

# AGENDA

## Denver Board of Water Commissioners

Denver Water Administration Building  
1600 West 12<sup>th</sup> Avenue  
Denver, CO  
Board Room, Third Floor

**Wednesday, October 24, 2018 9:00 a.m.**

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### I. INTRODUCTORY BUSINESS

#### A. Call to Order and Determination of Quorum

#### B. Public Comment and Communications

At this point in the agenda, the Board may allow members of the public to address the Board on any item of interest within the jurisdiction of the Board, and not on the agenda for action. Speakers wishing to address a specific Action Item will be invited to address the Board when the item is being considered. Three minutes are allowed for each person unless the President determines otherwise.

1. Distributor Communications
2. Citizen Advisory Committee Communications

#### C. Ceremonies, Awards and Introductions

1. American Heart Association – Wellness Committee Award

### II. ACTION ITEMS

#### A. Consent Items

Items listed below are considered routine and may be enacted by one motion and vote. If any Board member desires discussion beyond explanatory questions, or corrections to the Minutes, the President may order that item to be considered in a separate motion and vote.

1. Hauling, Disposal and Storage of Aggregates and Spoils – Contract 503259
2. Approval of CIGNA and Delta Dental Plans Administrative Services Contracts and CIGNA Stop Loss Amendment Contracts - 503668, 503670, 501025

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**B. Individual Approval Items**

1. Chatfield Pump Station Intergovernmental Agreement with South Metro Water Supply Authority Agreement 503646	Rick Marsicek	10 minutes
2. Agreement with the High Line Canal Conservancy Related to the High Line Canal Transformation – Contract 503691	Tom Roode	10 minutes
3. Intergovernmental Agreement with City of Arvada for Northwater Treatment Plant – Contract 503675	Pete McCormick	10 minutes
4. General Conditions Work Package Guaranteed Maximum Price (GMP) 1A for Northwater Treatment Plant	Pete McCormick	10 minutes
5. Conduit 16 Tunnels Installations Change Orders 4 & 5 to Contract 500815 (formerly 15453A)	Kirk Petrik	15 minutes

**III. POLICY MATTERS**

<b>A. OCR Update</b>	Jeremy Ross	10 minutes
<b>B. GRE Procurement</b>	Jeff Martin	45 minutes

**IV. EXECUTIVE UPDATE**

- A. CEO Update**
- B. CFO Update**
- C. Operations Update**

## **V. BRIEFING PAPERS & REPORTS**

### **A. Briefing Paper**

1. Water Efficiency Update
2. Watershed Inventory Update

### **B. Report**

## **VI. ADJOURNMENT**

## **VII. TRUSTEE MATTERS**

## **VIII. EXECUTIVE SESSION**

The Board may adjourn the regular meeting and reconvene in executive session on topics authorized by C.R.S. Sec. 24-6-402 or D.R.M.C Sec. 2-34.

- A. Confidential Report § 24-6-402(4)

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: October 24, 2018

Board Item: II-A-1

## Hauling, Disposal and Storage of Aggregates and Spoils Contract 503259

Action by Consent

Individual Action

### **Purpose and Background:**

This contract is for storage, hauling and disposal of aggregate and spoils to and from job sites, for planned repair and replacement projects and unplanned repairs such as water main breaks. During the previous contract period for this service Denver Water implemented a new process for management of aggregate material. The new process allowed aggregates to be stored off-site at the contractor's facility, while still allowing access on a 24/7 basis in the event of a main break.

The new contract continues the previous services, including having the contractor store aggregates off-site. Denver Water added an option to have the contractor procure aggregates and maintain inventory. Additionally, Denver Water provided incentive to the contractor to operate multiple facilities within the service area so that haul time can be reduced resulting in reduced haul costs and crew wait time. The contract also requires installation of weighing and ticketing systems at each site so that adequate accounting and controls can support contract management.

### **Budget and Schedule:**

The total amount of this contract is \$25,000,000, and the term of the contract is October 24, 2018 to July 31, 2023. Funds for this contract will come from the 2018 budget for Water Distribution, which has sufficient funds to pay the \$877,193 estimated to be needed in 2018. The remaining \$24,122,807 will be budgeted in years 2019, 2020, 2021, 2022 and 2023.

### **Selection of Business Partner:**

Denver Water issued a Request for Proposals to the public on Rocky Mountain E-Purchasing System (BidNet), on Denver Water's website, directly to known suppliers, and through notification to the SBE and MWBE communities. Denver Water received two proposals and one no-bid, one of which was from an MBE. Denver Water selected Iron Woman Environmental Services as it provided the best value to Denver Water.

### **S/MWBE Information:**

This contract is part of the O&M Construction Related and the Covered Goods and Services MWBE programs. Iron Woman Environmental Services is an MBE per the City and County of Denver.

### **Recommendation:**

It is recommended that the Board approve Contract 503259 with Iron Woman Environmental Services for hauling, disposal and storage of aggregates and spoils for the contract period October 24, 2018 to July 31, 2023 for a total contract amount not to exceed \$25,000,000.

**Approvals:**

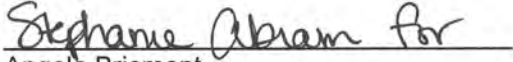


Thomas J. Roodé  
Chief Operations Maintenance Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager



Angela Bricmont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: 10/24/18

Board Item: II-A-2

## Approval of CIGNA and Delta Dental Plans Administrative Services Contracts and CIGNA Stop Loss Amendment Contracts 503668, 503670, 501025

Action by Consent

Individual Action

### **Purpose and Background:**

Denver Water maintains self-funded medical and dental plans for employees and their dependents, as well as retirees until age 65. After a competitive procurement for medical and dental plans was completed earlier this year by Gallagher Benefit Services, we are recommending the Board approve continuing contracts with the current providers for the period 1/1/19 through 12/31/2021.

The Board saw a presentation earlier this year of the procurement and pricing analysis conducted by Gallagher Benefit Services. Attached to this Board Item is the October 10 briefing paper that reflects the 2019 medical and dental rates. The 2019 medical rates reflect a split of 83/17, moving to 80/20 by 2020 as approved by the Board at the July 25, 2018 meeting.

Denver Water proactively manages these benefits by partnering with the providers to educate employees about disease management and wellness and to promote healthy living. For 2019, new programs include CIGNA One Guide, Total Behavioral Health, Health Management Outreach and Rx Essential Protection that will continue to control and manage the Board's costs.

### **Budget Information:**

Funds for the contracts will come from the 2019 - 2021 Benefits budget:

#### CIGNA Administrative Services Contract

The total amount of this contract is \$1,604,530, and the term of the contract is Jan. 1, 2019 to Dec. 31, 2021. Funds for this contract will come from the 2019 budget for Medical, which will have sufficient funds to pay the \$531,454 estimated to be needed in 2019. The remaining \$1,073,076 will be budgeted in years 2020 and 2021.

#### CIGNA Stop Loss Contract Amendment

The total amount of this contract is \$3,977,785, and the term of the contract is Jan. 1, 2019 to Dec. 31, 2019. Funds for this contract will come from the 2019 budget for Medical, which will have sufficient funds to pay the \$1,021,563 estimated to be needed in 2019.

#### Delta Dental Administrative Services Contract

The total amount of this contract is \$131,937, and the term of the contract is Jan. 1, 2019 to Dec. 31, 2021. Funds for this contract will come from the 2019 budget for Dental, which will have sufficient funds to pay the \$43,979 estimated to be needed in 2019. The remaining \$87,958 will be budgeted in years 2020 and 2021.

### **Selection of Business Partner:**

As part of Denver Waters Total Reward Philosophy and Benefit Plan Strategy, Human Resources solicited competitive bids for all medical and dental plan services. The medical and dental Request for Proposal (RFP) requested bids from vendors to determine competitive pricing of available provider networks, claim discounts and additional services available to Denver Water employees and retirees. As the medical and dental plan offerings are self-funded the main components analyzed in the RFP were the claims, administration fees and

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stop loss protection as well as disease management, network availability and additional services offered. The medical RFP resulted in a total of eight vendors providing proposals, including the incumbent CIGNA. The dental RFP resulted in a total of seven vendors providing proposals, including the incumbent Delta Dental.

**Recommendation:**

It is recommended that the Board approve Contract #503668 with CIGNA for Administrative Services as described in the contract for the contract period Jan. 1, 2019 through Dec. 31, 2021 for a total contract amount not to exceed \$1,604,530.

It is recommended that the Board approve the Third Amendment to Contract #501025 with CIGNA Health and Life Insurance Company for individual stop loss coverage for the contract period Jan. 1, 2019 through Dec. 31, 2019 for a total contract amount not to exceed \$3,977,785. This contract is reviewed and budgeted annually.

It is recommended that the Board approve Contract #503670 with Delta Dental for Administrative Services as described in the contract for the contract period Jan. 1, 2019 to Dec. 31, 2021 for a total contract amount not to exceed \$131,937.

**Approvals:**

*Gail Cagle*  
for Gail Cagle  
Chief Human Resources Officer

Respectfully submitted,

*Tom Lochhead for*  
James S. Lochhead  
CEO/Manager

*Angela Bricmont for*  
Stephanie Abram for  
Angela Bricmont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: October 24, 2018

Board Item: II-B-1

## Chatfield Pump Station Intergovernmental Agreement with South Metro Water Supply Authority

### Contract 503646

Action by Consent

Individual Action

#### Purpose and Background:

Denver Water has stored water in Chatfield Reservoir that can only be accessed by lowering temporary pumps to pump the water to Conduit 20 and the Marston Water Treatment Plant. The temporary pumps, which have been operated since 2003, must be removed each winter or operated continuously to prevent damage from ice. The pumps are costly to install and remove, the permit for the temporary pumps expires in 2027, and the pumps can only access the top portion or about 40% of Denver Water's storage capacity. For these reasons, Denver Water desires to study various alternatives for a permanent pump station to access water at lower elevations and allow for the decommissioning of the temporary pumps.

A number of South Metro Water Supply Authority ("South Metro") entities own capacity within the reallocated space of Chatfield Reservoir, but many have no means of accessing that water. Since Denver Water would only need the Chatfield Pump Station during certain hydrologic conditions such as a drought, there is an opportunity to cooperate with partners on sharing a pump station. Under the Intergovernmental Agreement (IGA) with South Metro, Denver Water will contribute \$50,000 in funds toward a joint study with South Metro and other water users. The study will explore the opportunities for mutual benefits and the design feasibility of a regional pump station, and assess whether there are opportunities for cooperation on joint utilization of other water infrastructure near Chatfield Reservoir.

#### Budget and Schedule:

The total amount of the study that is being funded by Denver Water, South Metro and other water users, is \$258,644. Denver Water's portion to fund this study is \$50,000, and the term of the contract with South Metro is from October 24, 2018 to December 31, 2019. Funds for this agreement will come from the Chatfield Pump Station Business Unit budgeted in 2018 & 2019.

#### Recommendation:

It is recommended that the Board approve Agreement 503646 with the South Metro Water Supply Authority for the Chatfield Pump Station and Westside Alternative Study for the contract period October 24, 2018 through December 31, 2019 for a total agreement amount not to exceed \$50,000.

#### Approvals:

Respectfully submitted,



Mike King  
Chief External Affairs Officer



James S. Lochhead  
CEO/Manager



Angela Bricmont  
Chief Finance Officer



# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: October 24, 2018

Board Item: II-B-2

## Agreement with the High Line Canal Conservancy Related to the High Line Canal Transformation Contract 503691

Action by Consent

Individual Action

### **Purpose and Background:**

The High Line Canal Conservancy (HLCC) has been working since 2015 to harness multi-agency support to define the transformation of Denver Water's High Line Canal from an inefficient irrigation channel, to a thriving, managed recreational and stormwater resource. The transformation of the High Line Canal is an Organizational priority because it aligns with our water conservation ethic and will provide wide spread community benefits along the 71-mile corridor.

In 2017, the Board and local cities and counties surrounding the canal endorsed the HLCC led Vision Plan that outlines the goals associated with the High Line Canal transformation. This contract provides \$150,000 to support the HLCC in the completion of the Framework Plan that continues the work of the Vision Plan into a comprehensive document further defining future needs and responsibilities along the canal corridor. Denver Water will also contribute \$45,000 towards the development of a High Line Canal Recreation Guidebook. This effort will transfer the knowledge and responsibilities of the Guidebook production to the HLCC going forward.

Additionally, in Contract #503691, Denver Water pledges to match the \$15,000 grant awarded to the HLCC from the Pieces Foundation. The grant seeks to define smart water solutions along the High Line Canal and conduct research and public outreach for such solutions. This work is intended to accelerate the implementation of stormwater projects and increase public awareness and perceptions of the ecological benefits of stormwater treatment processes.

The agreement also describes additional responsibilities that the HLCC will perform to support coordination and communication around the canal to implement the framework plan and facilitate the transformation.


### **Budget and Schedule:**

The total amount of this contract is \$210,000, and the term of the contract period October 24, 2018 through October 24, 2019. Funds for this contract will come from the 2018 budget in Operations and Maintenance which has sufficient funds to pay the \$165,000 estimated to be needed in 2018. The remaining \$45,000 will be budgeted in the 2019 budget.


### **Recommendation:**

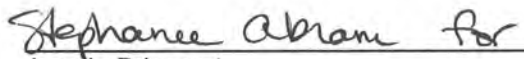
It is recommended that the Board approve Contract #503691 with the High Line Canal Conservancy in continued support of the High Line Canal transformation, including Framework development, Guide Book responsibility transfer and Pieces Grant contribution for the contract period October 24, 2018 through October 24, 2019 for a total contract amount not to exceed \$210,000.

**Approvals:**

  
\_\_\_\_\_  
Thomas J. Roode  
Chief Operating Officer

Respectfully submitted,

  
\_\_\_\_\_  
James S. Lochhead  
CEO/Manager

  
\_\_\_\_\_  
Angela Bricmont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: October 24, 2018

Board Item: II-B-3

## Intergovernmental Agreement with City of Arvada For Northwater Treatment Plant Contract 503675

Action by Consent

Individual Action

### Purpose and Background:

The purpose of this Board Item is to execute an Intergovernmental Agreement (IGA) with the City of Arvada (City), Contract 503675, in support of the Northwater Treatment Plant (NTP) construction. The IGA is necessary to remove the City's existing raw water lines and appurtenances previously constructed within an easement on Denver Water's Ralston site, which conflict with proposed NTP construction. The IGA identifies a new, shared raw water pipeline across the NTP site to continue to provide raw water to the City's existing Ralston water treatment plant (WTP), as well as Denver Water's Moffat WTP and North Table Mountain Water and Sanitation District's WTP. The IGA commits the City to sharing in the construction cost of the new 48-inch raw water pipeline. Construction of the pipeline, known as NTP Guaranteed Maximum Price (GMP) 2B, was previously approved by the Board on May 23, 2018 as an Amendment to Construction Agreement 503448.

The IGA also provides for connection to the City's existing potable water and sanitary sewer systems. The City's potable water supply will be used throughout construction and maintained thereafter as an emergency supply should NTP be unable to supply itself. The NTP connection to the City's sanitary system will be used throughout construction and serve as the permanent sewer service during operations. Costs associated with the permanent sewer service connection fees remain under negotiation with the City and its treatment provider, Metro Wastewater Reclamation District, and are therefore not yet included within the IGA. Costs associated with the potable water and sewer construction will be presented in future GMP 1B - Site Services as a competitively bid installation.

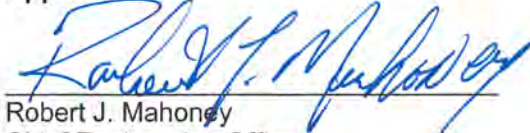
### Budget and Schedule:

The estimated reimbursement expected from the City is up to \$3,300,000, with the actual amount determined following construction of the improvements, based upon the cost sharing percentages identified within the IGA. This outside funding has been accounted for within the Total Project Cost presented to the Board on June 27, 2018. Construction of the IGA improvements is anticipated to be complete in mid-2019, with reimbursement by the City for its portion of the cost in late 2019.

### Recommendation:

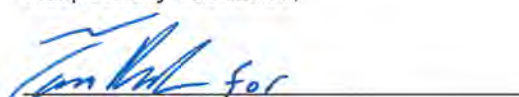
It is recommended that the Board approve the proposed IGA with the City of Arvada, which has an approximate value of up to \$3,300,000 reimbursed by the City to the NTP Business Unit.

### Approvals:

  
Robert J. Mahoney  
Chief Engineering Officer

  
Tom Roode  
Chief Operations/Maintenance Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

  
Angela Bricmont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: October 24, 2018

Board Item: II-B-4

## General Conditions Work Package Guaranteed Maximum Price (GMP) 1A For Northwater Treatment Plant

Action by Consent

Individual Action

**Purpose and Background:**

Denver Water (DW) is in the process of designing the NTP, to be constructed on DW's Ralston Reservoir property north of Golden, to supplement the Moffat Water Treatment Plant (WTP). The scope of work for the Project includes the construction of a 75-MGD initial capacity NTP, expandable to 150-MGD; and continuing Moffat WTP operations with a capacity of up to 60-MGD through 2040, as needed. Due to the phased construction anticipated under the Construction Services Agreement, the NTP is requesting approval of only the General Conditions WP/GMP1A at this time.

The purpose of this Board Item is to execute the General Conditions Work Package (WP), also known as GMP1A (Contract 503682), under the Construction Services Agreement with Kiewit (Agreement 503388) in support of advancing the Northwater Treatment Plant (NTP) Project (Project) through Task 5 – Construction.

**Budget and Schedule:**

The Total Construction Cost (TCC) is currently estimated at \$414M, including Owner's Contingency of \$20M, of the total \$520M Total Project Cost (TPC) approved by the Board on June 27, 2018. Figure 1, attached, shows the projected budget for each WP GMP, including GMP1A. Funds for WP GMP1A will come from the 2018 through 2024 budget for the NTP Business Unit.

The General Conditions WP includes a core team of management staff that oversee the entirety of construction and cannot be readily assigned to an individual WP. Lower-level staff, specifically those required to execute construction of one or more discrete WPs, have been removed from GMP1A and assigned to their respective WPs. Table 1 identifies the specific personnel roles within GMP1A, which together equate to approximately 17 full-time equivalents (FTEs) over the five-year construction period, with an estimated 21 FTEs at the peak of construction activities.

**Table 1: GMP1A Staffing Summary**

Role	Duration (weeks)	Role	Duration (weeks)	Role	Duration (weeks)
Project Mgr.	253	Safety Mgr.	216	Startup and Commissioning Mgr.	149
Deputy Project Mgr.	138	Controls Mgr.	225	Sr. Scheduler	230
Sr. Construction Mgr.	228	Business Mgr.	262	Project Engineer	241
Environmental Mgr.	156	Document Control Mgr.	274	Administrative (2)	374
Quality Mgr.	243	Procurement Mgr.	200	Subcontract Clerk	164
Temporary Structures (TSCD) Mgr.	170	Survey Mgr.	225	Clerks (3)	629

**Contingencies and Allowances:**

Contractor risks associated with the General Conditions WP are generally related to need for additional staff to effectively manage the Project, need to relocate staff to increase the labor pool available in the local market, and potential personnel equipment cost escalation. Deployment of additional staffing or equipment escalation, which require DW prior approval, have been budgeted within the Contractor Contingency at a total of \$1,577,088, resulting in a total Contractor Contingency allocated to date of \$2,005,151, and leaving \$25,994,849 unallocated Contractor Contingency remaining within the \$28M budget. Contractor subsistence and relocation has been budgeted as an allowance item, requiring DW approval and support documentation. This allowance is estimated at \$612,200.

Owner-retained risk associated with the General Conditions WP is generally associated with delayed decision-making and resulting extensions to the construction schedule. Any Owner-directed delay resulting in a duration extension to this WP/GMP1A will require a future Board-approved change order. As such, no allocation of Owner Contingency is requested as part of this GMP, resulting in \$19,553,183 remaining in the budgeted \$20M of Owner Contingency.

**Selection of Business Partner(s):**

Due to the nature of this WP, there were no subcontractors procured under the General Conditions WP/GMP1A. Future WPs that contain selection of subcontractors will include information on the selection process.

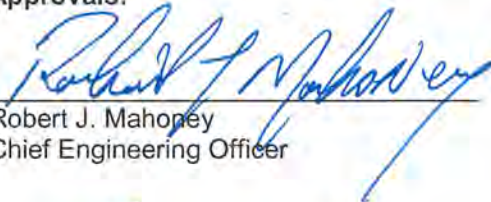
**S/MWBE Information:**

Due to the nature of GMP1A and the lack of subcontractor involvement, there is no S/MWBE participation goal for this WP. The lack of participation within GMP1A was accounted for within the original 8% S/MWBE participation goal for the NTP Construction.

**Recommendation:**

It is recommended that the Board approve proposed Contract 503682, General Conditions WP/GMP1A for the NTP Project, with a total not-to-exceed cost of \$23,413,118 including Contractor Allowance and Contingency.

**Approvals:**

  
Robert J. Mahoney  
Chief Engineering Officer

  
Thomas J. Roode  
Chief Operations and Maintenance Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

  
Angela Bricmont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: October 24, 2018

Board Item: II-B-5

## Conduit 16 Tunnels Installations Change Orders 4 & 5 to Contract 500815 (formerly 15453A)

Action by Consent

Individual Action

### **Purpose and Background:**

The Conduit No. 16 Replacement and Conduit No. 22 Abandonment Project consists of an 8.5-mile long, 84-inch diameter treated water pipeline that will replace two existing pipelines (Conduit No. 16 and Conduit No. 22). The existing conduits currently convey raw water from Ralston Reservoir to the Moffat Water Treatment Plant and were installed in 1937 and 1950, respectively. In the past several years the conduits have required repairs for joint leaks, and internal inspections have revealed extensive cracking. The replacement of Conduit No. 16 will deliver treated water from the future Northwater Treatment Plant at Ralston Reservoir through the Moffat facility to the distribution system.

The Conduit No. 16 Tunnel Installation Project consists of tunnel installations at five crossings, an open cut segment of approximately 5,495 feet of 84-inch diameter steel pipe, two 72-inch diameter butterfly valve vaults, cathodic protection, demolition, dewatering, and site restoration.

Change Order No. 4 is required to satisfy obligations of Denver Water's (DW) Temporary Construction Easement with Ace Express Coaches to provide a temporary parking lot for its buses. The new pipeline alignment is located in an area outside of DW's right-of-way and runs through the parking lot of Ace Express Coaches impacting parking spaces for its buses. A revised alignment was necessary to reduce the length and depth of the tunnel under Hwy 58 which saved costs. Change Order No. 4 includes labor, materials, and equipment to construct a temporary parking lot with 6-inches of No. 4 coarse aggregate.

Change Order No. 5 includes the reimbursement to the Contractor for all labor, equipment, potholing, surveying, demobilization, and delay charges for redesign of the Highway 93 crossing. During excavation of the Highway 93 tunnel launch shaft, it was discovered that the ground conditions were different than what was outlined in the Geotechnical Baseline Report. DW observed the site conditions and found the claystone was deeper than anticipated, causing the tunnel to be in two separate mediums which would not be conducive to tunneling. DW directed the Contractor to demobilize to further analyze other cost-effective options which included obtaining the approval from CDOT to open cut this section. This cost-effective open cut installation was completed in September which also eliminated any potential tunneling risks.

The Board increased the CEO's signing authority to \$750,000 on September 13, 2017. With this increase, the administration of contract changes have been effectively modified from the need to have Board approval, or ratification of small changes below this amount to only large contract changes over the signing authority. The \$750,000 limit also applies to a cumulative amount of contract changes which would then require Board approval upon exceeding this limit. This Board Item and approval falls into that category where contract changes on the Conduit No. 16 Project (change orders and amendments) total more than the \$750,000. Table No. 1 details the cumulative contract changes to date and includes Change Orders Nos. 4 & 5 for approval. Note, Table 1 includes Amendment No. 3 which will be reimbursed by the City of Wheat Ridge and Amendment No. 7 for emergency repair work on Conduit 303 that was added to this contract. These two amendments bring the total changes over the \$750,000 threshold, however once reimbursed, total changes would be well below the signing authority limit.

**Budget and Schedule:**

The amount requested for Change Order No. 4 is \$15,185.97 and the amount requested for Change Order No. 5 is \$51,347.66. The tables below show the history of Change Orders and Amendments.

<b>Table No. 1 – Change Orders to Contract 50815</b>			
<b>Item</b>	<b>Cost</b>	<b>Description</b>	<b>Comment</b>
Change Order No. 1	(\$39,369.00)	Delete Engineer's Field Office	
Change Order No. 2	\$9,507.62	Provide Railroad Liability Insurance and dig test pit for Hwy 93	Ratified on 6-13-18, includes Geotechnical investigation for Hwy 93 DSC.
Change Order No. 3	\$9,395.57	Reopen 44 <sup>th</sup> Avenue	Requested by the City of Wheat Ridge due to emergency repairs on Hwy 58 which caused traffic to spill on to 44 <sup>th</sup> Ave. 50% to paid by City of Wheat Ridge.
Change Order No. 4	\$15,185.97	Construct a temporary parking lot	Satisfy Temporary Construction Easement with Ace Express Coaches.
Change Order No. 5	\$51,347.66	Reimbursement to the Contractor for redesign of the Hwy 93 crossing	Differing Site Condition
<b>Total Contract Amount</b>	<b>\$46,067.82</b>		

<b>Table No. 2 – Amendments to Contract 50815</b>			
<b>Item</b>	<b>Cost</b>	<b>Description</b>	<b>Comment</b>
Amendment No. 1	\$0	Company name change	
Amendment No. 2	\$0	Indemnification for Bayou Ditch	
Amendment No. 3	\$557,335.63	Extend I-70 Tunnel	To be reimbursed by City of Wheat Ridge.
Amendment No. 4	\$79,144.15	Relocate Sanitary Sewer	Satisfy Temporary Construction Easement with Ace Express Coaches.
Amendment No. 5	\$0	RTD License Provisions	
Amendment No. 6	\$347,542.85	Install Conduit No. 22 Cross	Northwater Treatment Project early works
Amendment No. 7	\$51,470.46	Emergency Repairs on Conduit No. 303	Amended on a T&M basis to address immediate needed repair. Estimated repair for over \$200,000 and Reynolds Construction performed very efficiently. (Not part of Conduit No. 16 work, amended for emergency.)
<b>Total Contract Amount</b>	<b>\$1,035,493.09</b>		

Total Change Orders & Amendments \$1,081,560.91.

Funds for Change Orders Nos. 4 & 5 will come from the 2018 approved budget for the Conduit No. 16 Business Unit, which has insufficient funds of \$19,187,680 for the anticipated 2018 costs of \$23,000,000. The total 2018 variance in the amount of \$2,856,000 is being requested for Conduit 16.

Note regarding the variance:

The overall project costs are still on budget and estimated to be approximately \$5,000,000 below the 2017 estimate of \$85,000,000, however a variance is required for 2018 for the following reasons.

The 2018 approved projected budget of \$19,187,680 was estimated in September of 2017. In late 2017 a portion of the work was delayed until 2018 increasing the 2018 costs, along with the changes described above. The variance is the difference between the \$23,000,000 current project forecast minus the 2018 approved budget, plus the reimbursements and project transfers detailed below.

Amendment No. 3 totaling \$557,335.63 will be reimbursed by The City of Wheat Ridge, Amendment No. 7 totaling \$51,470.46 for emergency repairs and \$347,542.85 for Northwater Treatment Plant early work are not included in the variance being requested.

**Selection of Business Partner:**

Reynolds Construction, LLC was selected as the General Contractor through a quality based selection process which included four proposers. The original agreement was awarded at the April 11, 2017 Board Meeting, in the amount of \$21,441,000.

**S/MWBE Information:**

The Minority and Women Based Enterprise (MWBE) goal established for this construction project is 8% participation. Reynolds Construction, LLC. achieved 8.06% participation.

**Recommendation:**

It is recommended that the Board approve Change Order No. 4 and Change Order No. 5 to contract 500815 with Reynolds Construction, LLC for the Ace Express Coaches temporary parking lot for an addition of \$15,185.97 and the Hwy 93 tunnel delay costs for an addition of \$51,347.66, for a total amended contract amount not to exceed \$22,522,560.91.

**Approvals:**

  
Robert J. Mahoney  
Chief Engineering Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

  
Angela Bricmont  
Chief Finance Officer



# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: October 24, 2018

Board Item: V-A-1

## Water Efficiency Plan Update

### Strategic Plan Alignment

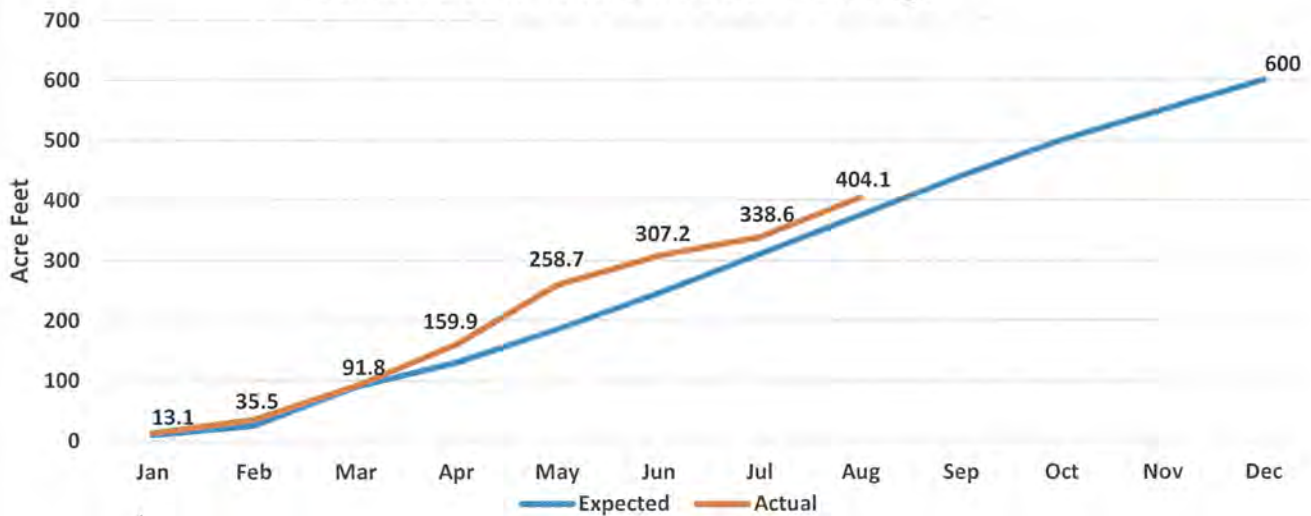
Lenses:  Customer Centric  Industry Leader  Long-Term View

The Water Efficiency Plan falls under the Excellent Operations perspective of Denver Water's Strategic Plan and supports our objective of having a visionary, adaptable long-range planning approach that considers the challenges of a warming climate and ensures diversity in supply and delivery, and efficiency in water use.

### Summary

Water Efficiency Plan projects are currently on track to attain the 2018 water savings target of 600 acre-feet (AF). The Water Efficiency Plan incorporates a portfolio of programs that can be adjusted as needed to respond to factors such as drought, customer participation and program cost.

### Cumulative 2018 Water Savings



### Background

2018 is the first year of Denver Water's five-year Water Efficiency Plan. The Water Efficiency Plan is being implemented by offering specific solutions to customers whose water use is above efficiency benchmarks. We presented those benchmarks to the Board in December 2017. The five-year program goal is 3,400 AF with a total target implementation cost of \$2,000/AF.

**Budget**

The 2018 budget is \$1.9 million (+\$400,000 applied labor) with a total five-year program cost of \$6.6 million. These costs include materials, services, reimbursements and staff time. Current budget spending through the third quarter was slightly over \$650,000 and programs are tracking at \$1,600/ AF.

**Approach**

The Water Efficiency programs approved by the Board in 2017 were grouped into projects based on scope and staffing. Each project is tracked based on progress, schedule and costs. Aggregate, cumulative water savings are reported to the executive team monthly. The projected water savings for the first half of 2018 was 245 AF with actual savings of 307 AF. The projected water savings for the third quarter of 2018 is an additional 177.7 AF, with a total cumulative savings of 484.9 AF.

Our staff projects cumulative water savings will meet the target. We also have recommendations for several scope and schedule modifications to increase water savings and reduce cost/AF, while not increasing our projected five-year spending. The attached Q2/Q3 project update document shows the projected 2018 savings compared to the goal, as well as next steps to improve or maintain progress. December is the next scheduled progress report to the Board.

When the Water Efficiency Plan was adopted in 2017, the public spaces outdoor efficiency section was a placeholder until stakeholders from various entities that work with public space around the metro area could be engaged to finalize benchmarks for efficiency. Our staff recommends the Water Efficiency Plan be amended to reflect recommendations from the stakeholder group. The attached public spaces outdoor efficiency update to the Water Efficiency Plan and cover page attachment describe what stays the same, what changes and which entities were involved in the stakeholder process.

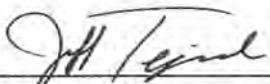
**Owner(s)**

Jeff Tejral - Water Resource Strategy

**Attachments**

1. Cover Page for Public Spaces Update
2. Public Spaces Outdoor Efficiency Update

Respectfully submitted,

  
\_\_\_\_\_  
Jeff Tejral  
Public Affairs Manager

  
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Mike King  
Chief External Affairs Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: October 24, 2018

Board Item: V-A-2

## Watershed Inventory Update

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### Strategic Plan Alignment

Lenses:  Customer Centric  Industry Leader  Long-Term View

The watershed inventory supports the Excellent Operations and Strong Financials perspectives of the Strategic Plan. The watershed inventory is the first step of a watershed planning approach to strategically guide investments and partnerships to protect our water supply, collection system infrastructure, and environmental stewardship. It meets the following guiding principles:

- Watershed planning is **customer-centric** and meets the needs of customers; 97% of whom identified that they see protecting healthy watersheds as an important Denver Water service.
- Denver Water is an **industry leader** in forest management and wildfire risk reduction. This approach will move Denver Water into a new era of leadership in source water protection.
- Watershed planning will occur on a rotating basis across the collection systems with a **long-term**, 20-year planning horizon, to identify threats and opportunities for strategic planning.

### Summary

The 2018 organizational work plan includes the watershed plan as an annual priority program, with the reporting metric of “75% watershed inventory complete for South Platte.”

The scope of the 2018 work plan priority includes the Upper South Platte and Blue River Watershed (Strontia Springs Reservoir collection system) Inventory (Inventory). The Inventory will include existing reports, data, GIS layers, and other information collected internally and from our watershed partners to be used in an assessment of the current state of the collection system in terms of existing and future threats and actions already planned or implemented.

The Inventory **schedule** is on track for a completion date of December 2018. The project was delayed by six months to focus on updating watershed monitoring strategies through Continuous Improvement. Work will continue in 2019 with an assessment of inventory data followed by a Denver Water-centric prioritization of threats and opportunities within the watersheds; anticipated completion June 2019. An Action Plan for the Upper South Platte and Blue River will then be developed by December 2020. This will include alignment and collaboration with watershed partners for suggested actions, budget forecasts, and estimated return on investments for watershed projects.

The **accomplishments** below were achieved through the efforts and support of every Division within Denver Water. Recognition goes out to the Executive Team

The **accomplishments** below were achieved through the efforts and support of every Division within Denver Water. Recognition goes out to the Executive Team in supporting staff time dedicated to these efforts and the staff that dedicated their time to this new initiative. The accomplishments below have provided the information and resources needed for the watershed planning efforts:

- Watershed Steering Committee: Guide planning effort and facilitate internal communication on watershed activities. Each Division is represented; also included in the Sustainability Plan.
- Watershed Scientist Hired: Alison Witheridge hired December 2017.
- IRP Watershed Toolbox of Options completed May 2018.
- Watershed Monitoring Rapid Improvement Event (RIE) held in March 2018.
- Watershed Monitoring Core Team: Formed by the RIE as a sub-group of the Watershed Steering Committee with staff across the organization to strategically guide watershed monitoring needs.
- 2018 Watershed Monitoring Program Update: Collaborative, need-based watershed monitoring plan in effect as of October 1, 2018.

## Background

The Watershed Steering Committee formed in March 2017 to guide watershed priorities in support of Denver Water's mission. Because of the size and diversity of the collections systems, watersheds were grouped into three general geographic scopes to facilitate planning:

- **Upper South Platte and Blue River**: Strontia Springs Reservoir collection system; includes Upper South Platte from headwaters to Waterton Canyon and all Lake Dillon watersheds including Ten Mile, Blue, and Snake Rivers.
- **Urban South Platte**: Upper South Platte downstream of Waterton Canyon through the Downstream Reservoirs, Chatfield Reservoir collection system, and Bear Creek Watershed.
- **North System**: Gross Reservoir collection system, include portions of Fraser and Williams Fork watersheds, South Boulder Creek, and Ralston Reservoir watersheds.

The Watershed Steering Committee selected the Upper South Platte and Blue River watersheds for the first watershed planning effort. The inventory, assessment, and prioritization will incorporate strategies from guidance set forth by [US Environmental Protection Agency](#), [US Forest Service](#), the [Upper South Platte Source Water Protection Plan](#), and new tools and indicators to prioritize and guide Denver Water investments. The results of this effort will be available to internal and external partners and customers, as security measures allow. Ongoing support from GIS, IT, and Public Affairs has been integral to the development of user-friendly, interactive deliverables. It is anticipated, at a minimum, that the inventory will be available internally through a GIS web service for all internal partners. Development and identification of Denver Water priorities and interests have and will continue to be vetted through the Watershed Steering Committee to accommodate comprehensive needs throughout the organization.

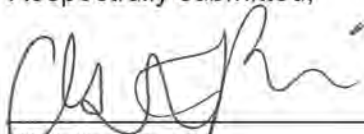
**Budget** The Inventory, Assessment, and Prioritization was contracted through a competitive bid process for \$250,000, of which the cost for the Inventory is approximately \$60,000. This was included in the 2018 budget. Development of the next phase, the Action Plan, is expected to take approximately 18-months, cost approximately \$250,000, and is included in the 2019 budget.

**Approach** Using an adaptive management approach, collection system watersheds will go through a planning process that includes five phases; inventory, assessment, prioritization, action planning, and evaluation (see Attachment). Continuous and ongoing efforts include monitoring and implementation of projects. The results and plans will be shared with stakeholders and available to the public, as security allows to encourage partnerships focused on leveraging resources for project implementation and grant writing. Regular updates will be provided to the Board.

**Owner(s)** Christina Burri, Water Resource Strategy, External Affairs  
Alison Witheridge, Water Resource Strategy, External Affairs

**Attachments** Watershed Planning Adaptive Management Diagram and Schedule

Respectfully submitted,



Christina Burri  
Watershed Scientist



Mike King  
Chief External Affairs Officer