

AGENDA

Denver Board of Water Commissioners

Denver Water Administration Building
1600 West 12th Avenue
Denver, CO
Board Room, Third Floor

Wednesday, November 8, 2017 9:00 a.m.

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 - Gail Cagle
2. Marston Director's Award – Tom Roode
3. Environmental Compliance Award – Brian Good

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. Minutes from October 11, 2017 - Open and Executive
2. Minutes from October 25, 2017 - Open and Executive
3. Williams Fork Dam Hydro Unit No. 1 Overhaul and Penstock Gate Maintenance – Contract 17013A
4. Ratification of Construction Contracts Change Orders and Amendments and Professional Services Agreement Amendments

B. Individual Approval Items

- | | | |
|---|---------------|------------|
| 1. Routine Water Quality Laboratory Testing Services
Contract 17161A | Tom Roode | 5 minutes |
| 2. Fourth Amendment for Purchase of Liquid
Chlorine Contract 14435A | Tom Roode | 5 minutes |
| 3. Conduit Nos. 57 & 58 Relocation from City Park
Golf Course to Perimeter Streets
Intergovernmental Agreement 503006 with the
City and County of Denver | Paul Peloquin | 5 minutes |
| 4. Water Efficiency Plan | Jeff Tejral | 30 minutes |

III. POLICY MATTERS

- | | | |
|------------------------------------|---------------|------------|
| A. Centennial Anniversary Update | Kathie Dudas | 15 minutes |
| B. 2018 Denver Water Pay Structure | Mary Faulkner | 10 minutes |

IV. EXECUTIVE UPDATE

A. CEO Update

B. CFO Update

C. Operations Update

- | | |
|--|-----------|
| 1. Recycling Plant Operations Improvements | Tom Roode |
|--|-----------|

V. BRIEFING PAPERS & REPORTS

A. Briefing Paper

- | |
|------------------------------------|
| 1. 2018 Denver Water Pay Structure |
|------------------------------------|

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: November 8, 2017

Board Item: II-A-3

Williams Fork Dam Hydro Unit No. 1 Overhaul and Penstock Gate Maintenance Contract 17013A

Action by Consent

Individual Action

Summary:

The Williams Fork Dam has a 3.0 MW hydropower turbine and generator that comprise Hydro Unit No. 1. A wheeled gate is installed on the upstream face of the dam at the inlet to the 66-inch diameter penstock pipe that supplies water from the reservoir to Hydro Units No. 1 and 2. The penstock gate isolates the penstock and Hydro Units No. 1 and 2 from the reservoir when the pipe or hydropower units need to be shut down for maintenance or an emergency. Hydro Unit No. 1 and the penstock gate were originally installed and put into service in 1959.

The turbine and generator of Hydro Unit No. 1 are operated on an almost continuous basis. As a result of continuous operation, the hydropower unit experiences wear and degradation over time that reduces the efficiency, power output and reliability of the hydropower unit. To correct the wear and degradation, Denver Water systematically performs preventative maintenance overhauls of these hydropower units to replace worn or defective components approximately every 10 years. Hydro Unit No. 1 was last overhauled in 2002, so it is past due for refurbishment. In addition to refurbishment of the hydropower unit, supporting equipment for the Hydro Unit No. 1 turbine and generator that is outdated and lacks redundancy will be upgraded and replaced as part of this project. Replacement parts for the outdated supporting equipment are either difficult to locate or are no longer made, which means if a failure of this equipment were to occur, there would be a significant unplanned outage of Hydro Unit No. 1.

Additionally, the fully submerged penstock gate has not been completely refurbished since it was put into service nearly 60 years ago. Due to the age and environment the penstock gate is exposed to, the gate requires a complete refurbishment to correct wear and degradation. Refurbishment of the penstock gate will ensure that it is in a like new condition to safely and reliably operate as originally designed for isolating and draining the penstock and hydropower units.

The completion of this project will ensure that this valuable revenue generating equipment is in a safe and proper condition and will operate reliably for another 10 years or more.

This project has been prioritized through the Programs and Systems process.

Budget Information:

The work begins in 2017 and will be completed in 2018. The 2017 Capital Improvement Plan for Williams Fork Dam Hydro Unit No. 1 Overhaul and Penstock Gate Maintenance Business Unit includes sufficient funds for the estimated \$125,000 for the 2017 expenditures. The remaining funds will be budgeted for the 2018 Capital Improvement Budget.

Selection of Business Partner:

Denver Water solicited bids from four General Contractors listed on the Prequalified Contractor List under the Mechanical Millwright discipline. This Contract was a restricted bid process using Invitation to Bids on the QuestCDN platform. On October 17, 2017, bids were received from two General Contractors. Gracon LLC of Colorado was selected based on the lowest cost bid.

S/MWBE Information:

The Minority and Women Business Enterprise (MWBE) goal established for this construction project is 5% participation. Gracon LLC achieved 1.73% participation. The MWBE goal for this project was not met because the specialized nature of the mechanical and electrical work required can only be performed by a narrow group of qualified contractors, which limits the options available to obtain MWBE participation.

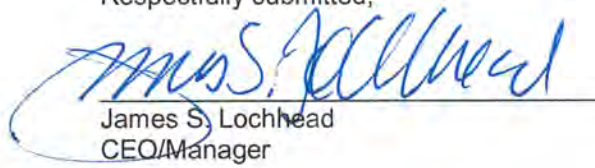
Recommendation:

It is recommended that the Board approve Contract 17013A with Gracon LLC for the Williams Fork Dam Hydro Unit No. 1 and Penstock Gate Maintenance project for the contract period November 8, 2017 to June 15, 2018 for a total contract amount not to exceed \$2,388,600.

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: November 8, 2017

Board Item: II-A-4

Ratification of Construction Contract Change Orders and Amendments and Professional Services Agreement Amendments

Action by Consent

Action

Summary:

The attached are Construction Contracts Change Orders and Amendments and Professional Services Agreement Amendments for Board ratification for September 2017 through October 2017.

Recommendation:


It is recommended that the Board ratify these Construction Contract Change Orders and Amendments and Professional Services Agreement Amendments.

Approvals:



Robert J. Mahoney
Chief Engineering Officer

Respectfully submitted,



James S. Lochhead
CEO/Manager

This list of Change Orders and Amendments is required per the September 13, 2017 resolution which raised the CEO's signing authority to \$750,000. These requirements may be modified by a future Board resolution.

DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: November 8, 2017

Board Item: II-B-1

Routine Water Quality Laboratory Testing Services Contract # 17161A

Action by Consent

Individual Action

Summary:

Denver Water's Water Quality Laboratory requires additional outside resources to perform water sample analysis of Lead, Total Kjeldahl Nitrogen (TKN), Volatile Organic Compounds (VOCs), Halo Acetic Acids (HAA5), Total Trihalomethanes (TTHMs), and Ammonia in drinking water samples. Denver Water intends to utilize the contractor on an as needed basis to supplement peaks in demand when staff or equipment is over capacity. This contract will also be used for required specialized testing that does not occur frequently enough to justify owning specialized equipment and completing the work in house. Lab management is also proactively working towards improving productivity allowing completion of this work in house, requiring less use of this contract in the future.

Budget Information:

The total amount of this contract is \$1,800,000.00, and the term of the contract is November 9, 2017 to October 31, 2021. Funds for this service/contract will come from the 2017 budget for the Water Quality Lab, which has sufficient funds to pay the \$75,000.00 estimated to be needed in 2017. The remaining \$1,725,000.00 will be budgeted in years 2018, 2019, 2020 and 2021.

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. This was the first time Denver Water has bid out these services. Denver Water received three proposals, one of which was from an SBE. Denver Water selected Colorado Analytical Laboratory as it provided the best value to Denver Water. Colorado Analytical Laboratory could provide a local testing facility to offer quick turnaround times on tests, the lowest price for lead tests, and the best integration and reporting capabilities to transfer data to Denver Water's Water Quality Laboratory and data management system.

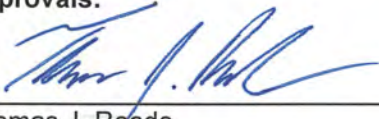
S/MWBE Information:

Contract is not in either the O&M Construction Related or the Covered Goods and Services MWBE programs. Colorado Analytical Laboratory is an SBE per federal guidelines.

Recommendation:

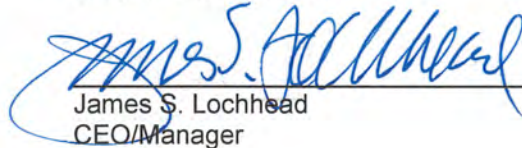
It is recommended that the Board approve Agreement 17161A with Colorado Analytical Laboratory for routine water quality laboratory testing services for the contract period November 9, 2017 to October 31, 2021 for a total contract amount not to exceed \$1,800,000.00.

Approvals:



Thomas J. Rode
Chief Operations Maintenance Officer

Respectfully submitted,



James S. Lochhead
CEO/Manager



Angela Bricmont
Chief Finance Officer

DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: November 8, 2017

Board Item: II-B-2

Fourth Amendment for Purchase of Liquid Chlorine Contract # 14435A

Action by Consent

Individual Action

Summary:

The State of Colorado Primary Drinking Water Regulations require the use of a disinfectant in the water treatment process. Disinfection is also necessary to comply with the Category 3 Standards for recycled water. Denver Water uses chlorine as a disinfectant at all of its treatment facilities.

Through the Northwater Treatment plant design process Denver Water is exploring the option of switching to different methods for disinfection in the treatment process. This change could be implemented at the other plants, and would be inherently safer and open up competition to more suppliers. The analyses to select the alternative will take several years to complete and implement. Given the lack of competition in this market, staff recommends maintaining the status quo pending the outcome of these analyses.

DPC Industries, Inc. is the current vendor, and is the only vendor in the Rocky Mountain region to provide the bulk and one-ton containers of chlorine utilized by Denver Water. They have agreed to maintain current pricing for the first of three additional years.

Budget Information:

The total amount of this amendment is \$1,800,000.00 with a time extension of three years. This results in a total contract amount of \$4,400,000.00, with the term of the contract from January 1, 2013 to December 31, 2020. Funds for this service/contract will come from the 2018 budget for Water Treatment, which has sufficient funds to pay the \$600,000.00 estimated to be needed in 2018. The remaining \$1,200,000.00 will be budgeted in years 2019 and 2020.

Selection of Business Partner:

Denver Water's bulk chlorine requirements under the current Contract No. 14435A were bid in 2012; Denver Water received two bids and DPC Industries, Inc. was the low bidder. It is recommend to amend the contract over rebidding the chlorine requirements because the supply of bulk chlorine in the Rocky Mountain region is extremely limited. DPC Industries, Inc. has a repackaging operation in the Denver metropolitan area, while the next closest NSF/ANSI Standard 60-certified bulk chlorine supplier is located more than 500 miles from Denver. DPC Industries, Inc. has agreed to maintain their current pricing structure for the first year of the three year amendment.


S/MWBE Information:

DPC Industries, Inc. is not an S/MWBE business.

Recommendation:


It is recommended that the Board approve the Fourth Amendment to Agreement 14435A with DPC Industries, Inc. for the purchase of liquid chlorine for an extension of the contract period through December 31, 2020 and for an addition of \$1,800,000.00 for a total amended contract amount not to exceed \$4,400,000.00.

Approvals:



Thomas J. Roode
Chief Operations Maintenance Officer

Respectfully submitted,



James S. Lochhead
CEO/Manager



Angela Brichmont
Chief Finance Officer

DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: November 8, 2017

Board Item: II-B-3

Conduit Nos. 57 & 58 Relocation from City Park Golf Course to Perimeter Streets Intergovernmental Agreement 503006 With the City and County of Denver

Action by Consent

Individual Action

Summary:

The City and County of Denver (City) has initiated a project for major storm water improvements to City Park Golf Course to improve flood protection for neighborhoods north and northwest of the course. This project is one of four City projects that comprise the Platte to Park Hill Storm Water Systems Program. The Platte to Park Hill Storm Water Systems Program is taking a comprehensive approach to flood control in the neighborhoods north and east of downtown while improving water quality and enhancing public spaces. In accordance with Denver Water's Operating Rules, Denver Water is obligated to fund wastewater initiated relocations when pipelines are located in the City's park properties. This obligation is waived if other agreements are in place. As of this date, no other agreements exist for this location.

This Agreement sets forth Denver Water's interaction and participation on the project, which will require the relocation of 3,650 feet of 42-inch diameter welded steel Conduit No. 57 and Conduit No. 58, which are both approximately 75 years old. The relocations are necessary due to significant changes in grading for storm water detention pond construction. The relocations into 26th Avenue & York Street will yield improved access and site conditions for the conduits versus attempting to coexist with drainage facilities. To increase the efficiencies of the construction process, the City's contractor will carry out the relocations as they construct the storm water drainage improvements.

Budget Information:

The conduit relocation work will begin in 2017 and be completed in 2018. Denver Water will reimburse the City for actual costs in 2018, once construction is complete. The 2018 Capital Improvement Plan for Main Relocations Business Unit includes sufficient funds for the estimated project expenditures of \$5,368,343.


S/MWBE Information:

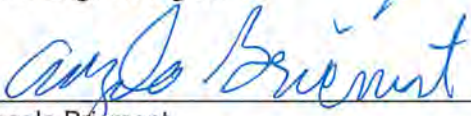
The City is administering the design-build contract for the City Park Golf Course improvement project and the Minority and Women Business Enterprise (MWBE) goals established for the project were 15% for Design and 17% for Construction. The City achieved 31.5% for Design and 17% for Construction.

Recommendation:

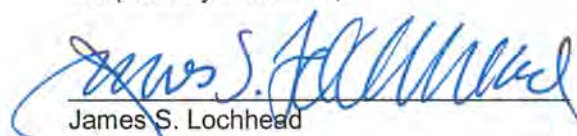
It is recommended that the Board approve Intergovernmental Agreement 503006 with the City and County of Denver in the amount of \$5,368,343.

Approvals:


Robert J. Mahoney
Chief Engineering Officer


Angela Brumont
Chief Finance Officer

Respectfully submitted,


James S. Lochhead
GEO/Manager

Water Efficiency Plan – Implementation Recommendations

Action by Consent

Individual Action

Strategic Plan Alignment:

Lenses: Check all that this initiative addresses: 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.

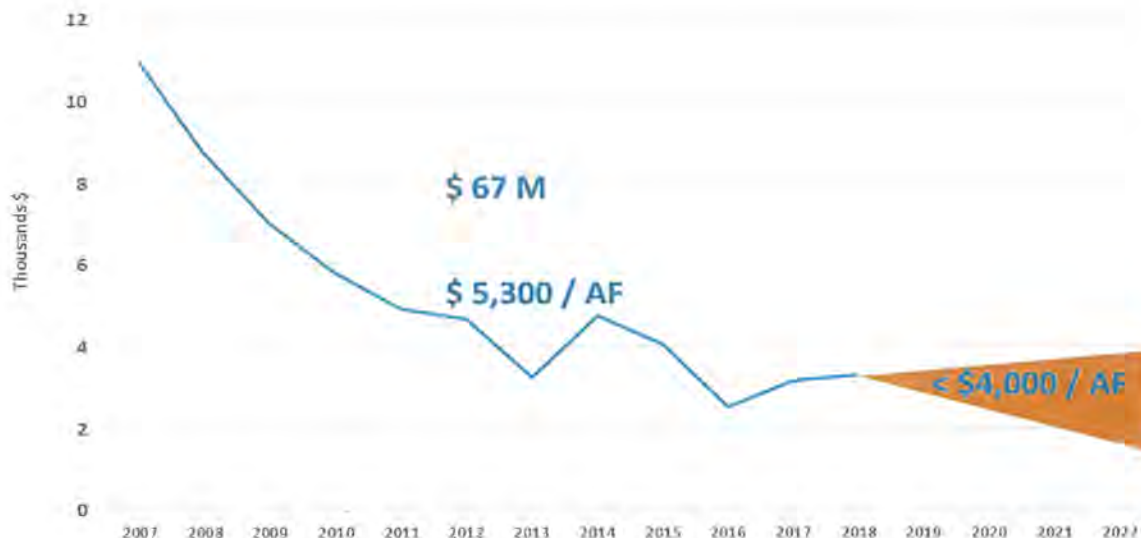
Summary:

The five-year Water Efficiency Plan (WEP) changes the focus from conservation across all customers to support customers who are less efficient water users via clear communication and specific program recommendations. This effort relies on targeted outreach to customers whose water use is above the benchmarks outlined in the WEP. By focusing on these customers rather than all customers, Denver Water can achieve reductions in demand by implementing cost effective water efficiency programs. The WEP aims to have an overall implementation cost of \$4,000/acre-foot (AF) or less. This document provides a recommendation for a five-year plan with an implementation cost of approximately \$2,000/acre-foot (AF) and total water savings of approximately 3,300 AF.

Background:

Water efficiency programs are an important element of Denver Water’s overall water supply strategy to meet the needs of our customers into the future. Although efficiency programs alone will not meet our future needs under any scenario, these programs are cost effective in deferring new supply development costs. For example, Denver Water assumes a base cost of \$12,500/AF for water rights acquisition, which does not include the capital costs of delivering the new supply. In contrast, the previous ten year conservation plan achieved total water savings of approximately 12,700 AF at an average implementation cost of \$5,300/AF, with total expenditures over the 10-year period of approximately \$67 million. The graph below shows historical and projected expenditures.

Cost Per AF Historic and Projected



Implementation Costs

The options below indicate the range of available programs and their associated costs. Option 2 is recommended by staff for the following reasons:

- Aligns with WEP workgroup recommendations
- Provides cost-effective water efficiency programs without sacrificing single-family outdoor and low income programs (latter two programs will be further evaluated for cost-savings opportunities)
- Attainable at existing staff levels

	Program	Cost	Water Savings	\$/AF
Foundational	Communicate Efficient Use	\$192,960	720	\$268
	Informational Water Budget	\$296,820	510	\$582
	SDC Efficiency Credit for New Construction	\$535,920	385	\$1,392
	Water Budget Based Rates	\$404,175	255	\$1,585
	Denver Parks IGA (already contracted – 2018 only)	\$372,750	42	\$8,875
	Total	\$1,802,625	1,912 AF	\$943/AF

Option 1: Foundational + Programs	Foundational	\$1,802,625	1,912	\$943
	SFR High Bill Audits	\$476,300	275	\$1,732
	SFR Indoor Rebates	\$1,200,000	300	\$4,000
	MFR Outdoor Rebates	\$42,805	35	\$1,223
	MFR Indoor Audits	\$276,480	135	\$2,048
	MFR Indoor Rebates	\$155,465	59	\$2,635
	Watersense Challenge	\$1,285,697	427	\$3,011
	CII Rebates	\$226,905	105	\$2,161
	Total	\$5,466,277	3,248 AF	\$1,683/AF

Option 2: Option 1 + SFR Outdoor & Low Income	Option 1	\$5,466,277	3,248	\$1,683
	Garden in a Box	\$360,494	30	\$12,016
	SFR Outdoor Rebates	\$440,387	62	\$7,103
	Low Income Retrofits	\$539,400	58	\$9,300
	Total	\$6,806,558	3,398 AF	\$2,003/AF

Option 3: Foundational + Expanded Programs from Option 1	Foundational	\$1,802,625	1,912	\$943
	SFR High Bill Audits (1 FTE)	\$1,212,400	700	\$1,732
	SFR Indoor Rebates	\$1,200,000	300	\$4,000
	MFR Outdoor Rebates (0.5 FTE)	\$85,610	70	\$1,223
	MFR Indoor Audits (1 FTE)	\$552,960	270	\$2,048
	MFR Indoor Rebates (0.5 FTE)	\$263,500	100	\$2,635
	Watersense Challenge (1 FTE)	\$4,215,400	1,400	\$3,011
	CII Rebates (1 FTE)	\$648,300	300	\$2,161
	Total	\$9,980,795	5,052 AF	\$1,976/AF

SFR: Single-Family Residential MFR: Multi-Family Residential CII: Commercial, Industrial, & Institutional

The 2018 budget request submitted by staff reflects funding for Option 2.

Recommendation and Program Monitoring

Staff recommends Option 2 from the table above with the 2018 budget request of \$1.9 million for programs and an estimated \$400,000 in staffing costs which will primarily be from existing staff. Monthly measurements of water savings achieved and year-to-date spending will be conducted to track performance. Major milestones for other program implementation projects will also be tracked and reported (e.g., implementation of customer communication program). An annual report will be completed each year showing progress in overall water savings and customer water use efficiency improvements.

Owner(s):

External Affairs

Attachments:

Water Efficiency Plan

Respectfully submitted,

Jeff Tejral

Division – External Affairs

Approvals:

M.K.

Mike King
Chief External Affairs Officer

Respectfully submitted,

James S. Lochhead

James S. Lochhead
CEO/Manager

Stephanie Abram for

Angela Bricmont
Chief Finance Officer