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October 31, 2022

Project No.: 936-50-21-09

SENT VIA: EMAIL

Mr. Greg Springman
Public Works Director
City of Sweet Home
1400 24th Avenue
Sweet Home, OR 97386

SUBJECT: Engineer's Recommendation for Mahler WRF Outfall Replacement

Dear Mr. Springman:

The City of Sweet Home (City) and West Yost staff recently met with representatives from Oregon Department of Environmental Quality (DEQ), United States Department of Agriculture Rural Utilities Service (USDA-RUS) and National Marine Fisheries Services (NMFS) to discuss environmental permitting requirements for the planned outfall upgrades included in the current Mahler Water Reclamation Facility (MWRF) Project.

The current planned approach for increasing outfall capacity to match the MWRF design flows is to retain the existing outfall and add an "overflow" that would be located outside the mean high-water elevation on the South Santiam River. This approach was discussed in a meeting with NMFS where it was indicated that the environmental permitting requirements for this proposed approach could be more complicated than simply replacing and upsizing the existing South Santiam River outfall diffuser. The existing outfall is shown in Exhibit A.

In addition to being undersized, the existing 14-inch diameter outfall is in a poor location in the South Santiam River that is outside the main river channel and subject to soil accretion that has reduced the effectiveness of the outfall in maximizing the 25 percent of the river flow allowed for mixing. Further, the existing outfall is a hydraulic bottleneck that, if addressed now, may allow the outfall pipeline diameter to be decreased and help offset the additional costs associated with the outfall replacement.

A key element related to the timing of the outfall design is the City's upcoming National Pollutant Discharge Elimination System (NPDES) Permit renewal, which is currently slated for 2024 by DEQ. It would be beneficial for the City to have the replacement outfall and improved mixing zone characteristics in place for those Permit negotiations, which will be vitally important for assuring the City's significant investments in the Mahler WRF are maximized.

West Yost proposes to complete the outfall replacement design and construction using a three-step approach:

- **Step 1** - Initial Planning and Permitting Documentation
- **Step 2** - Final Design and Mixing Zone Study
- **Step 3** - Construction

These proposed steps related to the outfall replacement are summarized in the following sections.

STEP 1 – OUTFALL REPLACEMENT INITIAL PLANNING AND PERMITTING DOCUMENTATION

Initial outfall planning and permitting activities would be completed concurrent with the ongoing MWRF Improvements 60% final design, planned for completion in January 2023. These initial activities would include:

- New outfall preliminary hydraulic sizing and design; and
- Completion of an updated Environmental Assessment (EA) and Biological Assessment (BA).

The additional environmental permitting activities to replace the MWRF outfall would be more rigorous than the previous efforts and would include a more rigorous EA and BA. These reports would be informed by the preliminary outfall hydraulic design.

If approved by the City, West Yost recommends utilizing the remaining \$49,652 in Owner-Controlled Contingency funds included in West Yost's current design contract for Step 1 outfall replacement activities. The EA and BA would be prepared by Pacific Habitat Services, who completed the previous Environmental Report for the project under contract with the City's previous consultant.

STEP 2 – OUTFALL REPLACEMENT FINAL DESIGN AND MIXING ZONE STUDY

In parallel with final design of the MWRF Improvements Project, West Yost would collect detailed river bathymetry data (river bottom elevations), complete final design of the replacement outfall, and prepare a mixing zone study for the new outfall. West Yost will include this as a task in our upcoming proposal for completing final design of the MWRF Improvements Project, which we anticipate submitting to the City in January 2023.

STEP 3 – OUTFALL BIDDING AND CONSTRUCTION

The timeline for obtaining permits for the new MWRF outfall is not currently known but could be anywhere from 6-12 months based on agency feedback and discussions with other Oregon utilities pursuing permits for new or replacement outfalls. For this reason, West Yost recommends the MWRF Outfall Replacement be developed as a stand-alone bid package, separate from the MWRF Improvements Project.

While concurrence with funding agencies USDA-RUS and DEQ is required, identifying the new outfall as a separate phase would hopefully allow the significant planned improvements "inside the fence line" of the MWRF to proceed if permits for the new outfall are delayed for any reason. This approach would also allow the construction schedule for the in-river work to be planned around any required construction windows in the South Santiam River.

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If the City concurs with the approach outlined herein and the use of Owner-Controlled Contingency is authorized, West Yost does not believe adding the outfall replacement design to the project will impact the MWRF Improvements final design schedule, as we are already designing the replacement of the majority of the existing outfall to address hydraulic limitations.

Please contact me at your convenience if you would like to discuss the MWRF outfall replacement and our associated recommendations.

We appreciate the opportunity to continue serving the City of Sweet Home in this vitally important project for your community.

Sincerely,
WEST YOST



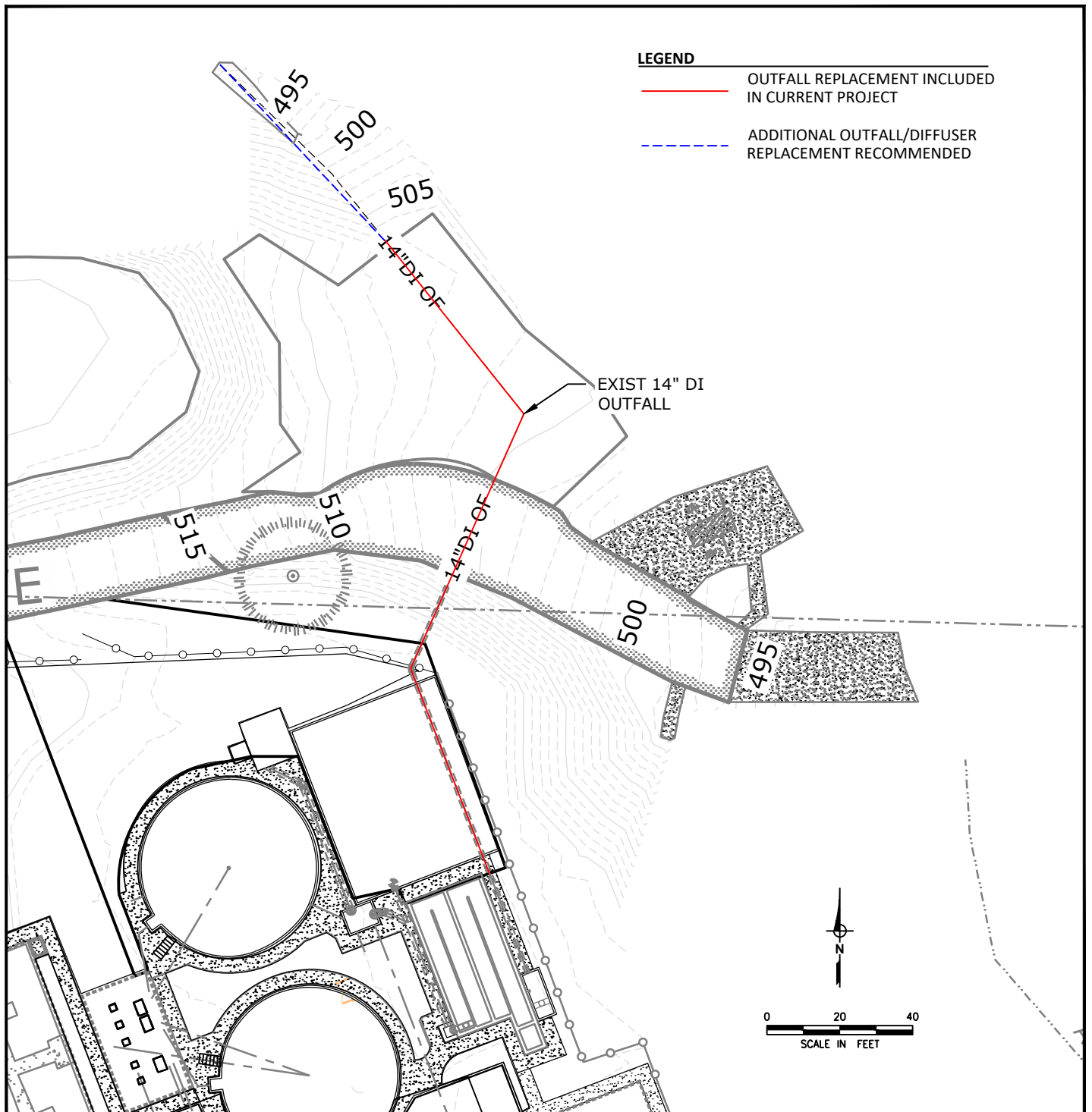
Preston Van Meter, PE
Project Manager
RCE #51615

cc: Steven Haney, City of Sweet Home Utilities Manager
Trish Rice, City of Sweet Home PW Engineering Technician II
Corie Moolenkamp, West Yost Principal-in-Charge
Brooke Barry, West Yost Deputy Project Manager

Attachment A. Exhibit A Existing MWRF Outfall

Attachment A

Exhibit A Existing MWRF Outfall



LOCATION MAP

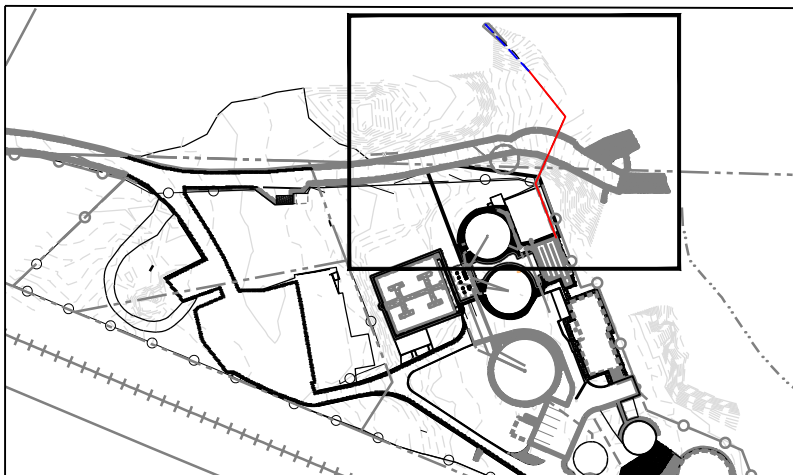


Exhibit A **Existing MWRF Outfall**



City of Sweet Home
Mahler WRF
Improvements Project