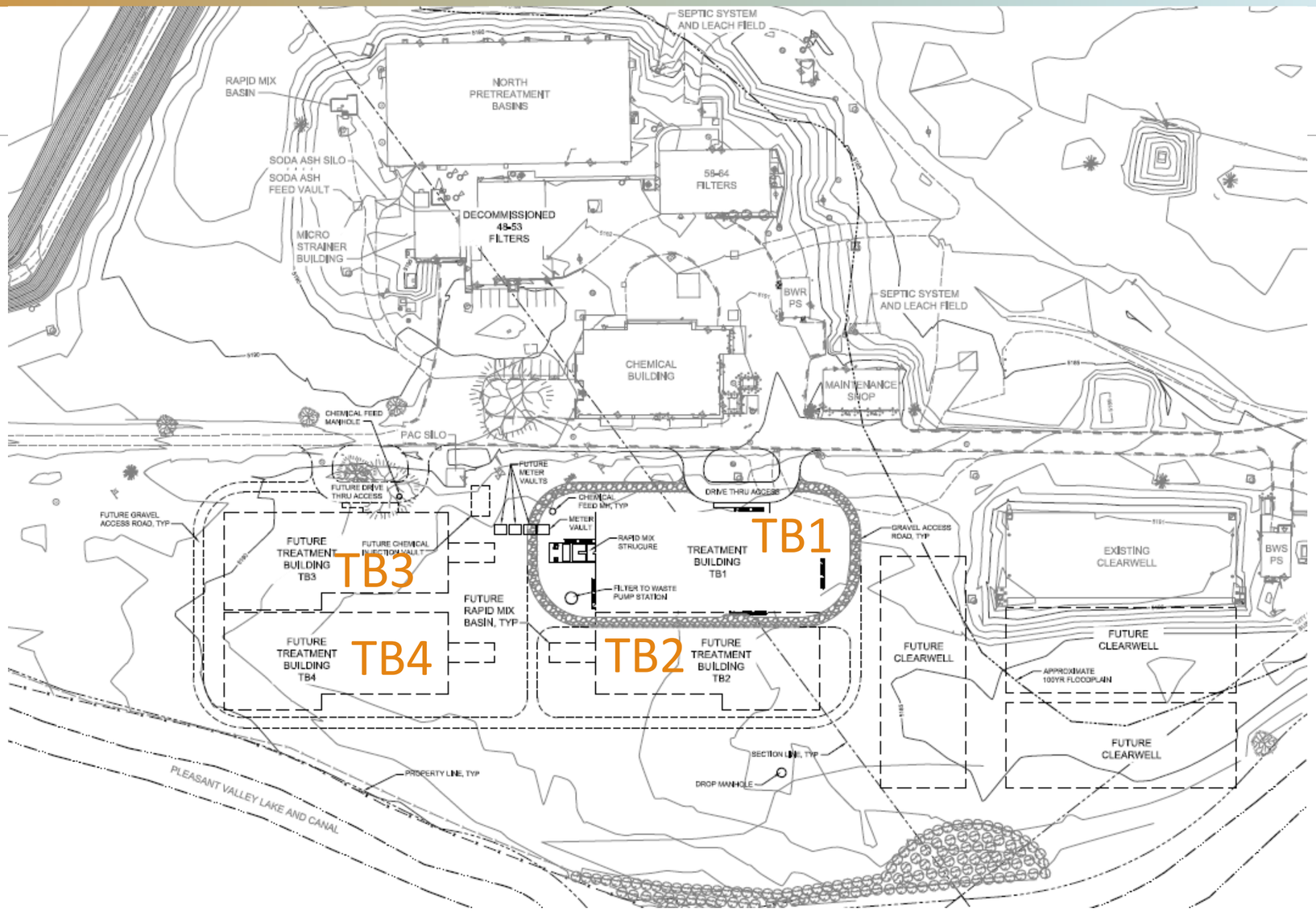
Platte Settlers

Piping Gallery

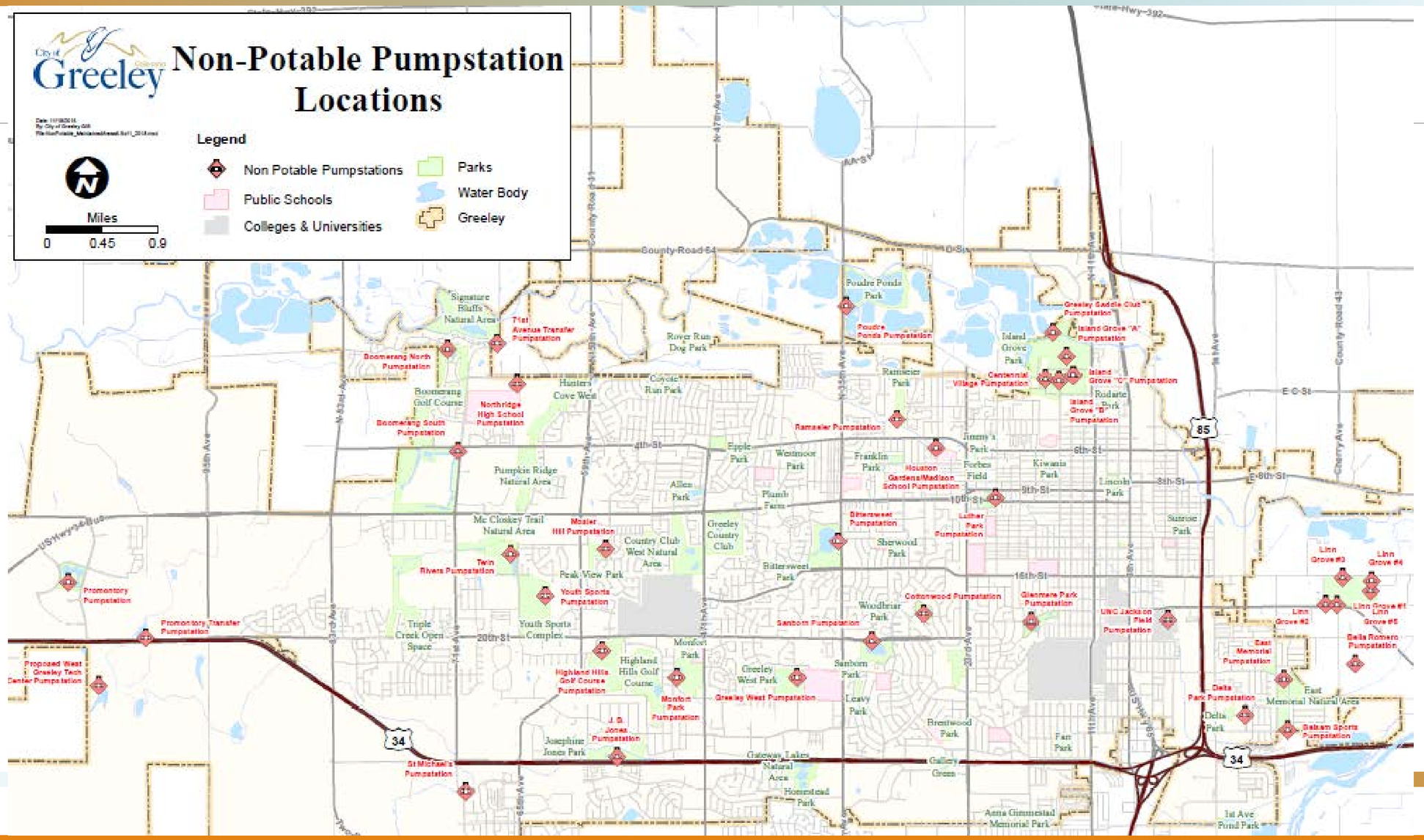
New Filters

2017-2020 Budget $25,457,710

BELLVUE NEEDS ASSESSMENT PROJECTS

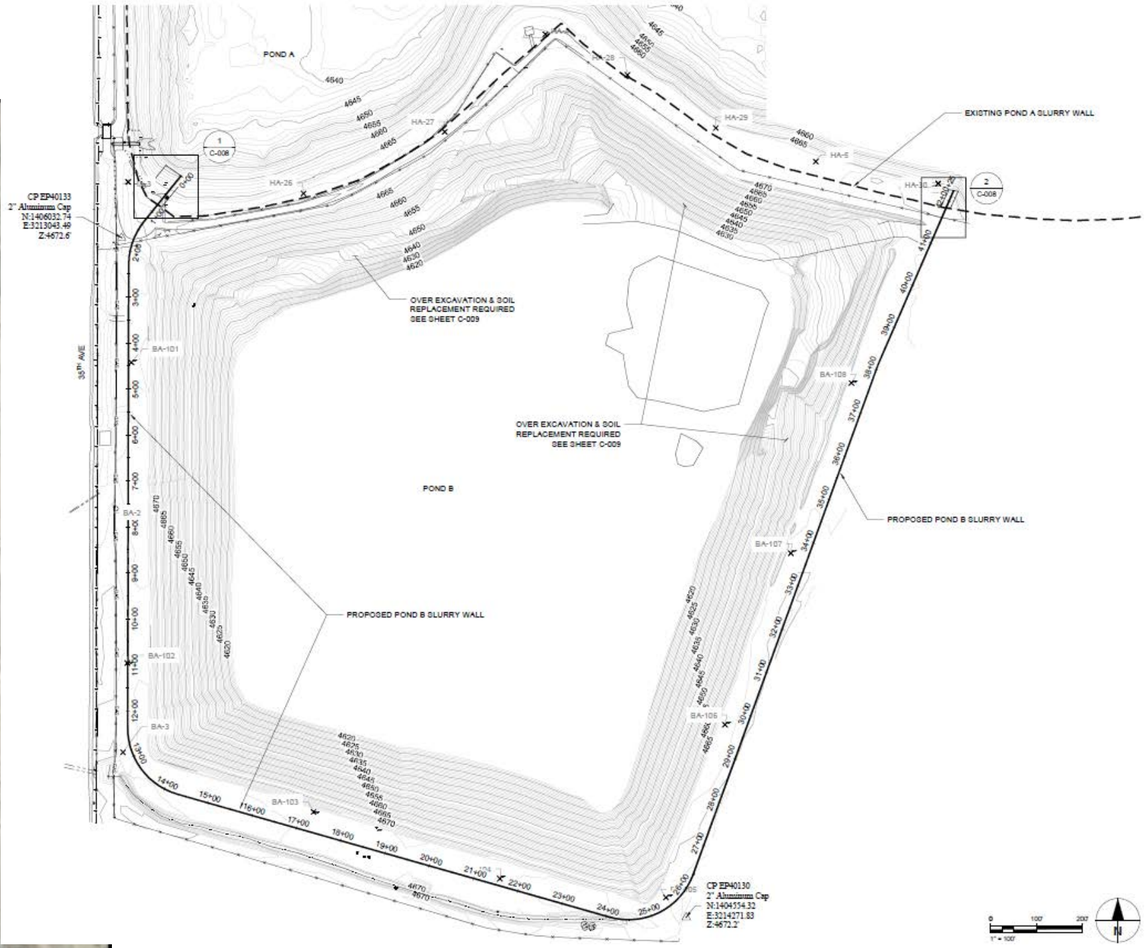


NON-POTABLE MASTER PLAN



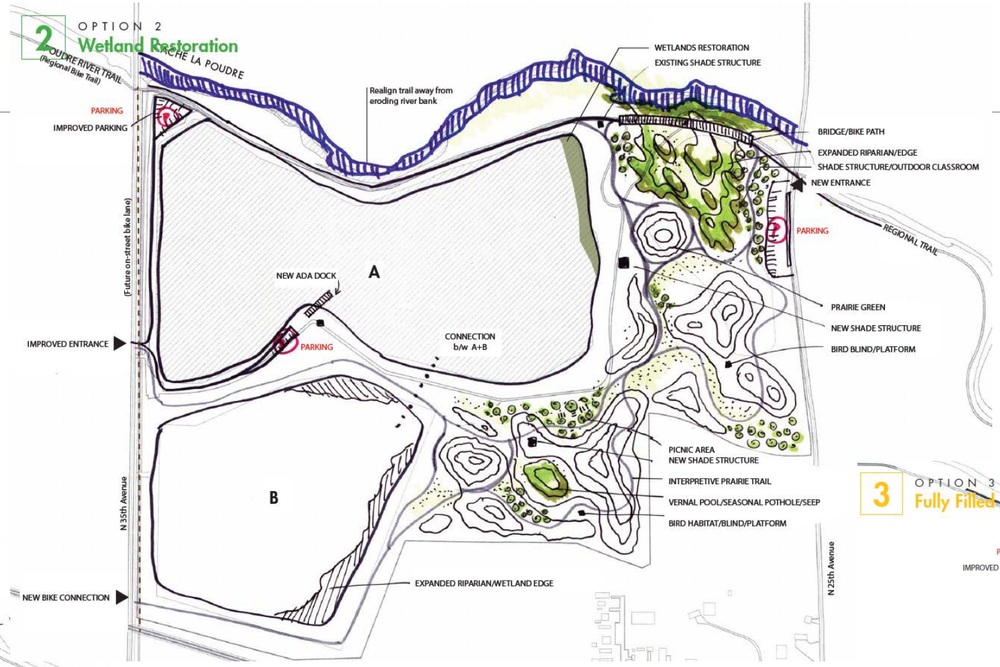
2019 Budget: $550,000

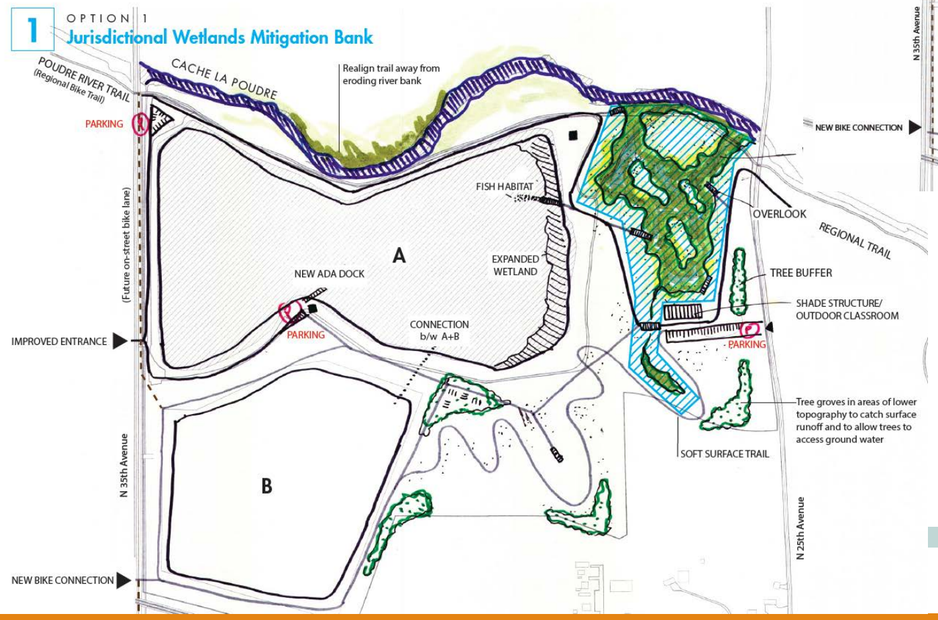
POUDRE PONDS SLURRY WALL & MASTER PLAN

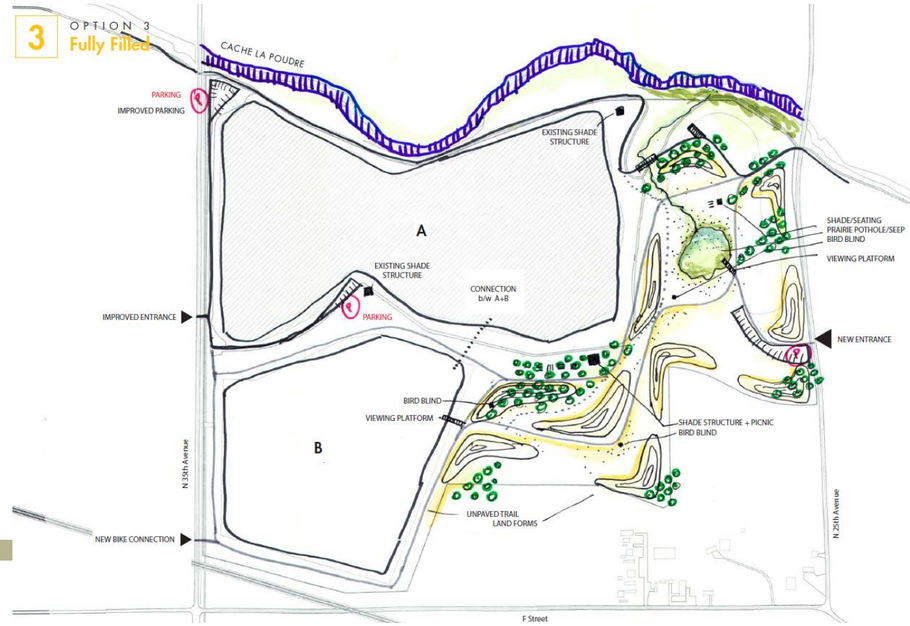


2019 Budget: 705,000

POUDRE PONDS SLURRY WALL & MASTER PLAN







2019 Budget: $705,000

MOSIER TRANSMISSION PIPELINE REHABILITATION

Lining a Pipe Segment

New Pipeline Segment

PVC Pipe Installation

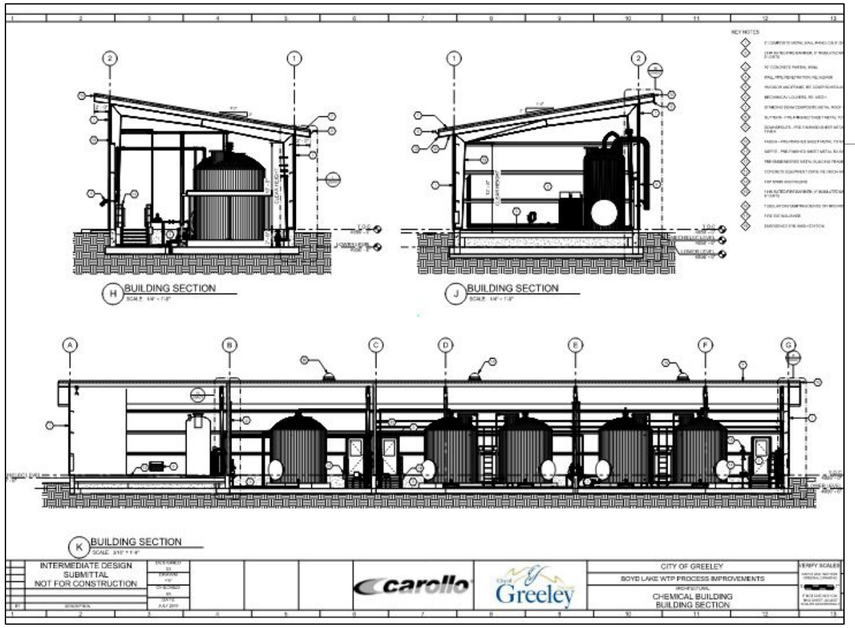
2019 Budget: $2,279,000

BOYD WTP PROCESS IMPROVEMENTS

New Oxygen Lake Aeration System

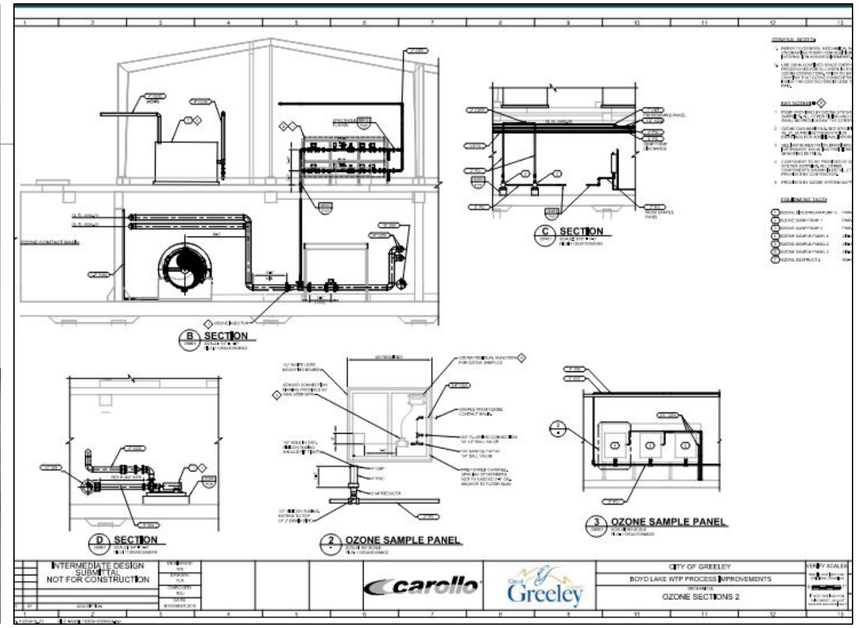
2019 Budget: $4,146,200

BOYD WTP PROCESS IMPROVEMENTS



New Chemical Building

Proposed New Ozone Generators



Design of Ozone System

2019 Budget: $4,146,200

THANK YOU!

Any Questions?

WATER & SEWER BOARD AGENDA MARCH 18, 2020

ENCLOSURE ___X___ NO ENCLOSURE ____

ITEM NUMBER: 6

TITLE: FARM AND WATER LEASE REPORT

RECOMMENDATION: INFORMATIONAL ONLY

ADDITIONAL INFORMATION:

Staff will present a background on current 'Water Only' and 'Water and Farm' leases as well as the terms staff intends to include for future leases to maintain consistency between leases.

CITY OF GREELEY AGRICULTRUAL LEASE PROGRAM

POLICIES

The City of Greeley manages an agricultural lease program that includes Water Leases and Water and Farm Leases in the Greeley-Loveland Irrigation Company, Water Supply and Storage Company, New Cache Irrigation Company and Cache la Poudre Reservoir Company, Windsor Reservoir and Canal Company, and Larimer and Weld Irrigation Company and Larimer and Weld Reservoir Company. A Water Lease involves leasing the water rights associated with historically irrigated lands for continued use of irrigation, often to the seller of the water rights. A Water and Farm lease includes a lease of both water and historically irrigated land for continued use of irrigation. Leases are frequently entered into after the acquisition of the water rights in order to support regional agriculture and to maintain beneficial water use on the property necessary for a future change case. In order to provide consistency in developing lease agreements, this policy outlines the general terms and conditions leases should contain. Leases negotiated as part of an acquisition of water rights are recommended but not required to follow these policies. All Water Leases and Water and Farm Leases must be approved by the City of Greeley Water and Sewer Board.

Water Leases

- Term:
  - The fixed term of a Water Leases will be no more than ten (10) years; and the number of annual renewals will not exceed five (5).
- Termination:
  - During the fixed term:
    - Greeley may terminate a Water Lease at any time for cause (such as breach of terms) and prior to any irrigation season (on or before November 1st of the proceeding calendar year) if Greeley determines, in its sole discretion, that the leased water is needed for municipal purposes.
    - Lessee may terminate a Water Lease prior to the irrigation season (on or before November 1st prior to the proceeding irrigation calendar year) upon two years advanced written notice.
  - During the Annual Renewal term:
    - Greeley may terminate a Water Lease at any time for cause and either party may terminate the Water Lease prior to any irrigation season (on or before November 1st of the proceeding calendar year).
- Payments:

- Annual payment for a Water Lease will equal annual ditch assessments plus an administration fee that is 10% of the total assessment cost up to $500.

Water and Farm Leases

- Term:
  - The fixed term of a Water and Farm Leases will be no more than 5 years; and the number of annually renewals will not exceed 5.
  - After the initial term, Greeley and the Lessee may renew the Water and Farm Lease annually for up to an additional five (5) additional years under mutual terms.
- Termination:
  - During the fixed term:
    - Greeley may terminate a Water Lease at any time for cause and prior to any irrigation season (on or before November 1st of the proceeding calendar year) if the leased water by the City to address mandatory water use restrictions in response to drought conditions or infrastructure failure or other circumstances limiting the City's ability to satisfy its customers potable water needs; or if Greeley sells all or part of the leased property.
    - Lessee may terminate a Water Lease prior to the irrigation season (on or before November 1st prior to the proceeding irrigation calendar year) upon two years advanced written notice.
  - During the Annual Renewal term:
    - Greeley may terminate a Water Lease at any time for cause and either party may terminate the Water Lease prior to any irrigation season (on or before November 1st of the proceeding calendar year).
  - (on
- Payments:
  - Bi-annual payments equal to $150 per gross acre plus an annual 3% increase per year during the lease term.
  - 50% of the payment is due by March 31st and the remaining 50% is due December 15th
  - Annual Ditch Assessments and administration fees are included in the price per acre

This document is intended to reflect current Greeley W&S Department policy, and may be subject to change.

Agricultural Lease Policy

March 18, 2020 W&S Board

Jennifer Petrzelka

Water Resources Operations Manager

City of Greeley Colorado

Importance of Agricultural Leases

- Support Regional Agriculture
- Maintain and build historical use on the land necessary for a future change case
- Current supplies exceed current demand

Summary of Leases

Ditch System	Changed	Unchanged
GLIC	23	0
WSSC	7	4
L&W/New Cache	0	7
Total	**30**	**11**

Water Only Leases

City of Greeley Colorado

Background

- In 2017, 18 GLIC and 7 WSSC leases expired
- New lease form developed that included:
  - 10 years + 1 additional 5 year term
  - Historical Use Affidavits (for unchanged shares)
  - Termination by Greeley if breach of terms or by either party for any reason prior to any irrigation season if noticed by February 1
- Some current leases have different term lengths as part of negotiations or if a lease that was entered into prior to the 2017 change has not expired yet
- Desire to be consistent moving forward

Current ‘Water Only’ Leases

- 41 total leases in WSSC, GLIC, New Cache and L&W
- Term
  - Varies between 10-16 years
  - 10 of the 41 the leases have annual renewals

Year of expiration	No. of leases
2021	1
2023	1
2025	4
2026	3
2027	18
2028	8
2030	1
2031	1
2032	1

Current ‘Water Only’ Leases

- Termination Provisions
  - *Fixed primary* term during which the lease may be terminated only for cause; thereafter lease may be annually renewed for a limited number of years (some leases are unlimited) but may be terminated for cause at any time or annually by either party at the end of the irrigation season.
  - One year lease with *fixed number of annual renewals* during which the lease may be terminated for cause at any time or terminated annually by either party at the end of the irrigation season.
- Annual cost of assessments plus $150 administration fee

Recommended 'Water Only' Lease Terms

- Term
  - Fixed term not to exceed 10 years with fixed number of annual renewals not to exceed 5
- Termination Provisions
  - During Initial Term: Greeley may terminate at anytime for cause and may terminate prior to irrigation season if needed for any municipal purposes. Lessee may terminate with 2 years advance notice.

    During Annual Renewal Period: Greeley may terminate at any time for cause and may terminate at end of irrigation season for any reason.

Recommended 'Water Only' Lease Terms

- Payments
  - Annual ditch assessments plus an administration fee that is 10% of the total assessment cost up to $500
- Unchanged vs. changed shares
  - Unchanged shares will require an affidavit declaring irrigation use
  - If water is needed for municipal use, leases for changed shares will be terminated first since this water has the legal ability to be used in Greeley's potable system

Water and Farm Leases

City of Greeley Colorado

Current ‘Water and Farm’ Leases

- 3 leases in the WSSC system, 2 pending in L&W
- Term
  - One lease with 10 year + subsequent 5 years (expiring 2028)
  - Two leases with annual renewals (expiring 2025)
- Termination Provisions
  - Two can be terminated without cause by either party
  - One can only be terminated if there is a breach of terms
- Payments
  - One lease charges $85/acre + CPI increase
  - Two leases charge $85/acre, no CPI increase

Recommended ‘Water and Farm’ Lease Terms

- Term
  - Fixed term not to exceed 5 years with fixed number of annual renewals not to exceed 5

Recommended 'Water and Farm' Lease Terms

- Termination Provisions
  - During Fixed Term:
    - Greeley may terminate at anytime with cause
    - Greeley may terminate prior to any irrigation season if
      - Water is needed to address critical municipal need (drought, infrastructure failure, etc.)
      - Greeley sells all or part of the leased property
      - Required as part of a term or condition in a water court decree
    - Lessee may terminate with 2 years advance notice

  During Annual Renewal Period: Greeley may terminate at any time for cause and may terminate at end of irrigation season for any reason.

Recommended ‘Water and Farm’ Lease Terms

- Payments
  - $150 per gross acre
  - 3% increase per year during the lease term
  - Bi-annual payments; 50% of the payment is due by March 31st and remaining 50% is due December 15th
  - Annual Ditch Assessments and administration fees are included in $/acre
- Unchanged vs. changed shares
  - Leases for unchanged shares will require an affidavit declaring irrigation use

Recommendation

- Staff requests input on the Agricultural Lease Policy
  - Maintain consistency moving forward.
  - Exceptions include negotiations as part of a water acquisition purchase
  - Policy will be updated periodically

- Staff will incorporate feedback and requests to bring Policy back to W&S Board for approval in April
  - Request that Board delegate authority to W&S Director to approve leases that conform to Policy (Mayor signature still required)

WATER & SEWER BOARD AGENDA MARCH 18, 2020

ENCLOSURE ___X___ NO ENCLOSURE ____

ITEM NUMBER: 7

TITLE: l.EGAL REPORT

RECOMMENDATION:

ADDITIONAL INFORMATION:

Legal Report
Greeley Water and Sewer Board Meeting
March 18, 2020

I. Statements of Opposition: Based on review of the January, 2020 Water Court Resume, staff and water counsel recommend that the Board file statements of opposition in the following cases:

a. Case Number: **20CW3011** Application of Town of Johnstown for a change of water rights for 346.75 shares of the Consolidated Home Supply Ditch and Reservoir Company. The applicant is seeking to change the use of these shares for municipal uses. Applicant proposes to change the water rights based on a prior ditch-wide analysis. We recommend that Greeley file a statement of opposition to ensure that the applicable legal standards have been satisfied and to protect against any injury to Greeley's water rights on the Big Thompson River.
b. Case Number: **20CW3000** Application of Holcim (US) Inc. for approval of a plan for augmentation. This is an application for an augmentation plan to replace depletions to the Cache la Poudre River caused by several quarry ponds. The replacement supply comes from a lease from the City of Greeley of water supplies in storage at Milton Seaman Reservoir that are decreed for augmentation. We recommend that Greeley file a statement of opposition to ensure that all the terms of the lease are complied with and that out of priority depletions are properly tracked in time, location, and amount.

II. Proposed Motion Language: "I move that the Board authorize the filing of statements of opposition in Case Nos. 20CW3011 and 20CW3000, and for staff and legal counsel to seek resolution of issues raised by these cases consistent with Water and Sewer Board Resolution No. 3-15."

WATER & SEWER BOARD AGENDA MARCH 18, 2020

ENCLOSURE _____ NO ENCLOSURE __X___

ITEM NUMBER: 8

TITLE: EXECUTIVE SESSION

RECOMMENDATION: INFORMATIONAL ONLY

ADDITIONAL INFORMATION:

- Matters Related to Potential Acquisition of Water Storage
- Water Market Update

WATER & SEWER BOARD AGENDA MARCH 18, 2020

ENCLOSURE ___X___ NO ENCLOSURE ____

ITEM NUMBER: 9

TITLE: DIRECTOR'S REPORT

RECOMMENDATION: INFORMATIONAL ONLY

ADDITIONAL INFORMATION:

- Summer Tour Dates:
  Board/Council Options - July 17th or 31st
  Citizen Tour – August 12th or August 21st
- Non-Potable Conversion Project
- Life After Lawn
- Water Smart Grant
- COVID 19 Update

BUREAU OF RECLAMATION

FY 2020 WaterSMART Grants: Water and Energy Efficiency Grants

California

Bard Water District, Construction of Five Gates Conveyance Improvements

Reclamation Funding: $300,000 **Total Project Cost: $642,294**

The Bard Water District, located in southern California near the Arizona border, along with the Quechan Indian Tribe, will construct conveyance improvements for the Five Gates structure, which is a series of gated culverts that act as a major chokepoint in the District's delivery system. The District will replace the existing Five Gates with new more advanced metal gates and 560 feet of pipeline to increase water use efficiency and reliability through optimal flow rates, reduced leakage, and reduced operational losses. The project is a top priority for the District and the Tribe and is expected to result in annual water savings of 1,452 acre-feet, which will remain in the Lower Colorado River System.

Beaumont-Cherry Valley Water District, Beaumont-Cherry Valley Water District Advanced Metering Infrastructure Project

Reclamation Funding: $1,500,000 **Total Project Cost: $5,704,270**

The Beaumont-Cherry Valley Water District, located in Riverside County in southern California, will install new meters and upgrade previously installed meters so that all 19,154 primarily residential water meters in the District have advanced metering infrastructure (AMI) capable technology. The District will also install repeater equipment to improve the District's leak detection program. The project is expected to result in annual water savings of 927 acre-feet by recovering losses currently caused by inaccurate metering and leaks. The area is vulnerable to drought conditions and is projected to have increasing demand due to population growth. The project will reduce the District's dependence on imported water and will offset groundwater pumping from the adjudicated Beaumont Basin.

Firebaugh Canal Water District, 2nd Lift Canal Lining Project

Reclamation Funding: $1,000,000 **Total Project Cost: $2,303,300**

The Firebaugh Canal Water District located near Mendota, California, will line 2.5 miles of the unlined 2nd Lift Canal with concrete. The District will also replace existing turnout structures with pre-cast concrete structures that can accommodate high-efficiency irrigation system upgrades. The District is located within the Grassland Drainage Area, which is underlain with a shallow, saline aquifer. As subsurface drain water generated within the region is discharged to the San Joaquin River, minerals enter the river and degrade water quality. Water that is currently lost to seepage from the 2nd Lift Canal becomes unusable when mixed with the saline sink. The project is expected to

result in annual water savings of 320 acre-feet by reducing seepage, which supports the Westside Regional Drainage Plan, a collaborative effort by local water districts to curtail discharge to the river. During normal water years, conserved water will be marketed to adjacent water districts to supplement their water supply and to offset reliance on local groundwater, which is often poor quality and contributes to subsidence. During critical years when the District's supply is curtailed, the water conserved will allow the District to make up for the reduced water allocation.

City of Needles, Needles Advanced Meter Infrastructure Project with Automated Meter Reading

Reclamation Funding: $213,826 **Total Project Cost: $427,652**

The City of Needles, located in San Bernardino County, California will install 1,944 meters with advanced metering infrastructure (AMI). The City currently relies on manual readings on a monthly basis, making it difficult to detect leaks. The project is expected to result in annual water savings of 160 acre-feet by reducing delays in leak identification and unusual consumption patterns. The water conserved will be used to meet increasing demand due to population growth, which will reduce the need for additional water rights or additional purchased water.

North Kern Water Storage District, Calloway Canal Lining and Water Delivery Improvements

Reclamation Funding: $1,500,000 **Total Project Cost: $3,100,392**

The North Kern Water Storage District, located in Bakersfield, California, will line 3,841 feet of an unlined portion of the Calloway Canal with 4-inch thick unreinforced concrete. The canal lining is expected to result in annual water savings of 1,349 acre-feet, which is currently seeping into the groundwater basin that has poor water quality. Additionally, the District will install flow meters, water level sensors, and telemetry at seven of the District's production wells. These additional improvements will provide real-time data and allow the District to better control well operations, resulting in an expected annual water savings of 289 acre-feet from reduced pumping. The groundwater basin in the San Joaquin Valley portion of Kern County is critically stressed, especially when pumping increases during dry years. Overall, the project is expected to result in 1,638 acre-feet of water savings, which will offset groundwater pumping.

City of Oceanside, City of Oceanside Advanced Metering Infrastructure Project (Phase II)

Reclamation Funding: $1,500,000 **Total Project Cost: $4,497,429**

The City of Oceanside, located in southern California, will upgrade approximately 11,429 existing primarily residential water meters to advanced metering infrastructure (AMI) smart meters. The project is expected to result in annual water savings of 784 acre-feet by providing real-time information to customers about leaks, breaks, and other unusual consumption patterns. The water savings from this project will have broad benefits in an area that has historically experienced water shortages and drought, relies on purchased water, and is projecting population and water demand increases. Currently, the City purchases approximately 90% of its potable water supply from the San Diego County Water Authority. The water conserved through this AMI project will help the City to use existing supplies more efficiently to meet demands.

Rancho California Water District, Compound Meter Upgrade Project
Reclamation Funding: $454,784 **Total Project Cost: $1,008,242**

The Rancho California Water District, located in Riverside County, California, will replace 134 existing standard compound meters with upgraded compound meters that can connect to the District's existing advance metering infrastructure system. The new meters will provide more accurate flow measurement and real-time water consumption data to customers. The project is expected to result in annual water savings of 271 acre-feet that is currently lost to leaks and customer overuse. The District and its water suppliers are susceptible to drought and face increased demand due to population growth. The water conserved will increase local water reliability and reduce imported water demand.

City of Santa Ana, Santa Ana Automated Metering Infrastructure Installation Project
Reclamation Funding: $1,200,000 **Total Project Cost: $9,286,347**

The City of Santa Ana, located in southern California, will replace 33,315 manual-read primarily residential water meters with updated advanced metering infrastructure (AMI) meters. AMI will provide real-time operational modeling information, establish a leak detection system, and provide water-consumption data to customers. The project is expected to result in annual water savings of 1,409 acre-feet that is currently lost to meter inaccuracies and leaks. The City is currently dependent on a combination of local groundwater and imported water for its supply. Water saved through the project will supplement the City's finite groundwater supply and reduce the need to purchase additional water.

City of Santa Ana, SA-1 Hydropower and Water Conservation Project
Reclamation Funding: $300,000 **Total Project Cost: $1,303,413**

The City of Santa Ana will also install a 132-kilowatt hydro turbine and generator at the Garthe Pumping station, which is expected to generate up to 877 megawatt-hours of power annually to offset existing electrical use. The project also includes the installation of smart irrigation controllers and high-efficiency nozzles on City property to reduce irrigation water use.

City of Santa Barbara, Santa Barbara Advanced Metering Infrastructure Project (Phase 2)
Reclamation Funding: $1,500,000 **Total Project Cost: $7,149,346**

The City of Santa Barbara, located in southern California, will install advanced metering infrastructure (AMI) equipment and implement a data management system, along with a customer portal that will support 27,000 primarily residential water meters that were installed in a previous phase of this overall AMI project. By providing real-time water use data about leaks and abnormal use patterns, the project is expected to result in annual water savings of 631 acre-feet and will better prepare the City for extended drought conditions. The water conserved will offset groundwater pumping and reduce the City's dependence on water imported through the State Water Project.

Sutter Mutual Water Company, Bohannon Dam Automation Project
Reclamation Funding: $806,610 **Total Project Cost: $1,613,220**

The Sutter Mutual Water Company, located near Sacramento, will install Supervisory Control and Data Acquisition (SCADA) components that allow for remote monitoring of irrigation delivery system conditions and for remote operation of delivery system control gates at Bohannon Dam weir. The project includes six Rubicon SlipGates with SCADA capability using software that allows real-time monitoring and remote access to the site. The project is expected to result in annual water savings of 20,000 acre-feet currently lost to operational spills. The water conserved as a result of the project will allow the Company to reduce diversions from the Sacramento River, eliminate surplus deliveries, and to store more water in Bohannon Dam.

Western Municipal Water District, Riverside Service Area Meter Replacement and Customer Portal (Phase 2)
Reclamation Funding: $1,000,000 **Total Project Cost: $3,690,717**

The Western Municipal Water District, located in Riverside, California, will replace 7,008 manually read residential meters with advanced metering infrastructure. The project is supported by multiple planning efforts in the region and is expected to result in annual water savings of 505 acre-feet, which is currently lost to leaks and over consumption. By completing the project, the District expects to reduce its reliance on groundwater and imports from Metropolitan Water District of Southern California.

Colorado

City of Aspen, Aspen Intelligent Metering and Meter Replacement Project
Reclamation Funding: $500,000 **Total Project Cost: $1,259,697**

The City of Aspen will convert 4,000 residential and commercial accounts to advanced metering infrastructure (AMI). The project includes the installation and implementation of all associated network hardware and software to support the AMI technology, along with a customer portal. By improving leak detection and reducing customer overuse, the project is expected to result in annual water savings of 273 acre-feet, which represents 9% of the City's current demands. The project will allow the City to reduce diversions and allow for the conserved water to remain in the Roaring Fork River for neighboring communities and the native ecosystem.

City of Grand Junction, City of Grand Junction Advanced Metering Infrastructure Project
Reclamation Funding: $300,000 **Total Project Cost: $1,821,141**

The City of Grand Junction, located in western Colorado, will upgrade 4,069 manual-read water meters with advanced metering infrastructure compatible meters. The City will also install a fixed network data collection system that will automatically collect and store hourly consumption data from its 9,867 customer meters. By providing customers with real-time data, the project is expected to result in annual water savings of 741 acre-feet, which is currently lost to customer overuse and leaks. As a result of the project, the City expects to reduce diversions from the Kannah Creek watershed, leaving water in the river system or otherwise making water available for other uses in the Upper Colorado River Basin.

City of Greeley, Greeley AMI Meter Installation Project
Reclamation Funding: $1,486,538 Total Project Cost: $6,059,617

The City of Greeley, located in northern Colorado, will convert 14,500 standard water meters to advanced metering infrastructure meters and integrate the smart meter software with Greeley Water's Supervisory Control and Data Acquisition system. The updated meters will benefit residential, commercial, and wholesale water purchaser accounts. The City owns surface water rights in four major river basins and operates six storage reservoirs in an area that faces drought, population growth, and overallocation of rivers. The project is expected to result in annual water savings of 1,129 acre-feet currently lost to seepage, leaks, and customer overuse. The water conserved will remain available in storage, supporting the City through multi-year droughts. Surface flow rights can also be sent downstream to meet return flow obligations or be made available for other uses.

City of Longmont, Longmont Automated Meter Reading Project
Reclamation Funding: $800,000 Total Project Cost: $2,642,605

The City of Longmont, located north of Denver, will upgrade 7,629 residential and 711 large analog water meters to meters with automated meter reading (AMR) technology. Once completed, the project will provide a continuous flow of data that will notify staff of customer leaks, backflow events, meter tampering, and no flow events. The AMR meters will be connected to a fixed base collector system and customer portal, which will also provide customers with real-time data on their water usage. The project is expected to result in annual water savings of 361 acre-feet, currently lost to leaks and customer overuse. The water conserved will remain instream and better prepare the City for population growth and prolonged periods of drought.

City of Thornton, City-Wide Advanced Metering Infrastructure and Residential Meter Conversion Project
Reclamation Funding: $1,500,000 Total Project Cost: $4,000,000

The City of Thornton located near Denver, Colorado, will install a city-wide advanced metering infrastructure system and replace 19,919 low resolution residential meters with high resolution meters. The project is expected to result in annual water savings of 1,665 acre-feet currently lost to inefficient customer water use and leaks. The project will support statewide goals to address water supply gaps in the state and South Platte Basin and to integrate water quantity and quality issues. The water conserved will remain in Thornton's storage reserves and reduce demands for treated water and diversions from the over-appropriated South Platte Basin.

Idaho

City of Ammon, City of Ammon Water Meter Installation Project
Reclamation Funding: $300,000 Total Project Cost: $2,593,371

The City of Ammon, located in southeastern Idaho, will install advanced metering infrastructure water meters in 916 residences that are currently unmetered. The City's population has more than doubled between 2000 and 2010 and the growth is expected to continue. The project is expected to

result in annual water savings of 258 acre-feet by allowing the City to better monitor water usage and identify leaks, fluctuations, and other inconsistencies in the system. The water conserved will remain in the Eastern Snake River Plain Aquifer, which will strengthen the reliability of the City's existing groundwater rights to adequately serve its growing population.

Big Wood Canal Company, Jim Knight and Sagebrush Hydroelectric Projects
Reclamation Funding: $1,500,000 Total Project Cost: $4,204,482

The Big Wood Canal Company located near Twin Falls, Idaho, along with the American Falls Reservoir District #2, will upgrade the Jim Knight and Sagebrush hydroelectric projects located on the Milner-Gooding Canal, including improved intake structures, mechanical equipment, and powerhouse electrical controls at both projects. Both projects will include new powerhouse structures and vertical Kaplan turbines connected to a new generator. At Sagebrush, the current concrete penstock has leaks and will be upgraded with a 10-foot diameter, 370-foot long steel penstock. The power plant rebuilds will increase the combined generation capacity of the plants from 604 kilowatts to 1050 kilowatts. The project is expected to result in annual water savings of 180 acre-feet due to leaks and seepage at Sagebrush's existing concrete penstock. The water conserved will remain in the American Falls Reservoir and Milner Lake and will allow for more efficient water deliveries to water users.

Boise Project Board of Control, New York Canal Lining (Phase 7)
Reclamation Funding: $226,832 Total Project Cost: $453,664

The Boise Project Board of Control, located in Boise, Idaho, will replace 600 feet of existing concrete and asphalt lining along the New York Canal with a multi-layer geocomposite liner with a concrete cap. Water supply has not been sufficient to meet demands, and in recent years, users within the Board's service area have had to purchase additional river water to help augment their irrigation water supply. The project is expected to result in an annual water savings of 367 acre-feet, which is currently lost to leaks and seepage. As a result of the project, the Board will be able to reduce reliance on purchased water from other sources and increase the amount of water available in Arrowrock, Anderson, and Lucky Peak Reservoirs to benefit fish and recreation.

Dixie Bench Ditch Lateral Association, Maple Creek Watershed Irrigation Efficiencies Improvement Project
Reclamation Funding: $142,357 Total Project Cost: $285,000

The Dixie Bench Ditch Lateral Association, located in southeastern Idaho, will decommission 8,000 feet of earthen canal and install 7,040 feet of high-density polyethylene pipeline and pressurized polyvinyl chloride pipeline, bypassing the original canal. The area is vulnerable to drought, and the Association experiences ongoing conflict among its residential and agricultural users. The project is expected to result in annual water savings of 90 acre-feet, which is currently lost to seepage and operational spills. As a result of the project, the Association will reduce diversions from Maple Creek and reduce the need for imported water to meet late-season allocations, allowing water to remain instream. Once completed, the pipeline will complement a current Natural Resources Conservation Service's Environmental Quality Incentives Program project to improve an existing irrigation system with pivots, wheel-line, pumping plants, and a Variable Frequency Drive.

Kansas

Kansas Bostwick Irrigation District, Converting Ridge 1.3 Right Open Lateral to a Buried Pipe System

Reclamation Funding: $163,000 **Total Project Cost: $329,451**

The Kansas Bostwick Irrigation District, located in northern Kansas, will convert 2.79 miles of open lateral canal into a buried pipeline system. The project is expected to conserve 623 acre-feet of water annually that is currently lost to evaporation, seepage, and operational spills. The area is dependent on the Republican River Basin which is over-drafted across multiple states. Groundwater depletions and overuse within the Republican River Basin have significantly impacted the District's available water supplies in recent years. The project will allow the District to more efficiently manage its current water supplies and reduce diversions from the Republican River and Harlan County Lake, the District's upstream supply reservoir. Reduced diversions from the Republican River will increase flows available for recreational activities and downstream tributaries, benefitting species including the endangered Topeka Shiner minnow.

Montana

Buffalo Rapids Irrigation Project—District 1, Lateral 1.7 Conversion Project

Reclamation Funding: $132,472 **Total Project Cost: $291,869**

The Buffalo Rapids Irrigation Project—District 1, located in eastern Montana, will convert 5,450 feet of open canal to a closed plastic irrigation pipeline. The District has experienced drought conditions over the last five years, and leakage and conveyance losses have contributed to water shortages and water scheduling issues. In response to system inefficiencies, the District has frequently had to divert and pump additional water from the Yellowstone River. By completing the project and increasing efficiency, the District will be able to reduce diversions. The project is expected to result in annual water savings of 248 acre-feet currently lost to seepage, which will remain in the Yellowstone River.

Buffalo Rapids Irrigation Project—District 2, Lateral 1.6 Conversion Project

Reclamation Funding: $300,000 **Total Project Cost: $666,307**

The Buffalo Rapids Irrigation Project—District 2, located in eastern Montana, will convert 8,660 feet of open canal to a closed plastic irrigation pipeline. The District has experienced drought conditions over the last five years, and leakage and conveyance losses have contributed to water shortages and water scheduling issues. In response to system inefficiencies, the District has frequently had to divert and pump additional water from the Yellowstone River. By completing the project and increasing efficiency, the District will be able to reduce diversions. The project is expected to result in annual water savings of 1,087 acre-feet currently lost to seepage, which will remain in the Yellowstone River.

Nebraska

Nebraska Bostwick Irrigation District, Enhancing Storage in Harlan Reservoir by Automating the Headgates of the Superior and Courtland Canals

Reclamation Funding: $75,000 **Total Project Cost: $152,434**

The Nebraska Bostwick Irrigation District, located in south-central Nebraska, will install canal automation technology to provide closed-loop flow control to the Superior and Courtland Canals. Precise actuation, level measurement, and flow controllers will be installed onto existing radial gates. The District has faced water scarcity over the past decade. Farmers have adjusted by changing crops, growing crops under stress, and augmenting their delivered surface water with well water. By completing this project, the District will be able to use real-time data to more precisely match supply with demand, thereby improving management of the Harlan County Reservoir and a portion of the Republican River system. Once complete, the project is expected to result in annual water savings of 1,006 acre-feet currently lost to operational spills, which will remain in Harlan County Reservoir. The project will allow the District to more efficiently deliver water, reduce the need for groundwater pumping from the Republican River system, and provide increased instream flows later in the season for stream augmentation.

Oklahoma

City of Eufaula, Eufaula Water System Improvements (Part B & C)

Reclamation Funding: $1,500,000 **Total Project Cost: $4,032,571**

The City of Eufaula, located in southeastern Oklahoma, will convert existing corrugated metal pipe, corrugated plastic pipe, cast iron pipe, and reinforced concrete pipe in its water delivery system to 38,242 feet of polyvinyl chloride pipe. The project also includes installation of new gate and pressure valves. The water system currently faces losses as high as 53 percent due to leaks and the lack of isolation valves. The project is expected to result in annual water savings of 198 acre-feet, which will remain in Lake Eufaula.

Oregon

Klamath Irrigation District, C-4-a Canal Lining/Piping Project

Reclamation Funding: $210,650 **Total Project Cost: $421,301**

The Klamath Irrigation District, located in Klamath County, Oregon, will convert 1.5 miles of the currently open C-4-a Canal to 3,000 feet of Ethylene Propylene Diene Monomer lining and 5,000 feet of high-density polyethylene pipe. The project is expected to result in an annual water savings of 664 acre-feet which is currently lost to seepage, evaporation, and operational spills. Once the project has been completed, the District will reduce diversions from Upper Klamath Lake. The project is expected to improve lake levels to benefit fish species such as the endangered Shortnose Sucker, and to provide a potential late season supply for other water users in times of shortage. In addition, conserved water may be available for the fall waterfowl migration at the Lower Klamath National Wildlife Refuge.

Klamath Irrigation District, F-4 Canal Lining/Piping Project
Reclamation Funding: $219,704 **Total Project Cost: $439,409**

The Klamath Irrigation District will also convert 1.4 miles of the currently open F-4 Canal to 300 feet of Ethylene Propylene Diene Monomer lining and 7,392 feet of high-density polyethylene pipe. The project is expected to result in an annual water savings of 664 acre-feet.

Middle Fork Irrigation District, Coe Branch Pipeline and Irrigation Efficiency Project
Reclamation Funding: $266,600 **Total Project Cost: $1,460,400**

The Middle Fork Irrigation District, located in northwest Oregon, will install a high-density polyethylene pipe from its existing diversion on Coe Creek to an existing settling pond to provide clean irrigation water to its users. Coe Creek is a glacier-fed tributary of the Middle Fork Hood River, and its high sediment load restricts the District's ability to fully utilize the water during the irrigation season. When sedimentation worsens in Coe Creek, the District must meet irrigation demand with water from Laurance Reservoir and its tributaries. The District will use the settling pond to remove glacial sediment from the water before it is delivered to irrigators, thereby avoiding diversions from Laurance Lake. By more efficiently and effectively removing sediment, the project will also allow water users to install high-efficiency micro-sprinklers.

Texas

Cameron County Irrigation District No.6, Bennett, Swan Nelson, 134, 139, and 196 Canals Piping Project
Reclamation Funding: $300,000 **Total Project Cost: $857,143**

The Cameron County Irrigation District No.6, located in southern Texas, will convert the earthen Bennett, Swan Nelson, 143, 139 and 196 Canals to 9,330 feet of polyvinyl chloride pipe. The project is expected to result in annual water savings of 1,040 acre-feet that is currently lost to seepage and evaporation. The Lower Rio Grande Reservoir System is over allocated and susceptible to long-term drought. The project will allow the District to reduce its diversions and allow for the conserved water to remain in the Lower Rio Grande Reservoir System.

El Paso County Water Improvement District No.1, Riverside Canal Concrete Lining Project (Phase III)
Reclamation Funding: $1,000,000 **Total Project Cost: $2,039,504**

The El Paso County Water Improvement District No.1 will line 6,600 feet of the currently earthen Riverside Canal with steel-panel reinforced concrete. The project is expected to result in annual water savings of 1,770 acre-feet that is currently lost to seepage. El Paso County has experienced prolonged and extreme drought conditions, and the population of El Paso County is projected to double to over 1.5 million people by 2070. The water conserved will allow for additional Rio Grande Project water to be stored in Elephant Butte and Caballo Reservoirs, which will provide critical water supplies to the area during drought years.

Harlingen Irrigation District Cameron County No.1, Piping of Wyrick Canal (Phase II)
Reclamation Funding: $300,000 Total Project Cost: $655,331

The Harlingen Irrigation District Cameron County No.1, located in southern Texas, will convert 3,730 feet of the concrete Wyrick Canal to a 48-inch pressurized polyvinyl chloride pipe. The project will increase system reliability and reduce the amount of power needed to lift water into the distribution system. The Harlingen area is dependent on surface water from the Rio Grande and experiences water conflict as a result of drought, over-appropriation of water rights, and population growth. The project makes progress toward water management goals identified in several Rio Grande Basin planning activities, including canal piping as a recommended water management strategy, increasing delivery system efficiencies to address drought, and conserving water to relieve tension for all groups in the basin. The project is expected to result in a 92 acre-feet of water savings, which will remain in the Rio Grande River Basin to benefit domestic, municipal, industrial, agricultural, ecological, and recreational uses.

City of Wilmer, Smart Meter Conversion and SCADA System Implementation Project
Reclamation Funding: $198,802 Total Project Cost: $497,006

The City of Wilmer located near Dallas, Texas, will retrofit 1,152 existing residential water meters to advanced metering infrastructure (AMI). The City will also install Supervisory Control and Data Acquisition equipment to allow for improved water management. The project will provide more accurate and detailed leakage and billing data and is expected to result in annual water savings of 53 acre-feet. The water conserved will remain in Dallas Water Utilities reservoirs.

Utah

American Fork City, American Fork City Pressurized Irrigation Metering Project
Reclamation Funding: $1,500,000 Total Project Cost: $3,035,400

American Fork City, located near Salt Lake City, will install 2,324 water meters with advanced metering infrastructure compatible with businesses and homeowners on the City's pressurized irrigation system. Through its pressurized irrigation system, the City delivers non-potable water for outdoor use. The City often has to pump water from its culinary wells to supplement the pressurized irrigation system during peak summer months. The project will enable the City to monitor real-time flows in the pressurized irrigation system and to accurately bill consumption. The project is expected to result in annual water savings of 597 acre-feet which is currently lost to customer overuse. The water conserved will offset the need for groundwater pumping and purchased water. Additional water would remain in the American Fork River system as instream flows or for aquifer recharge.

Bear River Canal Company, West Main Canal Liner Project
Reclamation Funding: $1,500,000 Total Project Cost: $3,031,600

The Bear River Canal Company, located in northern Utah, will line 3,200 feet of the earthen and partially lined West Main Canal with geotextile fiber covered by concrete. The Company will also install a ramp flume with telemetry and a 2-kilowatt crossfloat turbine along the Hammond Canal. The West Main Canal is the primary canal that provides water to other large canals within the Company's system, including the Hammond Canal. The project is expected to result in annual water savings of 4,903 acre-feet, which is currently lost to seepage. In dry years, the water conserved will

remain in the West Main Canal, allowing the Company to avoid reduced allocations. In wet years, conserved water will remain instream within the Bear River to benefit the Bear River Migratory Bird Refuge and the Great Salt Lake. Additionally, because seepage is eroding the hillside supporting the canal, the project addresses safety and reliability concerns.

Benchland Water District, Secondary Water Project (Phase I)
Reclamation Funding: $300,000 Total Project Cost: $675,150

The Benchland Water District located near Salt Lake City, Utah, will install 450 secondary water meters as part of an overall secondary metering program. The State of Utah has experienced drought conditions in twelve of the last fifteen years. The project will allow the District to utilize advanced metering infrastructure to better detect leaks and customer overuse, which is expected to result in water savings of 175 acre-feet per year. The water conserved will remain in the District's upper reservoirs or within the Weber Basin Water Conservancy District's system or remain as instream flows to benefit the Bonneville Cutthroat Trout and Bluehead Sucker.

Benchland Water District, Secondary Water Project (Phase II)
Reclamation Funding: $300,000 Total Project Cost: $675,150

The Benchland Water District will continue implementation of its secondary metering program with the installation of an additional 450 secondary water meters, which is expected to result in water savings of 175 acre-feet per year.

Davis and Weber Counties Canal Company, Canal Piping, Lining and Hydro Project
Reclamation Funding: $1,100,000 Total Project Cost: $2,714,000

The Davis and Weber Counties Canal Company, located near Salt Lake City, will convert 1,685 feet of existing concrete liner and 1,875 feet of existing steel pipe with 2,060 feet of an 8-foot by 6-foot precast concrete box culvert and 1,500 feet of 66-inch reinforced concrete pipe. Severe drought from 2012 through 2018 has strained the water system and the Company has had to respond with shortened irrigation seasons. The project is expected to result in annual water savings of 794 acre-feet that is currently lost to seepage and evaporation. The project will allow for more water to be saved and held in the Echo and East Canyon Reservoirs, therefore remaining in the river system for longer periods and providing benefits to native fish species. Additionally, the project includes the installation of a meter station and replacement of a meter to better manage water distribution, and the installation of a 2-kilowatt hydro turbine to help offset project energy consumption.

Nibley Blacksmith Fork Irrigation Company, Quarter Circle Drive Piping Project
Reclamation Funding: $300,000 Total Project Cost: $760,000

The Nibley Blacksmith Fork Irrigation Company, located in Cache County, Utah, will convert 2,220 feet of an earthen canal known as the Quarter Circle Drive Section to irrigation pipe. The Company will also upgrade the existing headworks of the canal at the diversion point on the Blacksmith Fork River to provide more accurate flow measurement. The system of canals and pipes services approximately 3,100 acres of irrigated residential and agricultural land. The Company has had to divert additional water for delivery due to system inefficiencies and seepage losses. The project is expected to result in annual water savings of 814 acre-feet, which is currently lost to seepage,

evaporation, and heavy vegetation growth. The project will allow the Company to reduce diversions from the Blacksmith Fork River and more efficiently deliver water to its shareholders.

City of Orem, City of Orem Advanced Metering Infrastructure Program
Reclamation Funding: $1,500,000 Total Project Cost: $7,298,424

The City of Orem located near Provo, Utah, will install 18,691 advanced metering infrastructure (AMI) meters to replace existing manually read primarily residential water meters. An additional 1,451 existing meters will be retrofitted for AMI capability. The project is expected to result in annual water savings of 3,133 acre-feet through the availability of consumption data, improved leak detection, and more accurate meter reading and billing. The City is in an area that is highly susceptible to severe drought, projected population growth, and increased water demands. The water conserved will remain in the Provo River.

Riverton City, Riverton City Secondary Water Metering Project
Reclamation Funding: $1,500,000 Total Project Cost: $15,376,745

Riverton City, located in Salt Lake County, Utah, will install 9,872 meters on its secondary water distribution system. The secondary meters will be integrated with the City's advanced metering infrastructure system, which includes a data portal for customer interaction. The project will improve the reliability of the City's secondary system, preparing it for projected future growth. The project will support water conservation efforts and provide accurate, real-time data for individual users. The project is expected to result in annual water savings of 3,000 acre-feet by identifying customer overuse. The water conserved will be stored and made available for projected future demands in the area.

South Jordan City, South Jordan City Secondary Water Metering Project
Reclamation Funding: $300,000 Total Project Cost: $635,200

South Jordan City, located in Salt Lake County, Utah, will install 443 secondary water meters on existing residential connections. Secondary water meters equipped with endpoints that allow continuous data collection will provide usage information to better quantify secondary water use and promote conservation. The project will help to prevent the use of potable water for lawn and garden watering, especially during times of drought, and is expected to result in annual water savings of 172 acre-feet. The project directly supports the State of Utah's goal to reduce residential water usage per capita per day by 25%. The water conserved will remain in the Jordan River, which drains into the Great Salt Lake.

Sunrise and Bench Creek Irrigation Company, Piping and Small Hydro Project
Reclamation Funding: $538,000 Total Project Cost: $1,196,500

The Sunrise and Bench Creek Irrigation Company, located in northern Utah, will replace 7,300 feet of existing corrugated metal pipe and 500 feet of open, unlined ditch with a 26-inch high-density polyethylene pipeline. The project also includes a new inlet structure, meter station, widening of a settling pond, and an underwater micro-hydro turbine to power the meter. The existing corrugated metal pipe experiences significant leaks, causing the Company to over-divert water from the Provo River to compensate for water losses. The project is expected to result in an annual water savings of 802 acre-feet, which will reduce diversions and enable Company shareholders to reduce their

reliance on the Central Utah Water Conservancy District. The water conserved will remain in the Provo River and eventually be stored in Jordanelle Reservoir.

Uintah Water Conservancy District, Steinaker Service Canal Enclosure Project (Reach III)

Reclamation Funding: $1,500,000 Total Project Cost: $15,500,000

The Uintah Water Conservancy District, located in northeastern Utah, will convert 13,100 feet of the unlined Steinaker Service Canal to 72-inch diameter fiberglass pipe with associated appurtenances, turnouts, and measurement devices. Drought is common in the project area, and the Steinaker Reservoir is an off-channel reservoir that does not get excess flows during large precipitation years. The project is expected to result in annual water savings of 900 acre-feet currently lost to seepage, which will be stored in Steinaker Reservoir. Conserved water will be used to address shortages during drought years, reduce the need for imported water, and maintain water levels necessary for recreation at Steinaker Reservoir. In addition, the project will provide a pressurized water supply, enabling the conversion from flood irrigation to sprinklers.

Ute Indian Tribe, Ute Indian Tribe Water Meter Replacement Project

Reclamation Funding: $837,900 Total Project Cost: $1,675,800

The Ute Indian Tribe, located in eastern Utah, will replace 1,021 existing meters with cellular LTE end point technology to detect water main breaks, service line breaks, and inaccurate metering. The project is expected to result in annual water savings of 381 acre-feet currently lost to metering inaccuracy. The water conserved will remain in the river system, improving water reliability for the tribe and multiple water districts and communities in the adjacent area.

Weber Basin Water Conservancy District, Upper Willard Canal Lining Construction Project (Phase 7)

Reclamation Funding: $1,200,000 Total Project Cost: $2,425,000

The Weber Basin Water Conservancy District, located in northern Utah, will line 2,000 feet of the currently unlined Willard Canal with 6-inch steel reinforced concrete. Canal lining has been identified as a priority in the District's System Optimization Review and water conservation plan. The District administers water contracts totaling 226,170 acre-feet, serves a geographic area over 2,500 square miles, and has regional water supply responsibility for cities, districts, and companies located in five Utah counties. The area is vulnerable to drought and continues to experience rising demand from population growth. The project is expected to result in annual water savings of 3,000 acre-feet currently lost to seepage, which will be marketed to wholesale customers, mostly cities, in order to meet rapidly growing demand. Further, conserved water will remain in the Weber River for longer periods of time, benefitting species in the area, including the Bonneville Cutthroat Trout.

Weber Basin Water Conservancy District, Woods Cross Secondary Water Metering Project (Phase III)

Reclamation Funding: $300,000 Total Project Cost: $827,500

The Weber Basin Water Conservancy District will also install 650 secondary water meters with advanced metering infrastructure (AMI) to provide the District with real-time data to detect leaks and end use inefficiencies. The data will also help customers better understand how they can reduce

water usage. The area has experienced rapid population growth and drought, resulting in declining groundwater levels. The project is expected to result in annual water savings of 247 acre-feet which is currently lost to leaks and customer overuse. The water conserved will be stored to meet rising municipal demand from population growth and to regulate flows in the Davis Aqueduct, which has reached maximum capacity.

Wellsville City Irrigation Company, Wellsville Pressurized Irrigation Project
Reclamation Funding: $1,500,000 Total Project Cost: $5,895,000

The Wellsville City Irrigation Company, located in northern Utah, will convert its existing open earthen ditch system to a pressurized irrigation system throughout the City of Wellsville to provide irrigation water to city residents who are currently using potable water for indoor and outdoor use. The project also includes constructing a small storage pond with a Supervisory Control and Data Acquisition system, pumping station, and two booster pump stations. The project is expected to result in annual water savings of 1,960 acre-feet that is currently lost to seepage, evaporation, and operational spills. The project will allow for more water to remain in the Hyrum Reservoir until later in the irrigation season, which will provide increased flows in the Bear River, primarily to benefit the Bear River Migratory Bird Refuge.

Washington

Kittitas Reclamation District, South Branch Canal Efficiency Project
Reclamation Funding: $975,000 Total Project Cost: $1,950,000

The Kittitas Reclamation District located near Yakima, Washington, will install 4,637 feet of double barrel 60-inch, steel reinforced polyethylene pipe on the existing earthen South Branch Canal. The project is expected to result in annual water savings of 515 acre-feet currently lost to seepage and operational spills. The water conserved through the project will be delivered to Manastash Creek for instream flows to benefit threatened species, including Coho and Chinook salmon. The project is consistent with a memorandum of agreement between Reclamation, the Washington Department of Ecology, and the District to address water management issues in over-appropriated or flow-impaired tributaries to the upper Yakima River.

City of Leavenworth, City of Leavenworth Advanced Metering Infrastructure Project
Reclamation Funding: $300,000 Total Project Cost: $975,000

The City of Leavenworth, located in central Washington, will upgrade 1,400 existing manual-read primarily residential water meters with an advanced metering infrastructure (AMI) system. The system will include meters, data collection stations, radio transmitters, meter data analysis, and billing hardware and software. The AMI system will provide the City with real-time data to detect distribution system losses and unusual or continuous usage patterns. By improving metering accuracy, the project is expected to result in annual water savings of 22 acre-feet, which will remain in Icicle Creek.

Quincy-Columbia Basin Irrigation District, West Canal Lining
Reclamation Funding: $300,000 **Total Project Cost: $833,264**

The Quincy-Columbia Basin Irrigation District, located in central Washington, will line 2,500 feet of the earthen West Canal with a geotextile liner covered with concrete to address seepage losses. The project advances the goals of a Memorandum of Understanding (MOU) between the three Columbia Basin Project irrigation districts, the Washington State Department of Ecology, the Washington State Department of Fish and Wildlife, and the Bureau of Reclamation, where the parties have agreed to address regional water reliability concerns including drought, groundwater issues, and improved stream flows to assist salmon recovery. The project is expected to result in annual water savings of 850 acre-feet that is currently lost to seepage. The water conserved will be used to meet actions identified in the MOU, including offsetting groundwater pumping and enhancing flows in the Columbia River.

Wyoming

Austin/Wall Irrigation District, Wall Reservoir Improvement Project
Reclamation Funding: $300,000 **Total Project Cost: $900,000**

The Austin/Wall Irrigation District, located in southwestern Wyoming, will install a clay liner on a portion of the Wall Reservoir to reduce seepage losses. During times of shortage, when water deliveries under existing water rights from the Blacks Fork River are curtailed, the Wall Reservoir serves as a critical source of water for many growers. By addressing seepage, the District expects to be able to fill the reservoir more quickly, allowing for reduced diversions from the Blacks Fork River. Once complete, the project is expected to result in annual water savings of 1,048 acre-feet. Water conserved as a result of the project will help to avoid reduced allocations in times of shortage and will otherwise remain in the Blacks Fork River.

Eden Valley Irrigation and Drainage District, Farson Lateral Phase III Piping and Hydro Project
Reclamation Funding: $1,500,000 **Total Project Cost: $3,182,900**

The Eden Valley Irrigation and Drainage District, located in western Wyoming, will convert 6,200 feet of the unlined Farson Lateral to a 63-inch high-density polyethylene pipeline. Water is currently lost to seepage to the sandy subsurface, which raises the water table and brings salts to the surface. In addition, the project area has a low water holding capacity, resulting in an inefficient delivery system in a region prone to drought. As a result, the District diverts more water from the reservoirs than users require in order to account for seepage loss. The project is expected to result in annual water savings of 666 acre-feet by improving delivery efficiency. The conserved water will be used to avoid reduced water allocations during dry years and will otherwise remain in the Big Sandy and Eden Reservoirs and in the river system, providing recreation and wildlife benefits. This project also positions farmers in the District to implement on-farm improvements through the Natural Resources Conservation Service's Environmental Quality Incentives Program by providing a pressurized system that can be used by farmers to convert to sprinkler irrigation. Lastly, the project includes the installation a 2-kilowatt hydro turbine to help offset project energy consumption.

Kirby Ditch Irrigation District, Kirby Ditch Lower Reach Piping Project
Reclamation Funding: $737,966 **Total Project Cost: $2,236,260**

The Kirby Ditch Irrigation District, located in central Wyoming, will convert 2.56 miles of the open Kirby Ditch to a buried polyvinyl chloride pipeline. The pipeline will service six landowners, totaling 704 acres, and enable improved water delivery. The project is expected to result in annual water savings of 1,008 acre-feet, which is currently lost to seepage. As a result of the project, the District will reduce its diversions from the Big Horn River and will also be able to avoid purchasing water from Boysen Reservoir. Once completed, the project will allow landowners to increase on-farm irrigation efficiency by converting to gated pipe and pivot irrigation.

Bureau of Reclamation WaterSMART Grant

WaterSMART Grant

Water and Energy Efficiency Grants

- $24 Million available in 2019
- These grants will be awarded to larger projects that will result in quantifiable and sustained water savings and support broader water reliability benefits. These projects conserve and use water more efficiently; mitigate conflict risk in areas at a high risk of future water conflict; and accomplish other benefits that contribute to water supply reliability in the western United States.
  - Funding Group I - $300,000 and completed in two years
  - **Funding Group II - $1.5 Million and completed in three years**
- Applicant must provide 50% cost-share
- 54 out of 120 applicants received funding in 2018

WaterSMART Grant

Greeley Grant Application

- Project includes installation of 14,500 National/Badger Smart AMI (Advanced Metering Infrastructure) meters
  - Replaces half of Greeley meters 29,000 meters
- Installation planned from 2020 - 2022

WaterSMART Grant

Badger Beacon AMI Meters

- Increased accuracy from 0.5 to 0.1 gals
- Increased meter readings to every 15 minutes
  - Currently meters read once per month
  - Enhanced leak detection and elimination
- Two way communications with meters
- Online/smartphone/tablet apps for monitoring of water usage
  - Customizable dashboards for citizens and W&S staff
- Integration with existing and future billing system

WaterSMART Grant

Estimate Water Savings

- Reduce non-revenue water by 1% or 245 ac-ft/year
- Estimated Water Conservation
  - 20% of customers with new meters will reduce usage by 20%
  - Estimated savings of 491 ac-ft/year
- Improved leak detection & elimination
  - Average 10 (last 14 years) residential leaks per year with 650,000 gals per leak – Savings of 199 ac-ft/year
  - Estimated 50 minor indoor leaks of 0.5 gal/min – Savings of 166 ac-ft/year
- Total Estimated Water Savings of 1,101 ac-ft/year

WaterSMART Grant

Estimate Cost for 14,500 Meters

- National/Badget Beacon meter equipment - $4.7 million
- Meter Equipment installation cost – $2 million
- Grant Award – $1.5 million
- Greeley Contributions - $5.2 million or $1.73 million/year for three years

- Raw water acquisition cost (1,101 ac-ft) - $22 million
  - Assume $20,000/ac-ft of raw water

THANK YOU!

Any Questions?

WATER & SEWER BOARD AGENDA MARCH 18, 2020

ENCLOSURE _____ NO ENCLOSURE __X__

ITEM NUMBER: 10

TITLE: SUCH OTHER BUSINESS THAT MAY BE BROUGHT BEFORE THE BOARD AND ADDED TO THIS AGENDA BY MOTION OF THE BOARD

RECOMMENDATION: TO BE DETERMINED

ADDITIONAL INFORMATION: