

# AGENDA

## Denver Board of Water Commissioners

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

**Wednesday, April 12, 2017 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

### 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 March 8, 2017 – Open and Executive
2. Minutes from March 22, 2017 – Open and Executive
3. Contract 14186A Assessment to the South Platte Water Related Activities Program, Inc. in Support of the Platte River Recovery Implementation Program
4. Contract 16967A Out of Service Chlorine Tank Inspections
5. 2016 Subscriber Fees to Water Research Foundation
6. Contract 17100A Hydropower Research Project
7. Contract 7804A Revised Foothills Agreement between Denver Water and Aurora

8. Contract 16947A Tibco Support Services
9. Contract 16948A Splunk Support Services
10. Contract 16994A-C Auto Body and Paint Repair
11. Contract 16995A-C Crane Rental Services
12. Contract 16987A Maintaining, Testing and Treating Water Systems in the South Platte Area
13. Contract 16044A Denver International Airport 2016 Vault Improvements – Amendment No. 1
14. Contract 17103A Design Phase Services for the Meadow Creek System Flume Upgrades Project
15. Contract 14978A Conduit No. 16 Replacement and Conduit No. 22 Abandonment – Amendment No. 5
16. Contract 15453A Conduit No. 16 Tunnel Installations
17. Contract 17101A Northwater Treatment Plant Design Package #5 – Architectural and Building Systems
18. Contract 17098A Northwater Treatment Plant Design Package #7 – Moffat Facility Improvements
19. Task 4A – 30% Design Services Amendments to Design Phase Service Agreements For Northwater Treatment Plant
20. Ratification of Construction Contract Change Orders and Amendments to Contracts/Agreements
21. Contract 16976A Hauling of Water Treatment Residuals
22. Contract 15488A Third Amendment to Legal Services Contract with Stern & Curray, LLC
23. Contract 16690A Purchase and Sale Agreement Lockheed Martin

**B. Individual Approval Items**

1. **Contract 16759A ORCA Project – Increment 2- Enterprise Financial System Procurement and Payment** Jonathan Spitze 20 minutes

- |   |             |            |
|---|-------------|------------|
| <b>2. Contract 17075A Gross Reservoir Expansion Project Owner's Representative Services</b> | Jeff Martin | 10 minutes |
|---|-------------|------------|

### **III. POLICY MATTERS**

- |                                      |                            |            |
|--------------------------------------|----------------------------|------------|
| <b>A. Supplier Diversity Program</b> | Katie Knoll/Dawn Hamm      | 30 minutes |
| <b>B. WISE Presentation</b>          | Lisa Darling/Rick Marsicek | 45 minutes |

### **IV. EXECUTIVE UPDATE**

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

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

#### **A. Briefing Paper**

1. Legislative Update
2. Twenty Percent (20%) Design Update of Northwater Treatment Plant (NTP)
3. Denver Water's Centennial Anniversary
4. Semi-Annual Update on Sustainability

#### **B. Report**

1. 2015-2018 ("On-Call") General Engineering, Construction Management, and Planning Services Contracts
2. Status of Contract Work and Consultant Services
3. Reporting of Staff Administered Construction Contract Contingencies and Allowances

## **VI. ADJOURNMENT**

## **VII. TRUSTEE MATTERS**

1. Approval of March 22, 2017 Trustee Meeting Minutes
2. Tier 2 Employee Contribution Rate Changes – Leslie Thompson (GRS) – 15 min

## **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: April 12, 2017

Board Item: II-A-3

## 2017 Assessment to the South Platte Water Related Activities Program, Inc. in Support of the Platte River Recovery Implementation Program Contract No. 14186A

Action by Consent

Individual Action

### **Summary:**

We are requesting approval of the annual assessment for Denver Water's membership in the South Platte Water Related Activities Program (SPWRAP) and consequently our continued participation in the 3-States Platte River Recovery Implementation Program (PRRIP). Membership in SPWRAP is required in order to receive continued Endangered Species Act (ESA) compliance and coverage for Denver Water's water depletions in the South Platte basin in Colorado. The Board previously approved this contract and amended it to cover assessments through 2019.

### **Background:**

On September 27, 2006, U.S. Secretary of the Interior Dirk Kempthorne signed the Record of Decision for the Final Environmental Impact Statement on PRRIP. The governors of the states of Wyoming, Colorado, and Nebraska signed the PRRIP document on January 1, 2007, initiating the official start of PRRIP. PRRIP is designed to allow existing and future water use to continue in a way that protects the endangered species in central Nebraska. If PRRIP is not successful, existing water uses can be severely impacted and the federal permitting of water supply projects in the Platte River basin will become much more difficult.

SPWRAP is a Colorado nonprofit corporation established by Colorado water users for the purpose of representing water users' interests in PRRIP. A Colorado water user must become a member in SPWRAP and pay an annual assessment to obtain the regulatory benefits provided by PRRIP. The funds generated by annual assessments are used to help the state meet its obligations under PRRIP. As long as the state meets its PRRIP obligations, members of SPWRAP are protected.

### **Budget Information:**

Annual assessment rates in SPWRAP have remained unchanged since 2010. Funds for this contract will come from the 2017 budget for Environmental Planning, which has sufficient funds to pay Denver Water's 2017 annual assessment of \$384,997.00. It is anticipated that Denver Water's annual assessment will increase in 2018. Environmental Planning will adjust our future budgets to reflect this increase.

### **Recommendation:**

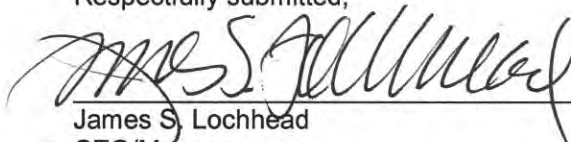
It is recommended that the Board approve the payment of \$384,997.00 for Denver Water's 2017 annual assessment to SPWRAP.

### **Approvals:**

Respectfully submitted,



Mike King  
Chief Planning Officer



James S. Lochhead  
CEO/Manager



Angela Brimont  
Chief Financial Officer

*Denver Water aspires to be the best water utility in the nation.*

Integrity :: Vision :: Passion :: Excellence :: Respect



# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-4

## Out-of-Service Chlorine Tank Inspections Contract # 16967A

Action by Consent

Individual Action

### **Summary:**

Foothills Water Treatment Plant is soliciting a mechanical contractor to perform out-of-service inspection of three 20 ton bulk storage pressurized chlorine tank systems.

This specific type of inspection is to be completed by a certified pressure vessel inspector every 6 years per the Bulk Chlorine Storage Tank Operation and Maintenance Manual. Denver Water has historically completed the inspection at 5 year intervals. The last inspection was completed in 2012. The inspections shall be conducted during normal operation of the plant to facilitate depleting and purging tanks prior to entry. One tank will be taken out of service for inspection at a time.

The preventive maintenance includes:

- Hydrostatic pressure testing
- Visual interior inspection of each tank for corrosion, cracking or pitting
- Ultrasonic testing to determine wall thickness
- Cleaning, inspecting, and testing of all the scales, alarms, valves, and internal piping associated with each tank.

### **Budget Information:**

The total amount of this contract is \$120,000.00, and the term of the contract is March 22, 2017 to December 31, 2017. Funds for this service/contract will come from the 2017 budget for 1007044425-Foothills Treatment Operations which has sufficient funds to pay the \$120,000.00 estimated to be needed in 2017.

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

Denver Water issued an Invitation for Bids (IFB) to the public on the Rocky Mountain E-Purchasing System (BidNet), on Denver Water's website, and through notifications to the SBE and MWBE communities. Denver Water received three bids; one was an SBE and none were an MWBE. Specialized Response Solutions was selected based on the lowest bid.


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


Specialized Response Solutions is neither an SBE nor certified MWBE. This contract does not meet the criteria of either the O&M Construction Related or the Covered Goods & Services MWBE programs where overall annual participation targets are set.

### **Recommendation:**

It is recommended that the Board approve Agreement 16967A with Specialized Response Solutions for chlorine tank inspection and testing for the contract period April 12, 2017 through December 31, 2017 for an amount not to exceed \$120,000.00.

**Approvals:**

  
\_\_\_\_\_  
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: April 12, 2017

Board Item: II-A-5

## 2017 Subscriber Fees for the Water Research Foundation

Action by Consent

Individual Action

### **Summary:**

The Water Research Foundation provides service to the water industry by conducting research on behalf of its member utilities, consultants and equipment manufacturers. This research has proven to be effective in advancing technology and in providing a science base for water-quality regulations. Since 1987, a key component of the Foundation's research funding has come through subscription contributions from member utilities. Denver Water is one of the original, founding subscribers of the Water Research Foundation.

Over the past several years, Denver Water has increased its participation in and use of services from the Water Research Foundation. CEO Jim Lochhead serves on its Board of Trustees. Director of Finance Angela Bricmont serves on a Technical Advisory Committee for Water Utility Finance. Several employees serve as experts on project advisory committees and have participated in workshops addressing water quality issues that affect utilities across the nation. In 2016, Denver Water also participated actively in four research projects that directly impact our operations:

- Assessing Water Demand Patterns to Improve Sizing of Water Meters and Service Lines
- Challenges and Practical Approaches to Water Reuse Pricing
- Long Term Water Demand Forecasting Practices for Water Resources and Infrastructure Planning
- Project Delivery Performance Evaluation and Decision Support Tool for Water and Wastewater Capital Projects

In addition, Denver Water employees have utilized our membership to participate in eight webinars and ordered 76 research reports over the past 12 months (a total research value of over \$40 million) to help deliver safe drinking water to our customers.

### **Budget Information:**

Subscriber fees to the Water Research Foundation are calculated based on total water produced in the previous year and population served. For Denver Water, the total amount due is \$145,953. Funds will come from the 2017 budget for Manager and Staff, which has sufficient funds to cover the expense (\$150,000 was budgeted).

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

This section is not applicable because these are subscriber fees.

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

This section is not applicable because these are subscriber fees.

### **Recommendation:**

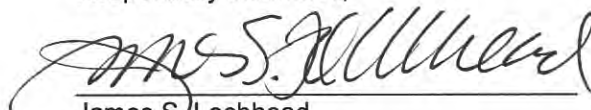
It is recommended that the Board approve 2017 subscriber fees to the Water Research Foundation for a total amount of \$145,963.

### **Approvals:**



Angela Bricmont  
Chief Financial Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager

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# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-6

## Contract with Emrgy, Inc. for a Hydropower Research Project Contract # 17100A

Action by Consent

Individual Action

### **Summary:**

Denver Water is proposing to engage in an innovative hydropower research project that will test a series of generators placed within the South Boulder Canal near Ralston Reservoir. Contract #17100A with Emrgy, Inc., is for the purchase of ten, 10kW hydropower generators. It also covers project management for the research of hydraulic impact and electrical output of the generators and coordination with a variety of project stakeholders including US Bureau of Reclamation, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Colorado School of Mines, Colorado Small Hydropower Association, Xcel Energy and United Power. Research will start in the summer of 2017 and is expected to conclude in the fall of 2017. Additional studies may continue into 2018 and 2019, but are beyond the scope of this Board Item. Once the project is complete, Denver Water plans to use the results of the research conducted by these parties to optimize placement of the hydrokinetic generators and use the energy generated by them behind the electric meter or transfer it to the electric grid through a power purchase agreement. The Board was provided more details about this project in a briefing paper that was part of the March 8, 2017 Board Meeting.

### **Budget Information:**

The total amount of this contract is \$330,000, and the term of the contract is April 12, 2017 through December 31, 2017. Funds for this contract will come from the 2017 budget for the Source of Supply System Capital Budget, which has sufficient funds. Denver Water's System Managers agreed to re-allocate a portion of funds from the Dillon Hydro Project, which is expected to come in under budget, for this research.

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

The technology proposed by Emrgy for this project is experimental and still under development. Therefore, a competitive selection waivers was obtained from Denver Water's procurement team. Oak Ridge National Lab provided initial funding to Emrgy to develop the magnetic gear box associated with the hydrokinetic units – this has been tested in the laboratory and is currently undergoing field testing at two locations in Georgia. This project will conduct research related to hydraulics of and electrical output from multiple hydrokinetic generators in series, recommend appropriate spacing and modifications for smooth flow in channels, and design components to collect electricity, condition it, and make it available for use.

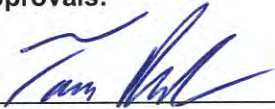
### **S/MWBE Information:**

Emrgy, Inc. is a Small Business Enterprise. Its owner has also completed application to be certified as a Woman-Owned Business and is awaiting final receipt of that certification.


### **Recommendation:**

It is recommended that the Board approve Contract #17100A with Emrgy, Inc. for provision of ten, 10kW hydrokinetic generators and project management of related research for the contract period April 12, 2017 through December 31, 2017 for a total contact amount not to exceed \$330,000.

**Approvals:**




Tom Roode  
Chief Operations Maintenance Officer



Brian Good  
Chief Administrative Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager



Angela Bricmont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-7

## Revised Foothills Agreement between Denver Water and Aurora Contract No. 7804A

Action by Consent

Individual Action

### **Summary:**

On October 11, 1983, Denver Water and Aurora (the "Parties") entered into an Agreement ("1983 Agreement") to establish their respective financial obligations for the operation and maintenance of the Foothills Project facilities and for the operation and maintenance of the jointly used Foothills Project facilities. Foothills Project facilities jointly used by the Parties consist of Strontia Springs Dam and Reservoir and attached appurtenances including the river gage station below the dam, the Platte Canyon access road between Kassler and Strontia Springs Dam, caretaker facilities, maintenance shop, security fencing, gates, reservoir buoy line, Conduit No. 26 and the Conduit No. 26 Intertie.

Under the 1983 Agreement, as amended on March 12, 2008, the Parties agreed to share costs for capital projects and operations and maintenance expenses based on an allocated percentage of 84.27% for Denver Water and 15.73% for Aurora. If a capital project exceeds the threshold amount, which is currently \$100,000, the Parties must negotiate a separate written agreement allocating cost responsibilities.

Generally, the Revised Foothills Agreement modifies the 1983 Agreement by: (1) increasing the threshold amount of capital projects between the Parties to \$250,000 to reduce the number of separate written agreements required between the Parties; (2) reducing the administrative charge which Denver Water may assess to Aurora; and (3) updating terminology and language used in the 1983 Agreement.

### **Budget Information:**

The Revised Foothills Agreement does not contain a total contract amount as it merely allocates financial responsibility for capital, operation and maintenance costs by assigning Aurora and Denver Water a percentage cost responsibility for shared Foothills Project facilities. The Revised Foothills Agreement does not impact the budget, only the thresholds for project approval. Sufficient funds have been budgeted in the 2017 budget for Denver Water's financial obligations within the respective business units for 2017. In addition, any work exceeding \$250,000 will be performed pursuant to a separate cost sharing agreement with Aurora.

### **Recommendation:**

It is recommended that the Board approve the Revised Foothills Agreement.

### **Approvals:**

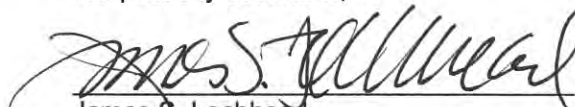


Mike King, Chief Planning Officer



Angela Brimont  
Chief Finance Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager

## DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-8

### Tibco Support Services Contract # 16947A

Action by Consent

Individual Action

#### Summary:

Denver Water has implemented TIBCO software to provide real-time integration services between many of our business applications. To improve support for our Tibco environments we are implementing a staffing model for our IT Data Services (ITDS) Team, where high demand and general skills are staffed internally and low demand and specialized skills are staffed with contract personnel. To accomplish this Denver Water is contracting with VarioTech, Inc. to provide personnel with administration, architecture and development experience to backup and/or augment the Denver Water team.

#### Budget Information:

The total amount of this contract is \$140,000 for a two-year term beginning April 12, 2017 through April 30, 2019. The cost of this service/contract will be offset by a permanent reduction in FTE employee count and corresponding reduction in payroll, effective in 2017.

#### Selection of Business Partner:

Denver Water issued a Request for Proposals (RFP) to the public on the Rocky Mountain E-Purchasing System (BidNet), on Denver Water's website, and through notifications to the SBE and MWBE communities. Denver Water received two proposals; one was an SBE and none were an MWBE. Variotech Inc. was selected based on the Vendor's Experience, Proposers Tibco Professional Program, Service Level, Understanding of Work and Price.

#### S/MWBE Information:

Variotech, Inc. is an SBE.

#### Recommendation:

It is recommended that the Board approve Agreement 16947A with Variotech Inc. for Tibco Support Services for the contract period April 12, 2017 through April 30, 2019 for a total contract amount not to exceed \$140,000.00.

#### Approvals:

DocuSigned by:



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Chris Dermody  
Chief Information Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager



Angela Bricmont  
Chief Finance Officer

## DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-9

### Splunk Support Services Contract # 16948A

Action by Consent

Individual Action

**Summary:**

Denver Water has implemented Splunk software to provide near real-time monitoring of our business applications and to provide near real-time operational intelligence of our water system operations. To improve support for our Splunk environments we are implementing a staffing model for our IT Data Services (ITDS) Team, where high demand and general skills are staffed internally and low demand and specialized skills are staffed with contract personnel. To accomplish this Denver Water is contracting with Turnberry Solutions, Inc. to provide personnel with administration, architecture and development experience to backup and/or augment the Denver Water team.

**Budget Information:**

The total amount of this contract is \$160,000 for a two-year term beginning April 12, 2017 through April 30, 2019. The cost of this service/contract will be offset by a permanent reduction in FTE employee count and corresponding reduction in payroll effective in 2017.

**Selection of Business Partner:**

Denver Water issued a Request for Proposals (RFP) to the public on the Rocky Mountain E-Purchasing System (BidNet), on Denver Water's website, and through notifications to the SBE and MWBE communities. Denver Water received five proposals; two were a SBE and one was an MWBE. Turnberry Solutions, Inc. was selected based on the Vendor's Experience, Vendor's Splunk Professional Program, Service Level, Understanding of Work and Price.

**S/MWBE Information:**

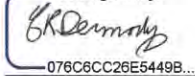
Turnberry Solutions, Inc. is not an SBE or MWBE

**Recommendation:**

It is recommended that the Board approve Agreement 16948A with Turnberry Solutions, Inc. for Splunk Support Services for the contract period April 12, 2017 through April 30, 2019 for a total contract amount not to exceed \$160,000.00.

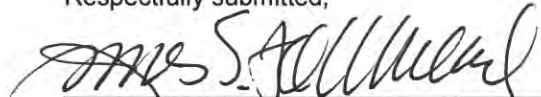
**Approvals:**

DocuSigned by:

  
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Chris Dermody  
Chief Information Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager



Angela Briemont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-10

## Auto Body and Paint Repair Contract # 16994A-C

Action by Consent

Individual Action

### **Summary:**

Denver Water uses an auto body contractor to repair fleet vehicles including passenger cars, light and heavy duty and utility trucks, light and heavy equipment and trailers. Repairs provided by the contractor include, but are not limited to fiberglass, paint and minor body repairs.

### **Budget Information:**

The total amount of this contract is \$150,000.00, and the term of the contract is April 12, 2017 to April 30, 2020. Funds for this service/contract will come from the 2017 budget for Fleet, which has sufficient funds to pay the \$35,000.00 estimated to be needed in 2017. The remaining \$115,000.00 will be budgeted in 2018, 2019 and 2020.

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

Denver Water issued a Request for Proposal to the public on Rocky Mountain E-Purchasing System (BidNet), on Denver Water's website, through notifications to the SBE and M/WBE community, and via direct solicitation to known vendors. Denver Water received two bids and both vendors were selected: Mazzo Corporation dba JM Auto Service and Colorado Kenworth, Inc. dba MHC Kenworth.

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

Mazzo Corporation dba JM Auto Service is an SBE but not a certified MWBE; Colorado Kenworth, Inc. dba MHC Kenworth is neither SBE nor certified MWBE. This service has been determined to fall within the Covered Goods & Services MWBE program, which has an overall 2017 target of 10% MWBE participation. MWBE participation targets are not set on an individual contract basis in this program.


### **Recommendation:**

It is recommended that the Board approve Contract 16994A (Internal Dollar Contract), 16994B and 16994C with Mazzo Corporation dba JM Auto Service and Colorado Kenworth, Inc. dba MHC Kenworth, respectively, for auto body and paint repairs for the contract period April 12, 2017 to April 30, 2020 for a total contract amount not to exceed \$150,000.00.

### **Approvals:**

  
Thomas J. Roode  
Chief Operations Maintenance Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

  
Angela Brimont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-11

## Crane Rental Services Contract # 16995A-C

Action by Consent

Individual Action

### **Summary:**

Denver Water requires a contractor to provide crane rental services on an as needed basis for both planned and unplanned work by Distribution, Water Treatment, Source of Supply, and Support Services. This contract will also be used to assist Trades, Fleet and Warehouse move equipment into their new buildings.

### **Budget Information:**

The total amount of this contract is \$150,000.00, and the term of the contract is April 12, 2017 to March 31, 2020. Funds for this service/contract will come from the various O&M sections that use the contract, including T&D, Trades, various Water Treatment Plants, and SOS facilities. These sections have sufficient funds to pay the \$40,000.00 estimated to be needed in 2017. The remaining \$110,000.00 will be budgeted in years 2018, 2019 and 2020.

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

Denver Water issued an Invitation for Bids (IFB) to the public on the Rocky Mountain E-Purchasing System (BidNet), on Denver Water's website, through notifications to the SBE and MWBE communities, and via direct solicitation to known vendors. Denver Water received two bids: RMS Cranes, LLC and Duffy Crane and Hauling, Inc. Both vendors were selected based on low price and the desire to have a back-up contractor.

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

Neither RMS Cranes, LLC nor Duffy Crane and Hauling, Inc., are SBE or certified MWBE. This service has been determined to fall within the O&M Construction Related MWBE program, which has an overall 2017 target of 50% MWBE participation. MWBE participation targets are not set on an individual contract basis in this program.

### **Recommendation:**

It is recommended that the Board approve Contract 16995A (Internal Dollar Contract), 16995B and 16995C with RMS Cranes, LLC and Duffy Crane and Hauling, Inc., respectively, for crane rental services for the contract period April 12, 2017 to March 31, 2020 for a total contract amount not to exceed \$150,000.00.

### **Approvals:**



Thomas J. Roode  
Chief Operations Maintenance Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager



Angela Brumont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-12

## Maintaining, Testing and Treating Water Systems in the South Platte Area Contract # 16987A

Action by Consent

Individual Action

### Summary:

Denver Water requires a state certified treatment plant and distribution system operator to treat, test and maintain eight potable water systems located in the South Platte River corridor where the Board owns rental properties.

### Budget Information:

The total amount of this contract is \$280,000.00, and the term of the contract is May 1, 2017 to May 31, 2020. Funds for this service/contract will come from the 2017 budget for Water Quality Operations, which has sufficient funds to pay the \$60,500 estimated to be needed in 2017. The remaining \$219,500.00 will be budgeted in years 2018, 2019 and 2020.

### Selection of Business Partner:

Denver Water issued an Invitation for Bids ("IFB") to the public on the Rocky Mountain E-Purchasing System (BidNet), on Denver Water's website, through notifications to the SBE and MWBE community, and via direct solicitation to known vendors. Denver Water received two (2) bids, both of which are SBE. An award was made to Habcon Services, Inc. as this Bidder presented the most competitive pricing. Habcon Services, Inc. is the incumbent for this service.

### S/MWBE Information:

Habcon Services, Inc. is an SBE. This contract does not meet the criteria of either the O&M Construction Related or the Covered Goods & Services MWBE programs where overall annual participation targets are set.


### Recommendation:

It is recommended that the Board approve Contract 16987A with Habcon Services, Inc. for maintaining, testing and treating water systems in the South Platte area for the contract period May 1, 2017 to May 31, 2020 for a total contract amount not to exceed \$280,000.00.

### Approvals:

  
Thomas J. Roode  
Chief Operations Maintenance Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

  
Angela Brimont  
Chief Finance Officer



# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-13

## Contract 16044A, Amendment No. 1 with Interstate Highway Construction for Denver International Airport 2016 Vault Improvements

Action by Consent

Individual Action

### **Summary:**

Denver Water maintains the potable and recycled water distribution systems at DIA. This infrastructure includes approximately 200 vaults on the ramp, apron, and taxiway areas. Many of the original hatches on these vaults are experiencing corrosion and other issues leading to a shorter than expected useful life. The vaults have undergone routine repairs over the years to address broken springs and mechanical devices on the access hatches. Rehabilitation projects and the replacement of the vault lids began in 2009 and includes all labor, materials, and equipment for new concrete lids, replacement hatches, ladders, etc.

Contract # 16044A awarded to Interstate Highway Construction for the amount of \$704,000 includes the rehabilitation of six vaults at DIA. Amendment No. 1 includes the rehabilitation of three additional vaults to this 2016 Vault Improvement project in the amount of \$396,100. In summary, these three vaults were deleted from the original scope of work and replaced with three other vaults due to DIA's availability schedule. Recently these deleted vaults became available again. Engineering and the System Manager see this is an opportune time to complete the work on all nine vaults.

### **Budget Information:**

Funds for Amendment No. 1 will come from the 2017 budget for DIA Vault Improvements, which is currently in the design stage. A project budget adjustment was recommended by the System and Program Managers in order to complete this work. An increase of contract time is also warranted with Amendment No. 1 and moves the final completion date from November 18, 2016 to June 9, 2017.

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

Interstate Highway Construction was selected for the original contract through the typical competitive bidding process. This is the first Amendment to the contract and will enable the addition of three (3) vaults to the original contract. The additional work is billed in accordance with the unit pricing established in the competitively-procured contract.

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

*There was a 5% Minority Women Business Enterprise (MWBE) participation goal required for the construction portion of the project. Interstate Highway Construction attained 5.02% MWBE participation.*

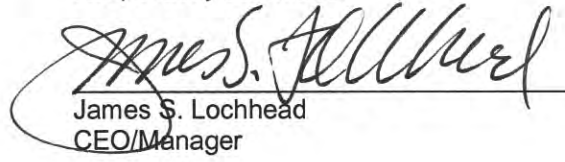
### **Recommendation:**

It is recommended that the Board approve Amendment No. 1 to Contract 16044A with Interstate Highway Construction for a total amended contract amount not to exceed \$396,100.

**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: April 12, 2017

Board Item: II-A-14

### **Contract 17103A with Ecological Resource Consultants, Inc. for the Design Phase Services for the Meadow Creek System Flume Upgrades Project**

Action by Consent

Individual Action

#### **Summary:**

The Meadow Creek Collection System is owned by the City of Englewood and Climax mine and is operated and maintained by Denver Water. As part of Settlement Agreement Contract 16893 with the US Forest Service for the Moffat Collection System Project Permitting, Denver Water is obligated to provide upgrades to the various flumes in the system that measure bypass flows.

This agreement is for engineering design services from survey and concept design through permitting and Final for Construction Contract Documents for the Meadow Creek System Flume Upgrades project. Within this agreement six different flumes will be evaluated, a determination will be made for replacement or rehabilitation of each flume, and the design work will be executed. The design will include the addition of telemetry and communications will be added to each location to convey flow data more frequently than is currently possible. Construction of this project is expected to be bid and constructed in 2018. The City of Englewood will reimburse Denver Water the full cost of labor, design, and construction of the upgrades.

#### **Budget Information:**

The work begins in 2017 and will be completed in 2018. The 2017 Capital Improvement Plan for Meadow Creek System Improvements Business Unit includes sufficient funds for the estimated \$132,363 for the 2017 expenditures. The remaining funds will be budgeted for the 2018 Capital Improvement Budget.

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

Denver Water solicited proposals via Denverwater.org, and also directly reached out to 24 qualified firms including 7 SBE/MWBE firms. Two proposals were received on March 14 2017 and reviewed and scored by a team of Denver Water evaluators in accordance with the quality based selection criteria listed in the Request for Proposals with the price assessed for reasonableness. Ecological Resource Consultants, Inc. of Colorado achieved the highest score, with an associated price of \$157,363.13.

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

*Due to the specialized nature of this work, no Minority and Women Business Enterprise (SBE/MWBE) goal was established for the design portion of the project, although SBE and MWBE firms were contacted to propose. Neither of the two proposals received were from SBE/MWBE firms.*

#### **Recommendation:**


It is recommended that the Board approve Contract #17103A with Ecological Resource Consultants, Inc. for the Design Services through Final for Construction Documents for the Meadow Creek System Flume Upgrades project for a contract period of April 12, 2017 through May 31, 2018 for a total contract amount not to exceed \$157,363.13.

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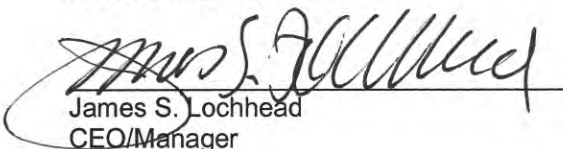
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**Approvals:**

  
\_\_\_\_\_  
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: April 12, 2017

Board Item: II-A-15

## **Contract 14978A, Amendment No. 5 with HDR-Dewberry Water Supply Partners for Conduit No. 16 Replacement and Conduit No. 22 Abandonment**

Action by Consent

Individual Action

### **Summary:**

The Conduit No. 16 Replacement and Conduit No. 22 Abandonment project is an 8.5-mile long, 84-inch diameter treated water pipeline that will replace two existing pipelines (Conduits Nos. 16 and 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 provide for treated water delivery from the future Northwater Treatment Plant at Ralston to storage and distribution at the Moffat Facility. Total project costs are estimated at \$85 million and the construction of this tunnel package is estimated at \$25 million.

On April 10, 2013, the Board approved Agreement 14978A for Engineering Design Services of Conduit No. 16 Replacement and Conduit No. 22 Abandonment in the amount of \$5,526,992. The competitive procurement allowed for, at Denver Water's discretion, amendment of construction services. Amendment Nos. 1 and 2 were no cost items addressing a contract time extension and revised consultant billing rates. Amendment No. 3 included additional design services to convert from the Denver Water 2011 CAD Standards to current Denver Water CAD Standards, and EE/I&C design services for five isolation valve vaults. Amendment No. 4 included revised corrosion protection design, development of a new design package, property assistance for two new valve vault sites, and additional public involvement services. The revised contract amount, with the base contract and Amendments 1 through 4, is \$5,795,478.

Amendment No. 5 covers Construction Phase Services in the amount of \$708,334 for the following work:

- Attend project meetings including but not limited to, pre-construction meeting, progress meetings, and stakeholder meetings.
- Review and respond to Contractor submittals and O&M Manuals.
- Review and respond to Contractor RFI's.
- Review and comment on contractor VE proposals.
- Review and comment on Work Change Directives, and Change Orders.
- Special inspection during tunneling construction, documenting daily work in Daily Logs.
- Periodic site visits to observe progress of work followed up with observation report.
- Onsite visit to contractor's selected pipe fabricator's shop to observe quality control procedures.
- Punch List walk through.
- Review and comment on Contractor As-Built Drawings.

### **Budget Information:**

The current amount of this contract is \$5,795,478, and the term of the contract is April 10, 2013 to December 31, 2018. Funds for this service/contract will come from the 2017 budget for Conduit No. 16 Replacement, which has sufficient funds to pay the \$300,000 estimated to be needed in 2017. The remaining \$408,334 will be budgeted in year 2018.

**S/MWBE Information:**

*Denver Water staff has encouraged the joint venture to add MWBE firms on all Amendments and Change Orders when possible, however the work that will be performed during the construction phase services by HDR/Dewberry is primarily executed by staff that completed the design. The joint venture did solicit Pinyon Environmental a MWBE firm that will observe the treatment of contaminated ground water. The joint venture has on previous Amendments achieved nearly a 5% MWBE participation through other MWBE's.*

**Recommendation:**

It is recommended that the Board approve the Fifth Amendment to Contract 14978A with HDR-Dewberry Water Supply Partners for Construction Phase Services for an addition of \$708,334 for a total amended contract amount not to exceed \$6,503,812.

**Approvals:**



Robert J. Mahoney  
Chief Engineering Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager



Angela Brimont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-16

## Conduit No 16 Tunnel Installations Contract 15453A

Action by Consent

Individual Action

### Summary:

The Conduit No. 16 Replacement and Conduit No. 22 Abandonment Project is an 8.5 mile long, 84-inch diameter treated water pipeline that will replace two existing pipelines (Conduit Nos. 16 and 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 to the Moffat Facility. The entire project will be delivered in four bid packages (Tunnels Installations, West, Central, and East Segments). Abandonment of Conduit No. 22 may be included in the east segment, or issued as a stand-alone bid package.

The general project scope for the Conduit No. 16 Tunnel Installations consists of:

Tunnel installations (96-inch minimum to 120-inch maximum diameter) at five crossings located at:

- State Highway 93 – Approximately 300 feet
- BNSF/RTD Mainline Railroad – Approximately 135 feet
- BNSF Spur Line Railroad – Approximately 50 feet
- State Highway 58 – Approximately 270 feet
- Interstate 70 – Approximately 1,460 feet

Open Cut Segments include:

- Approximately 5,495 feet of 84-inch diameter steel pipeline from West 44<sup>th</sup> Avenue through Clear Creek to the Applewood Shopping Center property
- Two 72-inch diameter butterfly valve vaults
- Cathodic protection, appurtenances, demolition, traffic control, dewatering, groundwater treatment, restoration, and abandonment of existing portions of the 42-inch reinforced concrete Conduit No. 16

### Budget Information:

The work begins in 2017 and will be completed in early 2019. The 2017 Capital Improvement Plan for Conduit No 16 Tunnel Installations Business Unit includes sufficient funds for the estimated expenditures for 2017. The remaining funds will be budgeted for the 2018 and 2019 Capital Improvement Budgets.

### Selection of Business Partner:

Prior to issuing requests for proposals, the project design team contacted contractors specializing in large diameter pipeline and tunnel construction. Several contractors submitted their firm's credentials and were prequalified and placed on Denver Water's Prequalified Contractor List under the Civil-Pipelines discipline.

Denver Water solicited proposals from four General Contractors listed on the Prequalified Contractor List under the Civil-Pipelines discipline. This Contract was a Quality Based Selection and a restricted proposal process using Instructions to Proposers on the QuestCDN platform. On March 27, 2017, proposals were received from four General Contractors. Proposals were graded on cost, project plan, schedule, and team qualifications. Scoring was done by individuals from Engineering and the external design team. Layne Heavy Civil, Inc. of Colorado achieved the highest score, with an associated price of \$21,441,000.

**S/MWBE Information:**

The Minority and Women Based Enterprise (MWBE) goal established for this construction project is 8% participation. Layne Heavy Civil, Inc. achieved 8.06% participation.


**Recommendation:**

It is recommended that the Board approve Contract 15453A with Layne Heavy Civil, Inc. for the Conduit No 16 Tunnel Installations for the contract period April 12, 2017 to January 29, 2019 for a total contract not to exceed \$21,441,000.

**Approvals:**

  
Robert J. Mahoney  
Chief Engineering Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

  
Angela Brichmont  
Chief Finance Officer



# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-17

## Contract 17101A with AECOM Technical Services, Inc. for Northwater Treatment Plant Design Package #5 – Architectural and Building Systems

Action by Consent

Individual Action

### Summary:

The Northwater Treatment Plant (NTP) is a new 150 million gallon per day (MGD) facility to be constructed on Denver Water's Ralston Reservoir property north of Golden on Colorado State Highway 93. Denver Water is engaging a Design Team to jointly execute the design of the NTP. The Design Team's responsibilities are selectively scoped and contracted in specific Design Packages (DPs) #1-7. The DPs and general scope of work are outlined below.

- DP #1 – Site and Civil Improvements
- DP #2 – Treatment Process Systems and Structures
- DP #3 – Electrical, Instrumentation, and Control Systems
- DP #4 – Ancillary Treatment Process Systems and Structures
- **DP #5 – Architectural and Building Systems**
- DP #6 – Post-Tensioned Water Storage Tanks
- DP #7 – Moffat Facility Improvements

The DP #5 Consultant will be responsible for design of all architectural and building systems associated with Task 4A – 30% Design Services for the NTP.

Denver Water has negotiated the scope and fee for DP #5 through a 30% level of design and will continue in a phased contract approach for future design milestones, based on the project schedule and the firm's performance. Each subsequent phase will be brought to the Board for consideration and approval. Table 1 presents the current status of the NTP Project Delivery.

**Table 1: NTP Project Delivery Tasks**

Major Tasks	Current Schedule
Task 1: Mobilization of Owner's Representative	Complete
Task 2: Design Phase Service Procurement (Design Team and CMAR)	Complete
Task 3: Preliminary Design (0 to 20% completion) Board Workshop at 20% Design Milestone	In Progress April 26, 2017
Task 4A: 30% Design Finalize Project Budget at 30% Design Milestone	3/2017 – 1/2018
Task 4B: Final Design (60 to 100% completion through bidding)	2/2018 – 2018-2021 (varies)
Task 5: Construction	2018 – 2023
Task 6: Transfer of Facility Ownership	2023

### Budget Information:

The total amount of this contract is \$1,026,814 with contingency. The term of the contract is March 31, 2017 to January 31, 2018. Funds for this service/contract will come from the 2017 budget for the Northwater Treatment Plant Business Unit, which has sufficient funds to pay the \$926,814 estimated to be needed in 2017. The remaining \$100,000 will be budgeted in year 2018.

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**Selection of Business Partners:**

On November 10, 2016, a Request for Statements of Qualifications (RFQ) was posted to denverwater.org, and 500 firms from DW's engineering contact list were also directly notified by mass email. Twenty-three firms attended a combined DP #5 and DP #7 Pre-Statement of Qualifications (SOQ) Meeting on November 17, 2016. On December 14, 2016, seven SOQs were received for DP #5 from the following firms:

- AECOM Technical Services, Inc. (AECOM)
- Davis Partnership Architects (Davis)
- Eidos Architects (Eidos)
- Oz Architecture (Oz)
- RNL Design (RNL)
- Short and Brennan Architects (S&B)
- Wong Strauch Architects (WS)

The SOQs were reviewed and evaluated by a team of Engineering and Operations, which determined that Proposals should be requested from the following firms:

- AECOM
- Davis
- Oz
- S&B

On January 17, 2017, a Request for Proposals was sent to the four shortlisted firms. A mandatory Pre-Proposal Meeting was conducted on January 18, 2017, with representatives of all four firms in attendance. On February 7, 2017, Denver Water received proposals from all shortlisted firms. The proposals were reviewed and evaluated by the same team of Engineering and Operations personnel, and a quality-based selection was made and documented. Denver Water evaluated the proposals to ensure the approach and rates are appropriate for the scope of work and that the proposed firms had the capabilities and resources to support the overall NTP Project.

Denver Water determined the AECOM team best met the evaluation criteria and provides the most value and innovation for the NTP. The negotiated rates and fee are presented herein for Board approval.

**S/MWBE Information:**


*The MWBE goal for DP #5 Task 4A – 30% Design was 8-12%. The AECOM team has 14.6% MWBE participation for Task 4A.*

**Recommendation:**

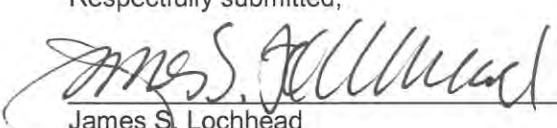
It is recommended that the Board approve Agreement No. 17101A with AECOM for DP #5 – Architectural and Building Systems design for the NTP for the contract period April 12, 2017 to January 31, 2018 for a total contract amount not to exceed \$1,026,814.

**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: April 12, 2017

Board Item: II-A-18

## Contract 17098A with Burns & McDonnell, Inc. for Northwater Treatment Plant Design Package #7 – Moffat Facility Improvements

Action by Consent

Individual Action

### **Summary:**

The Northwater Treatment Plant (NTP) is a new 150 million gallon per day (MGD) facility to be constructed on Denver Water's Ralston Reservoir property north of Golden on Colorado State Highway 93. Denver Water is engaging a Design Team to jointly execute the design of the NTP. The Design Team's responsibilities are selectively scoped and contracted in specific Design Packages (DPs) #1-7. The DPs and general scope of work are outlined below.

- DP #1 – Site and Civil Improvements
- DP #2 – Treatment Process Systems and Structures
- DP #3 – Electrical, Instrumentation, and Control Systems
- DP #4 – Ancillary Treatment Process Systems and Structures
- DP #5 – Architectural and Building Systems
- DP #6 – Post-Tensioned Water Storage Tanks
- **DP #7 – Moffat Facility Improvements**

The DP #7 Consultant will be responsible for design of all necessary improvements, excluding electrical, instrumentation, and control systems, at the Moffat Water Treatment Plant (WTP) for Task 4A – 30% Design Services for the NTP.

Denver Water has negotiated the scope and fee for DP #7 through a 30% level of design and will continue in a phased contract approach for future design milestones, based on the project schedule and the firm's performance. Each subsequent phase will be brought to the Board for consideration and approval. Table 1 presents the current status of the NTP Project Delivery.

**Table 1: NTP Project Delivery Tasks**

Major Tasks	Current Schedule
Task 1: Mobilization of Owner's Representative	Complete
Task 2: Design Phase Service Procurement (Design Team and CMAR)	Complete
Task 3: Preliminary Design (0 to 20% completion) Board Workshop at 20% Design Milestone	In Progress April 26, 2017
Task 4A: 30% Design Finalize Project Budget at 30% Design Milestone	3/2017 – 1/2018
Task 4B: Final Design (60 to 100% completion through bidding)	2/2018 – 2018-2021 (varies)
Task 5: Construction	2018 – 2023
Task 6: Transfer of Facility Ownership	2023

### **Budget Information:**

The total amount of this contract is \$1,426,012 with contingency. The term of the contract is April 12, 2017 to January 31, 2018. Funds for this service/contract will come from the 2017 budget for the Northwater Treatment Plant Business Unit, which has sufficient funds to pay the \$1,284,000 estimated to be needed in 2017. The remaining \$142,012 will be budgeted in year 2018.

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Preliminary Design Services with the DP01 and DP02 Consultants, with the DP03 Consultant Task 3 contract subsequently approved on August 24, 2016. The DP06 and CMAR contracts for Task 3 were approved by the Board on October 12, 2016. The Board approved the DP04 contract for Task 3 on November 9, 2016.

All firms were selected via competitive solicitation. The OR and DP Consultants were selected using a Request for Proposals published through denverwater.org; while the CMAR was selected using a two-step process including a Request for Statements of Qualifications followed by a Request for Proposals.

**S/MWBE Information:**

Goals were established for each DP Consultant contract prior to initiation of procurement. There is no goal set for the DP06, CMAR, or OR contract due to the type of services provided; however, goals for construction S/MWBE participation will be identified in the NTP CMAR Construction Phase Agreement prior to execution. To date, all DP Consultant contracts are meeting or exceeding their participation goals, as identified in Table 2. Although DP06 has no MWBE participation goal, SBE participation is projected to be approximately 64% for Task 4A.

**Table 2: NTP Contract Amendments MWBE Goals and Participation**


Contract	Firm	MWBE Goal	Task 3 MWBE Participation (Actuals)	Task 4A MWBE Participation (Projected)
DP01	AECOM	15%	24.0%	21.1%
DP02	CH2M	2-5%	6.1%	8.5%
DP03	Carollo	4-8%	5.2%	14.7%
DP04	Tetra Tech	2-5%	3.0%	1
DP06	Brown/Caldwell	0%	0%	0%
CMAR	Kiewit	0%	0%	0.6%
OR	Jacobs	0%	0%	1.2%


<sup>1</sup>Services for DP04 have been combined with DP02 for this amendment and future phases of work.


**Recommendation:**

It is recommended that the Board approve the Amendments to Agreements detailed in Table 1 for an addition of \$18,030,101 for a total amended contract amount not to exceed \$28,533,286.

**Approvals:**

  
 Robert J. Mahoney  
 Chief Engineering Officer

Respectfully submitted,  
  
 James S. Lochhead  
 CEO/Manager

  
 Thomas J. Roode  
 Chief Operations and Maintenance Officer

  
 Angela Bricmont  
 Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-19

## Task 4A – 30% Design Services Amendments to Design Phase Service Agreements For Northwater Treatment Plant

Action by Consent

Individual Action

### Summary:

The Northwater Treatment Plant (NTP) is a new 150 million gallon per day (MGD) facility to be constructed on Denver Water's Ralston Reservoir property north of Golden on Colorado State Highway 93. Denver Water has engaged multiple discrete design package (DP) consultants, an Owner's Representative (OR), and a Construction Manager-at-Risk (CMAR) to execute the design phase services for the NTP. The design reached a 20% milestone on March 31, 2017, with the existing Agreements ending on that same date.

The purpose of this Board Item is to execute Task 4A – 30% Design Phase Services Amendments to the existing design-phase services Agreements to support advancing the NTP design from 20% to 30% completion, and to extend the agreement completion dates. The specific Contracts, Amendments, and values are presented in Table 1.

**Table 1: NTP Contract Amendments Summary**

Contract	Contract #	Amendment #	Firm	Current Contract Value	Proposed Amendment Value	Total Contract Value
DP01	16811A	2	AECOM	\$1,050,137	\$1,673,338	\$2,723,475
DP02	16836A	2	CH2M	\$2,040,814	\$4,168,237 <sup>1</sup>	\$6,209,051
DP03	16851A	2	Carollo	\$1,798,675	\$2,364,002 <sup>2</sup>	\$4,162,677
DP04	16943A	2	Tetra Tech	\$369,374	<sup>3</sup>	\$369,374
DP06	16911A	1	Brown/Caldwell	\$335,280	\$999,082	\$1,334,362
CMAR	16912A	2	Kiewit	\$1,206,814	\$3,375,102	\$4,581,916
OR	16676A	4	Jacobs	\$3,702,091	\$5,450,340	\$9,152,431
<b>Total</b>					<b>\$18,030,101</b>	<b>\$28,533,286</b>

<sup>1</sup>Includes ancillary process systems and structures design previously covered under DP04 and \$200,000 in Owner-controlled contingency.

<sup>2</sup>Includes design of electrical, instrumentation, and control systems at NTP and Moffat (other Moffat Facility Improvements are included in DP07).

<sup>3</sup>Services for DP04 have been combined with DP02 for this amendment and future phases of work.

### Budget Information:

The total amount of these amendments is \$18,030,101, and the contract period for all DP amendments is March 31, 2017 through January 31, 2018. The contract period for the OR amendment is March 22, 2017 through January 31, 2018, and for the CMAR amendment is April 15, 2017 through March 15, 2018. The 2017 Capital Improvement Plan for the Northwater Treatment Plant Business Unit does not include sufficient funds for the project; however, based on current progress and schedule projections, is anticipated to be expended. A budget adjustment has been recommended by the System and Program Managers.

### Selection of Business Partners:

On March 23, 2016, the Board approved the contract for Tasks 1 and 2 with the NTP OR to provide Project Management and Procurement Services. On August 10, 2016, the Board approved the contract for Task 3 –

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**Selection of Business Partners:**

On November 10, 2016, a Request for Statements of Qualifications (RFQ) was posted to denverwater.org, and 500 firms from Denver Water's engineering contact list were also directly notified by mass email. Twenty-three firms attended a combined DP #5 and DP #7 Pre-Statement of Qualifications (SOQ) Meeting on November 17, 2016. On December 14, 2016, two SOQs were received for DP #7 from the following firms:

- Burns & McDonnell (B&M)
- HDR

Both SOQs were reviewed and evaluated by a team of Engineering and Operations, which determined that Proposals should be requested from B&M and HDR. On January 10, 2017, a Request for Proposals was sent to both firms. A mandatory Pre-Proposal Meeting was conducted on January 18, 2017, with B&M and HDR representatives in attendance. On February 7, 2017, Denver Water received proposals from both firms. Both proposals were reviewed and evaluated by the same team of Engineering and Operations, and a quality-based selection was made and documented. Denver Water evaluated the proposals to ensure the approach and rates are appropriate for the scope of work and that the proposed firms had the capabilities and resources to support the overall NTP Project.

Denver Water determined that a combined team, including B&M as prime consultant and HDR as a subconsultant, best met the evaluation criteria and provides the most value and innovation for the NTP. The negotiated rates and fee are presented herein for Board approval.

**S/MWBE Information:**


*The MWBE goal for DP #7 Task 4A – 30% Design was 8-10%. Due to the combined team structure, B&M has 7% MWBE participation for Task 4A, and will work with Denver Water to identify additional meaningful opportunities for future Tasks.*

**Recommendation:**


It is recommended that the Board approve Agreement No. 17098A with Burns & McDonnell, Inc. for DP #7 – Moffat Facility Improvements design for the NTP for the contract period April 12, 2017 to January 31, 2018 for a total contract amount not to exceed \$1,426,012.

**Approvals:**

  
Robert J. Mahoney  
Chief Engineering Officer

  
Thomas J. Roode  
Chief Operations and Maintenance Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

  
Angela Brimont  
Chief Finance Officer

## DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-20

### Ratification of Construction Contract Change Orders and Amendments to Contracts/Agreements

Action by Consent

Action

Information

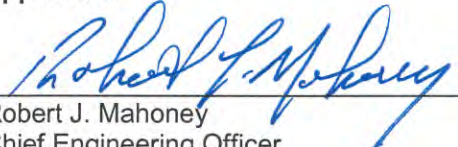
#### Summary:

The attached are Construction Contracts Change Orders and Amendments to Contracts/Agreements for Board ratification for February and March 2017.


#### **Recommendation:**

It is recommended that the Board ratify these Construction Contract Change Orders and Amendments to Contracts/Agreements.

#### **Approvals:**

  
Robert J. Mahoney  
Chief Engineering Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-21

## Hauling of Water Treatment Residuals Contract # 16976A-C

Action by Consent

Individual Action

### **Summary:**

Denver Water's potable water treatment plants generate approximately 12,000 cubic yards of residuals annually that need to be hauled to the landfill for disposal. Currently, residuals from Marston are hauled to the landfill at Foothills Treatment Plant. However, in the near future, the landfill at Foothills will no longer be used and residuals from both Foothills and Marston Treatment Plants will be hauled to an off-site landfill. A cost benefit analysis was completed by Finance showing that no longer using the Foothills disposal site would result in cost savings in both labor, (by repurposing the dedicated T&D crew to work on other projects), and in capital (by avoiding equipment purchases used to maintain the landfill). Currently, residuals from Moffat Treatment Plant are pumped to Ralston and then hauled to the landfill by Source of Supply staff. Once the Conduit 16 project starts in 2017, residuals from Moffat will also need to be hauled from Moffat to an off-site landfill.

### **Budget Information:**

The total amount of this contract is \$600,000.00, and the term of the contract is April 12, 2017 to March 31, 2020. Funds for this service/contract will come from the 2017 budget for Water Quality Treatment Admin, which has sufficient funds to pay the \$140,000.00 estimated to be needed in 2017. The remaining \$460,000.00 will be budgeted in years 2018, 2019 and 2020.

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

Denver Water issued an Invitation for Bids (IFB) to the public on the Rocky Mountain E-Purchasing System (BidNet), on Denver Water's website, and through notifications to the SBE and MWBE communities. Denver Water received seven bids; one was an SBE and four were MWBE. Kebb Trucking, LLC and Iron Woman Construction and Environmental Services were both selected based on being the lowest price.

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

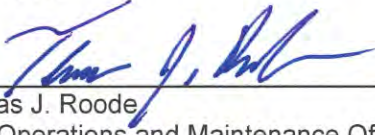
Kebb Trucking, LLC is neither an SBE nor certified MWBE. Iron Woman Construction and Environmental Services is a certified MWBE. This service has been determined to fall within the O&M Construction Related MWBE program, which has an overall 2017 target of 50% MWBE participation. MWBE participation targets are not set on an individual contract basis in this program.

### **Recommendation:**

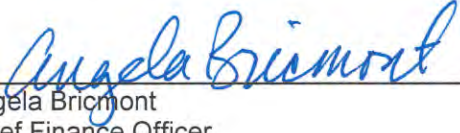
It is recommended that the Board approve Agreement 16976A (Internal Dollar Contract), 16976B and 16976C with Kebb Trucking, LLC and Iron Woman Construction and Environmental Services, respectively, for hauling of waste water residuals for the contract period April 12, 2017, through March 31, 2020, for an internal dollar amount not to exceed \$600,000.00.



**Approvals:**

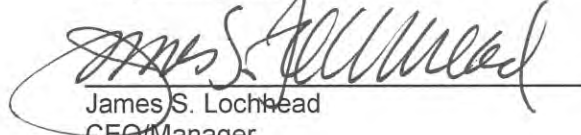


Thomas J. Roode  
Chief Operations and Maintenance Officer



Angela Brimont  
Chief Finance Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-22

## Third Amendment to Contract 15488A with Stern & Curray, LLC

Action by Consent

Individual Action

### **Summary:**

In 2014 Denver Water engaged Stern & Curray, LLC to provide expertise pertaining to H1B Visas and permanent residency applications for non-citizen employees of Denver Water and their family members. H1B Visas are available to employees when work is so specialized that U.S. citizens qualified for the work cannot be found. At the present time, Denver Water has four employees who are working under H1B Visas with the goal of obtaining permanent resident status. The legal work involved is continuous; H1B Visas must be renewed every three years and the permanent residency process includes numerous deadlines over several years. The process has been further complicated by recent and ongoing changes to U.S. immigration policies, some of which have required immediate responses.

### **Budget Information:**

This amendment extends the term of the contract through April 12, 2019. The approved budget for the extension is \$30,000, which will cause the approved budget to exceed \$100,000, so Board approval is required. Funds for this service will come from the 2017 budget for object account number 621060, OGC Professional Services, which has sufficient funds to pay the amount estimated to be needed in 2017. Expenditures in future years will be budgeted as needed.

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

Denver Water engaged Stern and Curray in 2014 by means of a competitive selection process. The firm has provided excellent legal service since then. Given the continuous nature of the issues involved with the four employees and the shifting legal landscape in this area of the law, extending the term of the contract appears to be the most effective means to protect Denver Water's legal interests.

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

Stern & Curray is a small business enterprise.

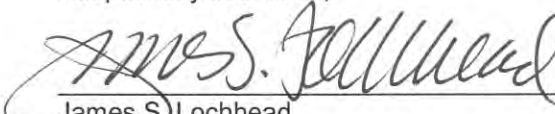
### **Recommendation:**

It is recommended that the Board approve the Third Amendment to Contract No. 15488A with Stern & Curray, LLC for legal services, extending the contract term through April 12, 2019 and adding \$30,000 to the budgeted amount, for a total budgeted amount of \$120,000.

### **Approvals:**

  
\_\_\_\_\_  
Patricia L. Wells  
General Counsel

Respectfully submitted,

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

  
\_\_\_\_\_  
Angela Briemont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-A-23

## Agreement for Sale of 53 acres of Platte Canon Reservoir property to Lockheed Martin Purchase and Sale Agreement Contract #16690A

Action by Consent

Individual Action

### Summary:

On October 28, 2015, the Board of Water Commissioners approved a declaration of surplus property ("Resolution") for 53 acres of land in Waterton Canyon adjacent to the Lockheed Martin Operations complex. The property borders the South Platte River and was originally acquired under the Platte Canon Reservoir project. The Resolution's surplus designation and potential conveyance to Lockheed Martin was based on the property being valued at the proposed Industrial zoning, contingent on resolution of long-standing drainage and erosion and a long term cigarette smoking solution to prevent the use of Board property by Lockheed Martin's employees and customers to smoke. The parties have agreed to include these issues in a separate agreement, the Adjoining Property Agreement (APA) rather than including these provisions in the Purchase and Sale Agreement.

The APA includes Denver Water's commitment to cost share 50% in the design and construction of a sedimentation basin which is intended to provide long term solution for drainage and erosion issues. Denver Water's commitment in the APA will not to exceed \$60,000. The APA also establishes on-going regular communication, cooperation and coordination with Lockheed Martin to address issues as neighbors of adjacent properties, including smoking on Denver Water property, fencing, Property rezoning and licensed Property use prior to the closing scheduled for September 22, 2017. The APA was executed by the Chief Engineering Officer, effective March 31, 2017.

Purchase and Sale Agreement Contract #16690A commits Lockheed Martin to a cash purchase of the 53 acres at the appraised value of \$2,941,000 plus a 2% administration fee of \$58,820 for a total of \$2,999,820. The property is being sold in as-is condition with a restrictive covenant limiting the Property to Industrial use.

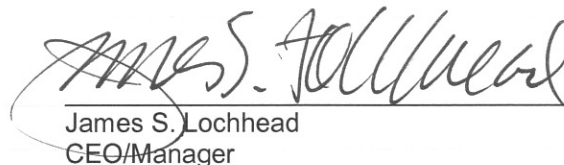
### Recommendation:

It is recommended that the Board approve the Purchase and Sale Agreement Contract # 16690A for \$2,999,820.

### Approvals:

Respectfully submitted,

  
Robert J. Mahoney  
Chief Engineering Officer

  
James S. Lochhead  
CEO/Manager

  
Angela Brimont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12<sup>th</sup>, 2017

Board Item: II-B-1

## ORCA Project – Increment 2 Enterprise Financial System Procurement and Payment 1<sup>st</sup> Amendment, Contract # 16759A

Action by Consent

Individual Action

### Summary:

In order to achieve the objectives of the 2nd Increment of the ORCA (Organization Reporting & Communication Alignment) project, the Enterprise Financial System (JDE) Procurement and Payment project will be completed.

The executive sponsors of this project recognized, due to complexity and unknowns, that we needed to split this project into two separate phases, recognizing that this could add time and dollars but that we agreed added due diligence was necessary for the project's success given all the parts of the business that needed to align and support it, including efforts of the Procurement Value Stream.

The first phase of this project has been completed. As a part of that phase, we have performed the following actions:

- Discovery – The process to understand the needs of the organization and define the project scope. This includes capture of current state as well as the desired state
- Detailed Functional Requirements – Development of the detailed requirements necessary to achieve the desired state as defined during the Discovery work
- Design – This process will deliver a system design that will meet the detailed functional requirements. This design will represent what will be built and delivered
- Development of cost and timing estimates for Phase 2

We are now prepared to move forward with Phase 2 of this project. As a part of Phase 2, we will be performing the following actions:

- Construction – This process of building out of the system. This includes configuration, development, and customization work required to meet the requirements and design gathered in Phase 1. Additionally, it will include all necessary testing, change management, and training to prepare the organization for deployment of the new solution.
- Transition – This include the deployment of the solution, post-deployment support, and the hand-off of that solution to operation staff for continued maintenance and support.

### Budget Information:

During the 2016 budget development process, budget of \$500,000 was set for vendor services needed to complete the Enterprise Financial System Procurement, and Payment project. To fulfill this need, Denver Water issued a Request for Proposal (RFP) and engaged an open-competitive selection process, resulting in the selection of Global Systems Integration, Inc. (GSI). GSI's initial bid for this work was \$494,875, however, their proposed implementation schedule was unrealistically aggressive. Following selection, Denver Water and GSI held discovery sessions to further refine business needs, timing requirements and conceptual cost estimates. As an outcome of the discovery sessions, an updated conceptual cost estimate of \$835,000 was created for this two-phased project. Funding for the Phase 1 scope of the GSI contract was approved at \$343,200, which produced complete requirements and the solution design. Based on the complete requirements and solution design, the contract estimate has been revised to \$963,245, which is \$463,325 above the original \$500,000 budgeted for these services. These cost increases are attributable to:

- Schedule extension of 4 months to provide a more realistic implementation schedule
- Increased cost estimates for existing scope (based on complete requirements and solution design)

- Additional costs for additional requested scope, consisting of:
  - Automated P-Card Expense Management
  - JDE Security improvements
  - JDE Mobile capabilities

The term of the contract with Global Systems Integration, Inc. (GSI) was established as 11/16/2016 to 1/31/2018, a duration sufficient for completion of both Phase 1 and Phase 2 of the Enterprise Financial System (JDE) Procurement and Payment project.

The 2017 ORCA Increment 2 budget will require a \$980,000 forecast adjustment due to the following:

- Additional funding for the GSI contract (as described above): \$463,325
- Increased software costs: \$157,000
- A shift of budgeted project costs from 2016 to 2017 (due to delays in starting the project): \$360,000

These changes have been reviewed and approved by the System Managers Group. They will offset this 2017 budget variance through active management of all capital project priorities and schedules.

**Selection of Business Partner:**

Denver Water issued a Request for Proposal (RFP) and engaged an open-competitive selection process in July 2016, resulting in the selection of Global Systems Integration, Inc. The original contract term and amount was for fourteen months and \$343,200.00 for the Phase 1 scope, with the express intent to bring an amendment to the Board upon completion of Phase 1 to add accurate scope and funding for Phase 2 of the Enterprise Financial System (JDE) Procurement and Payment project.

**Recommendation:**

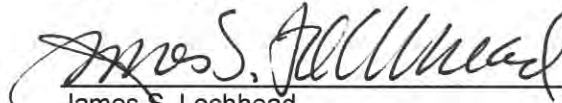
It is recommended that the Board approve the First Amendment to 16759A with Global Systems Integration, Inc. for Phase 2 implementation services of the Enterprise Financial System (JDE) Procurement and Payment project, for an addition of \$620,045 for a total amended contract amount not to exceed \$963,245.

**Approvals:**



Chris Dermody  
Chief Information Officer

Respectfully submitted,



James S. Lochhead  
CEO/Manager



Angela Brimont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: II-B-2

## Gross Reservoir Expansion Project Owner's Representative Services Contract 17075A

Action by Consent

Individual Action

### **Summary:**

Denver Water is in the process of forming an integrated project team comprised of Denver Water staff, consultants, engineers, contractors, and specialists to deliver the Gross Reservoir Expansion Project. The first step in forming the team is the procurement of the Owner's Representative (OR) who will augment Denver Water's staff to provide specialized expertise in project management, project control, and public communication. The project will be completed using a step-wise phasing approach covering the life cycle of the project.

In Phase 1, the OR will develop the principle project management plans and processes, such as the project management plan, delivery structure, document management systems, and public communications strategy. The OR will also support Denver Water with the following: 1) procurement of a Board of Consultants (technical oversight team required by the Federal Energy Regulatory Commission) and the Final Design Engineer; 2) ongoing preliminary engineering studies; and 3) augmentation of Denver Water's Public Affairs staff to provide onsite project representation. Denver Water has agreed to negotiate the scope and fee of the subsequent work (Phases 2 and 3) in a phased contract approach with the OR which will be based on the project schedule and the OR's performance. Each subsequent phase will be brought to the Board for approval.

### **Budget Information:**

The total amount of this contract is \$1,174,925, and the term of the contract is April, 21, 2017 to April 1, 2018. Funds for this service/contract will come from the 2017 budget for the Gross Reservoir Expansion Project (BU 2009612013), which has sufficient funds to pay the \$1,057,432 estimated to be needed in 2017. The remaining \$117,493 will be budgeted in year 2018.

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

On October 21, 2016, Denver Water advertised an open information meeting for the OR services to be held on November 4, 2016. At the meeting, Denver Water provided an overview of the project and specifics about the scope of services and planned procurement schedule for the OR contract. On December 2, 2016, Denver Water posted a formal Request for Proposal (RFP) to denverwater.org and grossreservoir.org. A mandatory proposal meeting was held in Denver Water's Board Room on January 10, 2017, where twelve firms attended. On January 31, 2017, Denver Water received three proposals in response to the RFP and a quality-based selection process was used to evaluate the proposals. Proposals were reviewed for quality, technical insights, effectiveness and creativity in project approach, personnel experience and depth of the proposed team. A panel comprised of stakeholders from Engineering, Operations and Maintenance, Planning, and Public Affairs reviewed the proposals and conducted an interview with the top-ranked firm. At the conclusion of the selection process, Denver Water's stakeholders were in unanimous agreement on the selection of Black & Veatch as the strongest candidate for the OR services for the Gross Reservoir Expansion Project.

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

*No specific S/MWBE goal was set for the Owner's Representative Services. However, a major subconsultant, Katz & Associates, on the Black & Veatch team is a WBE business and will account for approximately 12 percent of the total of the Phase 1 services.*

**Recommendation:**

It is recommended that the Board approve Agreement 17075A with Black & Veatch for Owner's Representative Services for the Gross Reservoir Expansion Project for the contract period April 21, 2017 through April 1, 2018 for a total contract amount not to exceed \$1,174,925.

**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: April 12, 2017

Board Item: V-A-1

## Briefing Paper for Legislative Update

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### Summary:

On the day of your Board meeting it will be the 92nd legislative day of the session and the two week Long Appropriations Bill (State Budget Bill) process will be complete, leaving only 28 calendar days left. We are tracking 29 bills so far this year. A summary table of these bills, their status and our position is attached. Following the summary table is the full bill report. All major updates are highlighted in the following outline:

1. **HB17-1190 Limited Applicability of St. Jude's Co. Water Case** – a recent amendment to this bill brought opposition from the environmental community. The River District was able to get the bill laid over to work with them on a solution. **Position: Support.**
2. **HB17-1008 Graywater Regulation Exemption For Scientific Research** – this bill along with our amendment to allow water providers to also be exempt for certain graywater research projects passed the House unanimously and has been introduced in the Senate. **Position: Support.**
3. **HB17-1233 Protect Water Historical Consumptive Use Analysis** – this is one of several newly introduced bills dealing with alternative transfer mechanisms and it extends and expands an existing pilot program. Details are in the full report attached. **Position: Support.**
4. **HB17-1248 Colorado Water Conservation Board Construction Fund Project** – this in an annual projects funding list that water users always support. Details of the projects in this year's bill can be found in the bill text link in the attached report. **Position: Support.**
5. **HB17-1254 Noneconomic Damages Cap Wrongful Death Of Child** – The title of this bill was alarming. However, a deeper analysis shows that it does not amend the Government Immunity Act and to be sure, Water Congress will be getting an amendment that specifically clarifies this. **Position: Monitor.**
6. **HB17-1289 State Engineer Rules Historical Consumptive Use** – this newly introduced bill will expand a pilot program that standardized the calculation of historic consumptive use in the Arkansas basin to each of the other water basins. We are still analyzing this bill and will have a recommendation shortly.
7. **SB17-050 Consolidate Forest Risk And Health Grant Programs** – Denver Water testified in **support** of this bill and it has now been signed by the Governor.
8. **SB17-235 Pilot Project Seaplanes Land In State Parks** – We are gravely concerned that seaplanes could introduce aquatic nuisance species into Colorado waterways. Details can be found in the full report. We will strongly oppose this bill. **Position: Oppose.**
9. **HB17-1219 Extend Colorado Water Conservation Board Fallowing And Leasing Pilot Program** - this is another of several newly introduced bills dealing with alternative transfer mechanisms and it extends and expands an existing pilot program. Details are in the full report attached. **Position: Support.**

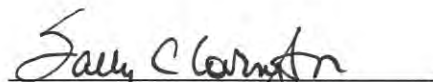
### Owner(s):

Chris Piper, Government Relations, Public Affairs

### Attachments:

Report on 2017 Legislation

Respectfully submitted,

  
Division – Public Affairs

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# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: V-A-2

## Briefing Paper for 20% Design Update of Northwater Treatment Plant (NTP)

### Summary:

#### **North System Renewal**

The purpose of the North System Renewal (NSR) Program is to replace aging infrastructure and improve the safety and strength of the entire water system.<sup>1</sup> The NSR Program comprises approximately 13 projects that will span the next seven years and impacts the collection, treatment, distribution, operations & maintenance, and information technology systems. The major NSR initiatives include improving the South Boulder Diversion Dam, Canal, and Ralston Outlet Works, constructing the Northwater Treatment Plant (NTP), replacing Conduit No. 16, and retiring Conduit No. 22.



Figure 1: NSR Program Overview

#### **Northwater Treatment Plant**

Denver Water (DW) is in the process of designing a new 150-million gallon per day (MGD) water treatment plant (WTP). The NTP will replace the Moffat WTP, which is approaching the end of its useful life. DW's plan is to execute the design and construction of the NTP in an integrated and collaborative manner, while also ensuring that the most qualified professionals conduct the work. The scope of work for the Project includes construction of

<sup>1</sup> "North System Renewal," Welcome to Denver Water, Denver Water, accessed March 16, 2017, <http://www.denverwater.org/ConstructionProjects/northsystemrenewal/>.

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the NTP on DW's Ralston property and modifying/decommissioning the Moffat WTP. The overall objective of the Project is to replace the Moffat WTP with a modern treatment facility to increase system reliability and flexibility.

DW's Project Manager (PM), the Owner's Representative (OR), and DW's Leadership Team determined the design of the NTP should be divided into separate design packages (DP). Based on the DP breakdown, the design execution to date has been completed by six prime consultants and multiple sub consultants, with two additional DPs commencing work during Task 4a, 20-30% design.

Modifications at the Moffat property include yard piping to bypass the existing WTP, installation of a headworks structure with an energy-dissipating valve, installation of a pressure reducing valve (PRV) and structure to bypass the clearwells, and re-purposing the existing structures to increase water storage capacity.

## **Background:**

### **Key Design Criteria**

The NTP is being designed to treat and deliver a plant capacity between 10 and 150 MGD to DW's customers. The Moffat WTP can operate as low as 20 MGD, and the proposed 10 MGD minimum for the NTP will increase the ability to operate at low flows based on system demands and to manage DW's North and South raw water supply systems.

The NTP is also being designed to have the ability to be expanded to treat as much as 240 MGD. The expansion will require construction and equipment additions; however, future ease of expansion is being considered in design, allowing the NTP to operate during future capital improvements.

### **Ultraviolet (UV) Disinfection**

The NTP will implement a combination of ultraviolet (UV) disinfection and free chlorine disinfection to provide an additional disinfection barrier. UV disinfection is highly effective for inactivation of *Giardia cysts* and *Cryptosporidium oocysts*, and free chlorine is highly effective for virus disinfection. Leveraging the benefits of different disinfection technologies provides an effective, multi-barrier disinfection approach for the NTP.

## **Budget Information:**

The 20% design opinion of probable cost<sup>2</sup> (OPC), prepared by the NTP Construction Manager-at-Risk (CMAR), will be presented to the Board at April 26, 2017 Board Meeting.

## **Approach:**

During the planning process for the NTP, DW established and refined the goals for the Project. All Project decisions and activities must aim to accomplish the following goals:

### **Sustainability**

DW has taken a leadership role in understanding and promoting sustainability in the state of Colorado, and in water utility planning, through continued environmental stewardship. To achieve these goals, DW will implement sustainability and health and wellness strategies at the NTP. DW is pursuing platinum LEED certification on the Administration Building, with gold status for core and shell as a design guideline for the remaining buildings. The design team has determined that the NTP site support the use of solar and hydropower, and is evaluating the feasibility of producing 100 percent of the NTP's initial annual energy needs (zero-net energy), which would continue DW's achievement of producing as much energy as its facilities consume. Envision certification for the full site is also achievable. Other rating systems such as the WELL Building Standard™ (WELL) and Sustainable

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<sup>2</sup> Association for the Advancement of Cost Engineering (AACE) Class 4.

Sites Initiative (SITES) could further supplement sustainability best practices directly relating to building occupants' wellbeing and the development's outdoor environment.

### **Modularity**

Through long-term experience operating and maintaining multiple treatment facilities, DW has identified redundancy and modularity as a critical requirement to facilitate the long-term safe and efficient operation and maintenance of the NTP. DW's goal is to be able to isolate, inspect, maintain, and replace every component of the NTP without necessitating a complete plant shutdown, improving the overall reliability of DW's system by eliminating the need for periodic shutdowns at one of DW's three water treatment facilities. The capability to maintain NTP without ever requiring a complete plant shutdown will be achieved by incorporating modularity into design and including provisions for each unit process train, equipment item, and conduit to be isolated, taken out of service, or brought on line independently.

### **Ease of Access and Maintenance**

The site will be designed to allow for safe, efficient flow of traffic and deliveries; future upgrade, expansion and improvement to processes and structures; and ease of maintenance of all equipment.

### **Safety**

Safety is a primary driver for the process design decisions for the NTP. The project team has selected chemicals for the NTP that are inherently safe for our operating staff to use and ensure public health standards are exceeded. In addition, the team is limiting confined spaces wherever possible, and using stairways in place of tall vertical ladders.

### **Personnel**

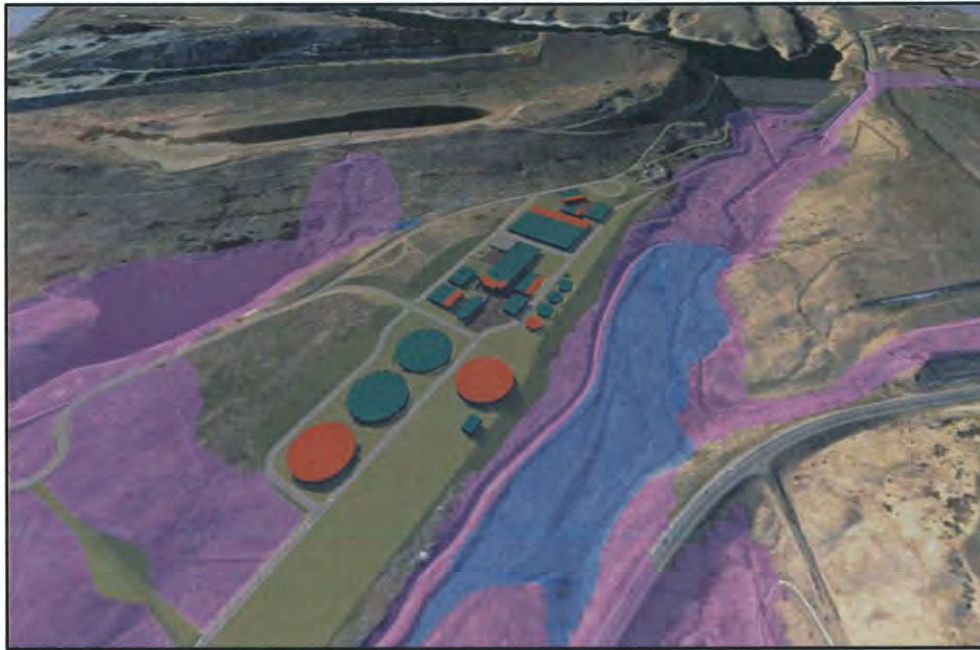
The NTP will be designed to accommodate both Treatment and Collection System facilities (personnel, equipment, etc.), allowing for streamlined operation and state of the art automated control.

### **Schedule**

The NTP schedule for design and construction is currently on target. The construction start date is still expected to be early 2018 and operational by 2023.

### **Budget**

The Project team will accomplish the Project objectives within the projected budget, to be finalized prior to completion of 30% design.



**Figure 2: NTP 3D Model. 150 MGD process layout (shown in green), future 200 MGD expansion facilities shown in orange).**

### **MWBE Design & Construction**

DW has identified goals for the participation of Minority and Women-Owned Business Enterprise (MWBE) firms in the execution of the NTP work. Goals are set as a percentage of the total design fee for each design package, which results in an approximate total Project-wide goal for design. Design Package Consultants are responsible for meeting the MWBE goal for the entirety of design, Task 3 – Preliminary Design and Task 4 – Final Design. The MWBE goal as a percentage of the total design fee is 4 to 8%. This overall percentage corresponds to approximately \$465,340 for Task 3 design and an estimated \$1,372,343 for Task 4a design. To-date MWBE expenditures are \$352,695 (6.3%) through February 2017.

Additionally, draft construction participation goals have been identified as 8% of the total construction cost, resulting in an approximate construction phase MWBE participation of \$26 Million.

### **Outstanding Risks**

DW and the Design Team have identified major risks to the project. These risks are investigated and mitigation plans are established and reviewed regularly. Of the risks to the NTP, the two most significant risks are described in the following sections.

#### **Tindall Mine**

Evidence of two subsurface coal mines (Tindall and Murphy mines) were identified at the NTP site. The maps and research indicate the Tindall coal mine was active from 1892 to 1897 and underlies several proposed NTP structures. The mine operation was extensive and is approximately 200 to 500 feet below grade with multiple levels. The method of decommissioning of the mine is currently unknown and is being investigated. The mitigation plan includes conducting a full geotechnical investigation and mapping effort, as well as evaluating construction mitigation alternatives. The complete cost and schedule impacts are unknown at this time, however the most likely approach will include relocating key structures a safe distance from the potential subsidence zone imparted by the Tindall mine.

**Agency Coordination (CDOT, Xcel, NTM, Arvada)**

Coordination and acceptance of affected agencies are major risks to the NTP Project. Agencies such as Colorado Department of Public Health and Environment (CDPHE), Colorado Department of Transportation (CDOT), Xcel Energy, North Table Mountain WTP, the City of Arvada, Jefferson County, and the adjacent property owner, Asphalt Paving Company (APC) play key roles throughout the duration of the project. The mitigation plan includes creating outreach programs and scheduling regular coordination meetings with each outside agency to build familiarity with the Project and determine the application and submittal procedure. These activities are in progress as well as development of Temporary Easement Agreement with APC and Intergovernmental Agreements (IGAs) with Arvada and Jefferson County.

**Owners:**

The NTP and NSR Program are joint efforts by DW's Engineering and Operations and Maintenance Divisions.

Respectfully submitted,



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Division – Engineering



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Division – Operations and Maintenance

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: V-A-3

## Briefing Paper for Centennial Anniversary

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### **Summary:**

The Public Affairs division is organizing a year-long centennial commemoration campaign in 2018 to celebrate Denver Water's past, present and future. Our overarching objective is to deliver a campaign that educates and engages our target audiences, while reinforcing our brand and firmly positioning us as a trusted source on water topics and issues, as directed in the Strategic Plan.

### **Background:**

The year 2018 marks the 100<sup>th</sup> anniversary of the establishment of the Denver Board of Water Commissioners. This milestone presents an unprecedented opportunity to commemorate the significance of our organization's heritage, our role in making this a vibrant and successful metropolitan area, and, most importantly, our continued commitment to serving our community's needs for generations to come.

The campaign will include a number of events and activities aimed at educating and engaging members of our target audiences – customers, employees and retirees, distributors, key stakeholders (elected officials, business leaders, community partners), and source of supply communities.

The campaign's centerpiece activity is the production of a 30-minute public education film celebrating the history of water in Denver and the interconnection of Denver Water with its metro and statewide networks that made the growth of the city possible. From the 1918 roots of the Denver Union Water Company, to the engineering marvels and immense infrastructure that followed and fueled the development of a Front Range metropolis, the film will engage and inspire viewers with the human story behind the politics, engineering, successes and challenges of Colorado's largest water utility.

The production will highlight the important people, eras and events in the evolution of the organization while revealing their local, state and regional impacts. The script will include sound bites edited from film interviews, augmented with a narrative track weaving together a story supported by archival imagery, artistically produced footage, original music, informative graphics, high quality production values and complete production services. The finished documentary will make an intellectual and emotional connection with viewers that preserves the legacy of Denver Water for all citizens of Denver and the West. Our intent is that the film will be premiered with employees, aired at a special event for key stakeholders, and shown on Channel 9 and Rocky Mountain PBS.

### **Budget Information:**

Total costs for the campaign are estimated at \$400,000, including \$200,000 for the documentary. Staff will secure sponsorships, partnerships and grants to help underwrite at least half of the total costs. \$100K has been budgeted for the project in 2017, and our goal is to secure additional funding by the end of the year. In-kind support from partners and a grant from the Colorado Film Commission will round out support, allowing us to determine budget needs for 2018.

### **Approach:**

Our strategy for the project is to engage in a series of activities, programs and events strategically targeted based on reach and effectiveness among key audiences. We intend to layer and integrate the centennial campaign creative and messaging over our existing Water Connects Us All theme (which launches in summer 2017) in a way that further communicates and supports that theme's larger goal — fostering a more holistic and long-term view of water among the public.

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Additionally, a number of campaign activities will be designed to foster continued pride among past and present employees.

The goals of this project are to build anniversary awareness among 80% of each targeted audience group; to use partnerships — current and prospective — to leverage campaign reach and exposure; and to fund at least 50% of total campaign costs through sponsorships and grant funding.

With the Board's approval, the team will take next steps toward project implementation:

- Select specific goals for campaign activities
- Begin film production.
- Secure contracted event planner/sponsorship manager.
- Form employee committee for internal planning and involvement.
- Conduct brainstorm session with retiree focus group.
- Develop logo treatment and graphic standards.
- Finalize timeline, staffing and other elements of full implementation plan.

**Owner(s):**

The lead staff for this project are members of Public Affairs' marketing and brand group. Support will come from members of both the communication and outreach teams, as well as from employee volunteers.

**Attachments:**

Centennial Anniversary tactics

Respectfully submitted,

  
Division – Public Affairs

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: V-A-4  
Board Item: V-A-4

## Briefing Paper Sustainability Program Update

Action by Consent

Action

Information

*This is a semi-annual update on the status of Denver Water's Sustainability Program.*

### **Summary:**

Denver Water hired its first Sustainability Program Manager (Kate Taft) in May of 2016 to provide guidance to staff and operations, create a sustainability plan for the organization, develop a Sustainability Program for Denver Water and support the Operations Complex Redevelopment project (OCR).

### **Background:**

In her first 10 months with Denver Water, Kate provided input for sustainability objectives related to the OCR project by attending One Water and weekly OCR design meetings with RNL, Ambient Design, Trammell Crow and other project teams. She coordinated decisions related to Denver Water's desired level of compliance with various LEED and WELL building optimizations. Additionally, she has been working with Public Affairs and a design group developing signage for the new campus.

The Sustainability Program and Green Team have supported waste diversion expansion at Quivas and the Recycling Treatment Plant by adding additional recycling and compost facilities. New contracts for waste hauling, recycling and electronic waste were implemented and a new vendor was selected for recycling who will provide better information and support for our efforts.

Kate and the Environmental Compliance Team developed Denver Water's first Environmental Stewardship Statement. Input regarding sustainability was provided for Denver Water's first efforts in Green Bond financing. Sustainability advice is being given to the design team working on the new North Water Treatment Plant.

The Sustainability Program inherited Denver Water's Greenhouse Gas Inventory, and Kate assisted with the completion and submittal of the 2015 inventory while evaluating the tracking mechanisms needed for regular monthly reporting of utility usage and waste streams. Net Energy Use was selected as a metric for inclusion on the Executive Team's dashboard.

Support positions were scoped and budgeted and in early 2017, interviews were held for two temporary staff to aid Denver Water in sustainability programming. An Energy Analyst and a Program Assistant were added to the team in April. These team members will: assist in the commissioning and tracking of energy in our new buildings; conduct outreach and education to employees on One Water, waste diversion, resource conservation and behavior change, and; provide recommendations for efficiencies and upgrades to our facilities and operations system-wide.

In late-march Kate completed the first draft of the Sustainability Plan / Guide. The context and goals of the document were developed after extensive research into best practices and review of sustainability plans from other utilities, educational institutions, forward-thinking companies, and conversations with many teams internally.



Other projects include:

- Worked with our office supply vendor on "greener" options
- Assisted Public Affairs with content development for Inflow / denverwater.org and began conversations on the sustainability of our promotional items
- Coordinated with the Environmental Compliance team on operational improvements
- Supported a green cleaning product pilot project
- Coordinated with Operations and Maintenance and other divisions on research and pilots for new technologies

**Approach:**

The Sustainability Program is continuing education opportunities and outreach to employees on waste diversion, the OCR project and other sustainability programs and projects. Next steps with the drafted Sustainability Guide are confirmation of the commitments and goals in the document and working with Public Affairs on design and formatting of the Guide. Annually, the Sustainability Program will report progress on goals set forth in the Sustainability Guide.

In April and May, Kate and the new Sustainability Program Assistant will implement additional compost and recycling bins and educational programming at Moffat, Marston, Foothills, and at the Operational Complex in the Administration Building and Three Stone Buildings to improve waste diversion and reporting metrics. The Energy Analyst will continue work with Xcel and our three other energy providers to baseline organization-wide usage and implement tracking for more accurate and frequent reporting.

During the second quarter of 2017, we will finalize the Sustainability Guide and begin the Greenhouse Gas Inventory for 2016 which includes the coordination of a third-party firm to authenticate our process and produce an accurate and systematic inventory prior to submitting results to our verification contractor. Kate will continue conversations and planning with the North Water Treatment Plant and begin conversations with the team planning the National Western Stock Show campus and Water Quality Lab.

The team will continue to implement mechanisms to track energy and water use and waste streams at Denver Water while improving the accuracy of reporting. The Sustainability Program will continue to support the design and application of sustainability in the Operational Complex Redevelopment, consult on resource-saving opportunities across the organization, and provide educational outreach, both internally and externally.

Respectfully Submitted,



Kate Taft  
Sustainability Program Manager



Brian Good  
Chief Administrative Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: V-B-1

## 2015-2018 (“On-Call”) General Engineering, Construction Management, and Planning Services Contracts

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Denver Water’s Engineering Division is utilizing a variety of firms for (“On-Call”) General Engineering Design Services and Construction Management Services. A summary of the work contracted (versus expended) from **September 2015 through March 2017**, is provided on Exhibit 1 (attached).

The On-Call contracting mechanism provides for expedited contract execution, allowing a quick turnaround by consultant teams.

1. Total Number of GES/CM Firms:	82
2. Number of GES/CM Contracts (September 2015 to Date):	99
3. Total Amount of On-Call Contracts (September 2015 to Date):	\$4,060,109.18
4. Average Cost for On-Call Contracts:	\$41,011.20
5. Total MWBE/SBE for On-Call Contracts (September 2015 to Date):	\$1,104,328.57

S/MWBE Contracts	MWBE Firms	MWBE Amount (\$)	
MWBE	Harris Kocher Smith (HKS)	8,530.00	
MWBE	Kumar & Associates, Inc.	168,796.00	
MWBE	Pinyon Environmental, Inc.	19,095.00	
MWBE	Vista Engineering, LLC	99,035.00	
MWBE	WaterPlans, Inc.	<u>39,480.00</u>	<u>Subtotal \$334,936.00</u>
SBE	Alpine Ecological Resources, LLC	4,800.00	
SBE	BBC Research & Consulting	95,050.00	
SBE	Canterbury Construction Management Services	7,303.32	
SBE	Infrastructure & Marine Consultants, LLC	220,368.50	
SBE	Lintjer + Haywood Architects, P.C.	72,380.00	
SBE	Providence Infrastructure Consultants, Inc.	92,028.00	
SBE	QualCorr Engineering Corporation	71,835.00	
SBE	RJH Consultants, Inc.	49,981.00	
SBE	Short and Brennan Architects	75,946.75	
SBE	Tumbleweed Electric	<u>79,700.00</u>	<u>Subtotal \$769,392.57</u>
Total MWBE/SBE Awarded			\$1,104,328.57
Total GES/CM Agreements Awarded			\$4,060,109.18
<b>Percent of MWBE/SBE Awarded</b>			<b>27.20%</b>

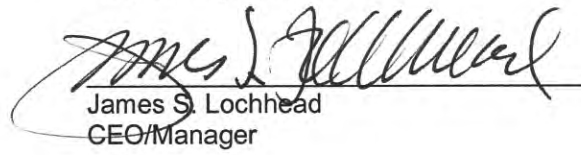
**Important Notes:**

1. Unlike the On-Call consultant design service task orders, construction management task orders will often exceed \$100,000.00. Board approval will be obtained on all task orders over \$100,000.00.

**Approvals:**

  
Robert J. Mahoney  
Chief Engineering Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager

  
Angela Brimont  
Chief Finance Officer

# DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: April 12, 2017

Board Item: V-B-3

## Reporting of Staff Administered Construction Contract Contingencies and Allowances

Action by Consent

Individual Action

### Summary:

Contracts with Board approved contingency and/or allowance amounts are to be administered through change orders, amendments or invoices as needed by staff. Funds used on the following projects are to be reported to the Board. The projects and their contingency/allowance amounts are:


Contract No.	Title	Contractor	Type	Amount
14063B	Ashland Reservoir Replacements	Western Summit	Contingency	\$750,000
14063B	Ashland Reservoir Replacements	Western Summit	Allowance	\$3,000,000
14978A	Design Services of The Ralston/Moffat Delivery System: Conduit No. 16 Replacement and Conduit No. 22 Abandonment	HDR-Dewberry	Allowance	\$200,000
14978A	Design Services of The Ralston/Moffat Delivery System: Conduit No. 16 Replacement and Conduit No. 22 Abandonment	HDR-Dewberry	Contingency	\$300,000
15630A-G	Operations Complex Redevelopment	Mortenson Construction	Contingency	\$5,000,000

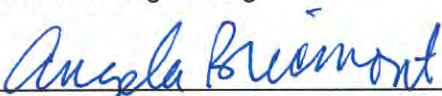
The construction contingency is used for unforeseen materials or equipment, or work items or site conditions that are not included in the original contract work and which may require timely approval and processing. Allowances are for specific items whose existence is known, but whose actual cost is not known at time of bid. There may be individual change orders brought to the Board for approval that do not fall into these categories, or if large amounts or changes are required during construction.

### Recommendation:

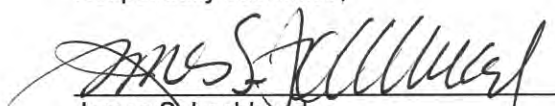
Staff will report to the Board quarterly through an Information Item the ongoing status of these funds. Please reference the attached spreadsheet for the detailed Project Contingency Report.

### Approvals:

  
Robert J. Mahoney  
Director of Engineering

  
Angela Brimont  
Chief Finance Officer

Respectfully submitted,

  
James S. Lochhead  
CEO/Manager