

### **Memorandum of Understanding**

This Memorandum of Understanding (“MOU”) is made and entered into between the City and County of Denver, acting by and through its Board of Water Commissioners (“Denver Water”), and the Colorado Department of Public Health and Environment’s Water Quality Control Division (“Department”). Denver Water and the Department are collectively referred to herein as the “Parties.” Denver Water and the Department agree as follows:

- A. On March 20, 2018, the Department designated a phosphate based corrosion control inhibitor (orthophosphate) as optimal corrosion control treatment (“OCCT”) for Denver Water’s system.
- B. On April 19, 2018, Denver Water and separately, The Greenway Foundation, Metro Wastewater Reclamation District, City of Aurora, Barr Lake and Milton Reservoir Watershed Association, South Adams County Water and Sanitation District, and South Metro WISE Authority (“Appealing Parties”) requested an adjudicatory hearing before the Department. The Department denied both requests on April 30, 2018.
- C. On May 30, 2018, Denver Water and the Appealing Parties separately appealed the Department’s denial of Denver Water’s and the Appealing Parties’ requests for an adjudicatory hearing to the Colorado Water Quality Control Commission (“Commission”), in two requests that are currently pending before the Commission.
- D. Denver Water has also intervened as a Plaintiff-Intervenor in a case seeking judicial review of the Department’s March 20, 2018 Designation decision. The appeal was filed by The Greenway Foundation, Metro Wastewater Reclamation District, and the City of Aurora (“Plaintiffs”), and is currently pending in Denver District Court in Civil Action No. 2018CV31406.
- E. Denver Water fully intends to implement OCCT in good faith by the Department’s March 20, 2020 deadline. Nothing in this MOU extends or stays the March 20, 2020 deadline.
- F. While Denver Water works to implement OCCT by March 20, 2020, Denver Water desires to conduct additional studies that may lead to a request for an OCCT treatment modification if such modification meets the requirements of the Colorado Primary Drinking Water Regulations including the definition of OCCT.
- G. Denver Water and the Department wish to avoid litigation while conducting the additional studies and having a constructive dialog.
- H. The purpose of this MOU is to set forth certain nonbinding understandings between the Parties. The Parties acknowledge that this MOU is a voluntary arrangement that expresses the good faith intentions of the Parties, is not legally binding, and does not give rise to any rights or obligations under state or federal laws. This MOU does not create any right or

benefit, substantive or procedural, enforceable by law or equity by the Parties or any other person or entity against the Parties.

- I. Decisions regarding OCCT treatment modification requests will be made by the Department in accordance with the Colorado Primary Drinking Water Regulations. The Colorado Primary Drinking Water Regulations define OCCT as “corrosion control treatment that minimizes the lead and copper concentrations at consumers’ taps while ensuring that the treatment does not cause the water system to violate any provision of the Colorado Primary Drinking Water Regulations.” 5 CCR 1002-11:11.26(1)(j). The Department considers lead levels at all consumer taps when making an OCCT designation.

Now, therefore, Denver Water and the Department agree as follows:

1. Stay of District Court Litigation and Commission Appeal.

- a. On June 15, 2018, the District Court granted a stipulated motion for stay of Civil Action No. 2018CV31406 filed by Denver Water, the Plaintiffs, and the Department. The stay will continue up to and until one or more of the parties to that action files a motion with the Court to lift the stay, or until November 1, 2018, whichever occurs first.

- b. Within five (5) days of the Effective Date of this MOU, Denver Water, the Appealing Parties, and the Department will file a stipulated motion for stay of the Commission’s review of the May 30, 2018 appeals of Denver Water and the Appealing Parties. If granted, the stay will continue up to and until the Commission orders the stay lifted.

- c. Should any party agreeing to or acknowledging this MOU wish to lift the District Court or Commission stay, they will terminate the MOU per the procedures listed in Section 11 of this MOU prior to taking any action to lift these stays, including filing a motion to lift a stay.

- d. If the studies and stakeholder processes described in this MOU are ongoing as of October 31, 2018, Denver Water, the Appealing Parties and Plaintiffs, and the Department will file stipulated motions with the District Court to extend the stay of Civil Action No. 2018CV31406 and, if necessary, the Commission to extend the stay of the appeals to the Commission, until these studies and stakeholder processes are complete.

2. Stakeholder Processes. The Department will establish two stakeholder processes consisting of a “Water Provider” stakeholder group and a “Wastewater and Watershed” stakeholder group. Both will consist of one or more initial technical working groups and larger stakeholder meetings, as set forth below. The Department will coordinate both stakeholder processes. The Department considers these stakeholder processes to be prospective in nature: they will not address the validity of the Department’s March 2018 OCCT Designation but rather focus on new studies, new mitigation plans, and possible future modifications to the OCCT Designation.

3. Water Provider Stakeholder Process.

a. The Water Provider stakeholder process will focus on water provider issues to review and evaluate objectives and protocols, data, modeling and analysis pertaining to the areas of additional study identified in this section.

b. The Water Provider stakeholder process will include a technical working group comprised of Denver Water staff, Department staff, Denver Water's consulting engineer, and one representative from the parties acknowledging this MOU who will represent the interests of water providers that receive potable water from Denver Water's distribution system. This technical working group will primarily focus on the studies described in section 3.b.i through 3.b.xi below:

i. Orthophosphate Doses – Lower orthophosphate doses and combinations of pH adjustment and lower orthophosphate doses.

ii. Analysis of Additional Data – Since completing its September 2017 OCCT Study, Denver Water has continued to collect additional data from its pipe-flow-through racks used to collect data for the September 2017 OCCT Study. Denver Water will review and analyze these additional data in coordination with the Department.

iii. Variability – Denver Water plans to study the variability associated with particular corrosion control treatments to evaluate the potential anticipated impacts of lead release variability within the distribution system.

iv. Effects of Corrosion Control Treatments on Fixed Amount Contract Systems – Denver Water supplies potable water to various service providers in the region. Denver Water plans to model and analyze the impacts, if any, of orthophosphate and pH/alkalinity adjustment on the four fixed-amount contract systems (City and County of Broomfield, East Cherry Creek Valley Water and Sanitation District, Inverness Water and Sanitation District, and South Adams County Water and Sanitation District). A representative from each of the above four fixed-amount contract systems will be able to participate in any technical working group addressing this topic.

v. Implementation of pH Adjustment – Denver Water needs to install additional facilities at all three of its treatment plants to accommodate long-term corrosion control operations. In the interim, Denver Water has initial capabilities to implement pH/alkalinity adjustment, and could afford consumers additional protection from lead. Denver Water plans to develop a proposed implementation schedule and method, and submit an implementation plan to the Department for review and approval. Denver Water acknowledges the concerns that the

Department expressed about this approach in its May 30, 2018 letter and will work with the Department to address those concerns.

vi. Relative Contribution of Lead Solder – Denver Water plans to study the amount of lead which lead solder contributes to drinking water compared to lead released from lead service lines. Denver Water plans to study this by analyzing existing data, conducting additional sampling from Denver Water served customers, and potentially conducting additional pipe-flow-through rack experiments.

vii. Ability to Transition From Corrosion Control Treatment Approaches – Denver Water plans to analyze the implications of transitioning from orthophosphate treatment to pH/alkalinity adjustment corrosion control treatment and vice versa. Denver Water’s pipe-flow-through racks present an opportunity to study the implications of these transitions and discern opportunities for the greatest public health protection.

viii. Population-Weighted Lead Exposure Model – Denver Water plans to develop a population-weighted lead exposure model to estimate differences between various strategies considering corrosion control type and implementation schedule, and lead service line removal approaches defined by geography and time.

ix. Mixed Metal Service Lines – Denver Water plans to conduct studies to collect data on how mixed-metal service lines react to various forms of corrosion control.

x. Point-of-Use-Filters – Study the potential lead reductions achieved through Point-of-Use Filters used independently of or in conjunction with orthophosphate addition and/or pH/alkalinity adjustment.

xi. Other issues related to the effectiveness and impacts of corrosion control may be studied as determined useful or necessary.

c. Other technical work groups may be formed as appropriate. For example, a technical working group may be formed to address the effects of corrosion control treatments on the four fixed-amount contract systems.

d. The broader Water Provider stakeholder group will review the work of the technical working groups and these studies and will be open to participation by Denver Water; other water utilities connected to Denver Water’s system or through the Water, Infrastructure and Strategic Efficiency (“WISE”) Partnership; United States Environmental Protection Agency (“EPA”); public health agencies such as the Denver Department of Public Health and Environment (“DDPHE”); interested members of the public, other interested state or local agencies, and other public health-interested parties.

e. Data and findings developed from the additional studies described in section 3.a above may be used to prepare a supplemental report to the Denver Water September 2017 OCCT Study. If the data and findings from the additional studies warrant a request for modification of OCCT, Denver Water may also use the data and findings to support such a request. Any results from new studies will be added to the existing body of evidence, including the Denver Water September 20, 2017 OCCT Study and South Adams County Water and Sanitation District January 26, 2018 study.

4. Wastewater and Watershed Stakeholder Process.

a. The Watershed and Wastewater stakeholder process will focus on wastewater and watershed issues, and will be open to participation by Denver Water, the Department, EPA, public health agencies such as DDPHE, the Appealing Parties, interested members of the public, other interested state or local agencies, and other public health-interested parties.

b. One or more technical working groups, comprised of members of the above, will develop and implement plans to identify, monitor, and/or mitigate potential impacts of orthophosphate. These plans and results will be shared and discussed with a larger Wastewater and Watershed stakeholder group. Topics will include but are not limited to the wastewater and watershed topics outlined Nicole Rowan's March 20, 2018 memorandum.

5. Timeline. Denver Water will propose a timeline to the Department for the studies outlined in section 3 above. Upon agreement of the timeline, the Department will schedule meetings in advance to support the Water Supplier Stakeholder Process. The Department will propose a timeline to stakeholders for the initial meetings for the Wastewater and Watershed Stakeholder Process; during those meetings the parties will work together to establish a timeline for studies and work as described in section 4 above.

6. Participation of Staff. The Department confirms that participating in the two stakeholder processes is a high priority. It is recognized that the Department has numerous other actions that it must be engaged in and there is always the possibility of public and environmental emergencies that Department must respond to that could impact the availability of staff working on these efforts. The Department will set monthly or more frequent meetings with the Water Provider and Wastewater and Watershed stakeholder groups. Denver Water and the Department will direct their respective staffs to participate in the stakeholder processes described herein, and provide constructive feedback in a timely manner so as to complete the process according to the agreed-upon timeline.

7. Facilitator. Lisa Carlson will serve as facilitator.

8. Leadership Meetings. Denver Water and Department managers will hold monthly leadership meetings to ensure that this MOU is being implemented, and that the studies are being performed according to the timeline agreed to by the Parties. One representative from each of the following parties acknowledging this MOU may also participate in the leadership meetings: the water providers, the wastewater entities, and watershed interests.

9. Effective Date. This MOU will become effective on the date of the last signatory to the agreement.

10. Concurrent Signatories. The Concurrent Signatories acknowledge that they have received and reviewed this MOU. By signing this MOU, the Concurrent Signatories understand that they are not parties to this MOU and are merely acknowledging the receipt and review of this MOU. This MOU is not legally binding and does not give rise to any rights or obligations under state or federal laws. This MOU does not create any right or benefit, substantive or procedural, enforceable by law or equity by the Concurrent Signatories against the Parties.

11. Termination. This MOU may be terminated by either party after fourteen (14) days advance written notice. In the absence of a mutual agreement by authorized officials from the Parties to continue to further this partnership, this MOU shall end on March 20, 2020.

**IN WITNESS WHEREOF, THE PARTIES HAVE ENTERED INTO THIS MEMORANDUM OF UNDERSTANDING:**

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION**

By: Patrick J. Pfaltzgraff

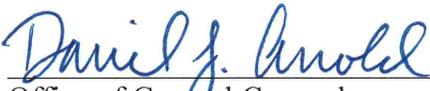
Date: 20 Jul 18

**CITY AND COUNTY OF DENVER, ACTING BY AND THROUGH ITS BOARD OF  
WATER COMMISSIONERS**

By:   
James S. Lochhead, CEO/Manager

Date: 7/23/18

APPROVED AS TO FORM:

  
Office of General Counsel

**AS ACKNOWLEDGED BY THE CONCURRENT SIGNATORIES:**

**THE GREENWAY FOUNDATION**

By:  \_\_\_\_\_

Date: 7-19-18 \_\_\_\_\_

**METRO WASTEWATER RECLAMATION DISTRICT**

By:   
Date: 7/19/18

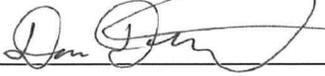
CITY OF AURORA

By: \_\_\_\_\_

Date: \_\_\_\_\_

  
7-20-2018

**BARR LAKE AND MILTON RESERVOIR WATERSHED ASSOCIATION**

By:  \_\_\_\_\_

Date: 7/19/2018

**SOUTH ADAMS COUNTY WATER AND SANITATION DISTRICT**

By: Jim In

Date: 7/19/18

**SOUTH METRO WISE AUTHORITY**

By: *Lisa R. Deley*

Date: *7/20/18*