REGULAR SESSION – 6:02 PM

CALL TO ORDER

Commissioners Present: Bernice Bagnall; Jim Doane, PE; Jim Duggan, PE; Todd Sanders (arrived at 6:34 p.m.); Dick Schmidt

Staff Present: Tom Hickmann, PE, Chief Executive Officer; Paul Matthews, Chief Financial Officer; Carrie Pak, PE, Chief Engineer; Pete Boone, PE, Water Operation Division Manager; Joel Cary, Water Resources Division Manager; Zach Lemberg, Engineering Associate; Clark Balfour, General Counsel; Dave Kraska, PE, Water Supply Program Director; Andrew Carlstrom, Customer Service Manager; Tim Boylan, IT Services Director; Andrea Watson, Communications and Public Affairs Supervisor; Debbie Carper, District Recorder

Other Attendees: Joe Brinkmann

REPORTS BY THE CHIEF EXECUTIVE OFFICER AND MANAGEMENT STAFF

Mr. Hickmann reported on recent Cryptosporidium detections in Bull Run water, collection plan efforts, a Willamette Water Supply System video produced for the April Aloha Business Association meeting, this year’s virtual Children’s Clean Water Festival and the virtual forum on the District’s water system held earlier today (see attached memo).

Mr. Boone presented the safety moment on sun protection.

Mr. Boone co-presented the department report with Mr. Lemberg. Mr. Boone described the water quality taskforce’s work over the past year, including objectives with the primary focus of managing water source blending, water age and chlorine residual (see attached presentation). He provided a brief overview of the history of chlorination of drinking water and described how a year’s worth of data gathering provided direct benefits to the District’s water system. Mr. Lemberg described staff’s hydraulic modeling that led to a system improvement. Mr. Boone concluded with future areas of taskforce focus.

COMMISSIONER COMMUNICATIONS

A. Reports of meetings attended

[Recorder’s Note: Commissioner Sanders arrived at 6:34 p.m.]

Commissioners described and submitted a list of recently attended meetings (see attached forms).
B. Topics to be raised by the Commissioners

There was none.

PUBLIC COMMENT

A. Joe Brinkmann requested a waiver of hydrant permit fees to use water for the upkeep of a memorial in Beaverton. Commissioner Bagnall recommended contacting staff regarding his request.

1. CONSENT AGENDA

A. Approve the March 17, 2021 regular meeting minutes.

Motion was made by Duggan, seconded by Schmidt, to approve the Consent Agenda as presented. The motion passed unanimously with Bagnall, Doane, Duggan, Sanders and Schmidt voting in favor.

2. BUSINESS AGENDA

A. Consider adopting Resolution 03-21, a resolution transferring General Fund materials and services appropriation to Customer Emergency Assistance Fund materials and services appropriation for the biennial budget period 2019-21. Staff Report – Paul Matthews

Mr. Matthews described the Customer Emergency Assistance Fund and identified the proposed sources of savings for the transfer of appropriations (see attached presentation).

In response to a question, Mr. Matthews said the District works with an experienced third party who qualifies customers who request emergency funding.

Motion was made by Doane, seconded by Sanders, to adopt Resolution 03-21, a resolution transferring General Fund materials and services appropriation to Customer Emergency Assistance Fund materials and services appropriation for the biennial budget period 2019-21. The motion passed unanimously with Bagnall, Doane, Duggan, Sanders and Schmidt voting in favor.

ADJOURNMENT

There being no further business, President Bagnall adjourned the meeting at 6:56 p.m.

Bernice Bagnall, President

Todd Sanders, Secretary
MEMO

Date:  April 21, 2021

To:  Tualatin Valley Water District Board of Commissioners

From:  Tom Hickmann, CEO

Re:  Chief Executive Officer and Management Staff Report

The following items will be covered during the report by the CEO:

1. Portland Cryptosporidium Results – For the month of March 2021, the Portland Water Bureau reported a total of four Cryptosporidium oocyst detections in water samples collected from the Bull Run Headworks. The Oregon Health Authority has determined that the public does not need to take additional protections at this time. Portland Water Bureau will continue increased sampling four times per week until there are at least three weeks without any detections. Complete results of Portland’s Cryptosporidium monitoring are posted on the City’s website: https://www.portland.gov/water/water-quality/test-results#toc-cryptosporidium.

2. Collections Plan – The collections effort is underway and progress is being made with the irrigation and current resident customers. Residential customers are applying for the Customer Emergency Assistance Program, which is being administered by TVWD Customer Service agents. Coordination with Clean Water Services is going well with regular meetings occurring at the leadership and staff levels. Customer Service will provide an update at the May 4, Board of Commissioners work session.

3. Aloha Business Association Recognizes TVWD – Thanks to Commissioner Jim Doane, PE and Joelle Bennett, PE, Assistant Director of the Willamette Water Supply Program, for working on a short video which highlights the Willamette Water Supply Project. The video premiered at the April Aloha Business Association (ABA) meeting and is available on the ABA website. TVWD has been a long-time member of the Aloha Business Association, where Commissioner Doane, PE represents the District.

4. Children’s Clean Water Festival Goes Virtual for 2021 – TVWD sponsors and provides staffing for the Children’s Clean Water Festival, a water-based field trip for fourth-grade students from the Tri-County metro area. This year, the sponsors created six virtual water lessons that are being made available to youth
and classrooms. Youth Education Coordinator, Frank Reed, was featured in a demonstration on how water is treated for safe drinking. The virtual lessons can be found at virtual.cleanwaterfestival.org.

5. **April Talkin’ Water** – TVWD’s next Talkin’ Water event will be held at noon, April 21, and consist of a repeated topic featuring Operations Division Manager, Pete Boone, who will explain to customers how their water system works with an “under the street” and “inside the system” view of how high quality water is processed and delivered. These events continue to attract large numbers of customers each month.

6. **Safety Minute and Department Report** – Pete Boone, Water Operations Division Manager, will present the safety minute this evening. Mr. Boone and Zach Lemberg, Engineering Associate, will jointly present the department report.
TVWD’s Water Quality Task Force

One year of positive results

Pete Boone
Water Operations Division Manager

Zach Lemberg, EIT
Engineering Associate

Water Quality Task Force
Engineers, Operators, Water Resources, GIS staff

COVID presented an opportunity...

Objectives:
1. Identify opportunities for WQ improvements
2. Recommend and implement improvements
3. Prepare for WWSS integration

Primary focus has been managing source blending, water age, and chlorine residual
Chlorination of Drinking Water

• Prior to widespread use of chlorine, drinking water contaminated with bacteria, viruses, and microbes was a major source of disease in humans.
• Germany and England began chlorinating in 1890’s.
• Jersey City was first in US to chlorinate in 1904.
• Chlorine provides a barrier against pathogens.
• Chlorine residual is typically 0.5-2.0 PPM and declines over time.

One of the greatest public health advancements of the last century

Managing water age and chlorine residual

1. Requires timely sampling and data collection
2. You can’t turn back the clock on aging
3. Moving water is fresh water

Water age
Use it up!
Don’t store too much
Flush it off if needed

Water movement
Cycle reservoirs
Let it flow back down to lower zones
Data collection and visualization

12 months of weekly chlorine residual data

Notable accomplishments – North Road Reservoir

3 million gallons in the 820 pressure zone

Long 24-inch inlet/outlet pipe
Notable accomplishments – North Road Reservoir

Added SCADA automation to a PRV from 820 to 575
North Road Reservoir

NORTH ROAD DRAINED/REFILLED

1 MGD BACK DOWN TO 575

1 PPM CHLORINE

North Road Reservoir-March 2021

MECHANICAL MIXER COMING SOON!

1 MGD

0.5 MGD

1 PPM CHLORINE

FILL DRAW
Hydraulic Modeling

- Objective 2: **Recommend** and implement improvements
  - Modeling: Sorting the options of the task force

- Average water age is the best guess for chlorine residual
  - Calculated at junctions from time steps tracking water volumes through pipes

- Case: 650 Zone Modeling
  - A: Do nothing
  - B: Jumper at 135th and Greenwood
  - C: Auto-Flusher at dead-end

**650 Zone Water Sources**
- Thompson Pump Station
- North Road 820 Reservoir

**Assumptions**
- Operations evolve
- Jumpers
- Main replacements

**Quick reference**
- 168 hrs ~ 1 week
- 330 hrs ~ 2 weeks
- 720 hrs ~ 1 month
Hydraulic Modeling

• Case A: Do nothing

0-200 hrs
- Pipe Aging
200-1600 hrs
- Reservoir Aging
1600-2160 hrs
- Pump/high age

Hydraulic Modeling

• Case B: Jumper at 135th and greenwood

1600-2160 hrs
- Pump cycling/low age
Hydraulic Modeling

- Case C: Auto-Flusher at dead-end
  - 2 week auto flush
  - 1600-2160 hrs
  - Flush fade & pump

Hydraulic Modeling

- Objective 2: **Recommend** and implement improvements

- Average water age is the best guess for chlorine residual

- Case: 650 Zone Modeling
  - A: Do nothing
  - B: **Jumper at 135th and Greenwood (lower average age)**
  - C: Auto-Flusher at dead-end
TVWD’s Water Quality Task Force

Future areas of focus:
• 513 to 435 jumper
• Springville Reservoir storage
• Post-summer conversion
• Prepare for WWSS integration

Questions?

Proposed Supplemental Funding for Customer Emergency Assistance Fund

Proposed Transfer of Appropriations

April 21, 2021
Regular Board Meeting
Overview

1. Customer Emergency Assistance Fund
2. Proposed savings from COVID
3. Proposed transfer of appropriations
4. Questions and answers
5. Optional update on Financial performance

Financial Assistance for Customers

Customer Emergency Assistance Fund

- Donations from District, Board, staff, and customers
- All donations and interest earnings stay within the CEAF to assist customers
- Eligibility determined by third party
- TVWD provides accounting services
Sources of Savings

COVID Savings

• Holiday lunch
• Employee recognition event
• Sustainability Committee funds
• $8,400

Proposed Transfer of Appropriations

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<td>Materials and Services</td>
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Questions and Answers

Staff Recommendation

Staff recommends the Board of Commissioner adopt Resolution 03-21, transferring General Fund materials & services appropriation to Customer Emergency Assistance Fund materials & services appropriation for the biennial budget period 2019-21.
Report of Meetings Attended

Commissioner Bernice Bagnall

<table>
<thead>
<tr>
<th>Date</th>
<th>Meeting or Function</th>
<th>Purpose</th>
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$250 OK to pay
D Carper

ORS 198.190, “A member of the governing body of a district may receive, not to exceed $50.00 for each day or portion thereof as compensation for services performed as a member of the governing body. Such compensation shall not be deemed lucrative. The governing body may provide for reimbursement of a member for actual and reasonable traveling and other expenses necessarily incurred by a member in performing official duties.” Please note that in accordance with ORS 294.331 (3) members of the budget committee shall receive no compensation for their services as members of such committee.

By Board Resolution 02-14, an amount equal to the unclaimed funds for services will be transferred to the District’s Customer Emergency Assistance Program.
I approve Commissioner Bagnall's Meeting Attended form for April 2021.

---

Hi Commissioner Sanders,

Could I please get your email approval for the attached meetings attended form for Commissioner Bagnall?

Debbie Carper, MMC
District Recorder
1850 SW 170th Avenue, Beaverton, OR 97003
direct 503-848-3014
debbie.carper@tvwd.org
www.tvwd.org

Tualatin Valley Water District
Delivering the Best Water • Service • Value
Report of Meetings Attended

**Commissioner Jim Doane**

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<thead>
<tr>
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$350

OK to pay CEAP

D Carper

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## Report of Meetings Attended

**Commissioner Jim Duggan**

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$300

**OK to pay D Carper**

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By Board Resolution 02-14, an amount equal to the unclaimed funds for services will be transferred to the District’s Customer Emergency Assistance Program.
Report of Meetings Attended

**Commissioner Todd Sanders**

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<td>4/8/2021</td>
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<td>Budget preparation</td>
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<td>Yes □ No</td>
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<tr>
<td>4/21/2021</td>
<td>Board meeting</td>
<td>District business</td>
<td>$50.00</td>
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**Commissioner Dick Schmidt**

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By Board Resolution 02-14, an amount equal to the unclaimed funds for services will be transferred to the District’s Customer Emergency Assistance Program.
Hi Debbie:

I approve these meetings for Commissioners Doane, Duggan, Sanders, and Schmidt.

-Bernice Bagnall

---

Good afternoon,

Could I please have your emailed approval for the attached meetings attended forms?

**Debbie Carper, MMC**  
District Recorder  
1850 SW 170th Avenue, Beaverton, OR 97003  
direct 503-848-3014  
debbie.carper@tvwd.org  
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