



Our vision of Coeur d'Alene is of a beautiful safe city
that promotes a high quality of life and sound economy
through excellence in government

PUBLIC WORKS COMMITTEE
with
Council Members McEvers, Gookin & English
December 12, 2016, 4:00 p.m.
AGENDA

- Item 1 AWTF Tertiary Treatment Phase 2 Improvements – Sole Source Procurement of Project Equipment – Jim Remitz
- Item 2 Declaration of Sole Source Procurement of Video Camera, AV System from Western Systems of Spokane – Kim Harrington

Library Community Room
702 Front Street

The City of Coeur d'Alene will make reasonable accommodations for anyone attending this meeting who requires special assistance for hearing, physical or other impairments. Please contact Amy Ferguson, Public Works Committee Liaison, at (208) 666-5754 at least 24 hours in advance of the meeting date and time.

**PUBLIC WORKS COMMITTEE
STAFF REPORT**

DATE: December 12, 2016

FROM: James Remitz, Capital Program Manager

SUBJECT: AWTF Tertiary Treatment Phase 2 Improvements
Sole Source Procurement of Project Equipment

DECISION POINT:

The City Council is requested to declare that Primary Sludge (PS) Pump 4, Return Tertiary Sludge (RTS) Pumps 3 and 4, Waste Secondary Sludge (WSS) Pump 3 and Alternate Coagulant Pumps be sole sourced procured as part of the AWTF Tertiary Treatment, Phase 2 Improvements. The construction bidding documents for this project will specify these pumps exclusively for their respective application. The Council is also requested to authorize publishing a notice in the newspaper stating the City's intent to sole-source procure said equipment pursuant to the requirements of Idaho Code § 67-2808.

HISTORY:

The Coeur d'Alene Wastewater Department is currently in the bidding phase for the Tertiary Treatment Phase 2 Improvements to the City's Advanced Wastewater Treatment Facility (AWTF). These improvements are necessary in order for the City's AWTF to comply with the requirements of the EPA National Pollutant Discharge Elimination System (NPDES) permit that was issued December 1, 2014, that allows for the discharge of treated wastewater into the Spokane River. The design of the Tertiary Phase 2 improvements follows the construction of Tertiary Treatment Phase 1 improvements and because some of the above referenced pumping equipment was installed as part of the Tertiary Treatment Phase 1 improvements, the compatibility of this pumping equipment is crucial to the functionality of the Tertiary Treatment Phase 2 Improvements.

FINANCIAL ANALYSIS:

The construction cost of Tertiary Treatment Phase 2 improvements is being funded through the Clean Water State Revolving Loan Fund administered by Idaho Department of Environmental Quality (IDEQ). The cost of the sole-sourced pumping equipment identified in this staff report will not significantly affect the total project cost.

DISCUSSION:

Idaho Code § 67-2808 (copy attached) allows sole source expenditures if the governing board declares that there is only one vendor reasonably available for the personal property to be acquired. Wastewater staff contends that the proposed pumping equipment meets the criteria of I.C. § 67-2808 (2) (a) (ii):

“Where the compatibility of equipment, components, accessories, computer software, replacement parts or service is the paramount consideration”. Wastewater staff has determined that the commonality of this pumping equipment is a “paramount consideration” for the efficient performance of the Tertiary Treatment Phase 2 improvements. The City’s design consultant for this project, HDR Engineering, Inc., has provided further written justification for the City’s consideration of the sole-source procurement of the pumping equipment and is attached to this staff report.

DECISION POINT / RECOMMENDATION:

Wastewater staff recommends that the City Council:

- 1.) Declare that the following equipment manufacturers and models to be sole sourced for use in the AWTF Tertiary Treatment Phase 2 project:
 - Primary Sludge Pump 4: WEMCO Model C;
 - Return Tertiary Sludge Pumps 3 and 4: ABS Model RCP 500
 - Waste Secondary Sludge Pump 3: Vogelsang Model VX100-128Q
 - Alternate Coagulant Pumps: Watson Marlow Model 620DuN
- 2.) Authorize the publication of a notice of intent to sole-source procure this pumping equipment.



December 5, 2016

Mr. Jim Remitz
City of Coeur d'Alene
710 E. Mullan Avenue
Coeur d'Alene, ID 83814

Subject: Advanced Wastewater Treatment Facility
 Tertiary Treatment Phase 2 Improvements
 Sole Source Justification for Project Equipment

Dear Mr. Remitz,

The purpose of this letter is to provide the City of Coeur d'Alene, in accordance with requirements for political subdivisions of the state of Idaho, with technical information related to some of the equipment being furnished for the Advanced Wastewater Treatment Facility (AWTF) Tertiary Treatment Phase 2 Improvements project that we consider necessary to sole source.

Background

Phase 1 of Tertiary Treatment at the Coeur d'Alene AWTF confirmed the process concept developed and tested in the Low Phosphorus Demonstration Pilot Facility. The project has been designed, constructed, and the following components have been in operation for over a year:

- Secondary Effluent Pumping Station (SEPS)
- Expanded Solids Contact Tank (ESCT)
- Chemical Mixing Tank (CMT)
- Tertiary Membrane Filtration (TMF) Equipment Building
 - An equipment building houses tertiary membrane filtration ancillary process equipment, including pumps, blowers, and chemical systems.
- Membrane Operating System
 - The Membrane Operating System consists of straining, membrane tanks, membrane cassettes, permeate pumping, tank drain pumps, chemical cleaning equipment, and system controls.
- Blower System
 - The blower system consists of two systems:
 - Turbo blowers providing aeration air to the Chemical Mixing Tank.
 - Positive displacement blowers providing air to scour the membranes.

- Return Tertiary Sludge Pumping
- Waste Sludge Pumping
- Chemical Feed Systems

The Tertiary Treatment Phase 2 Improvements project continues the phased implementation of improvements necessary to comply with the City's current EPA National Pollution Discharge Elimination System (NPDES) permit that became effective December 1, 2014. In addition to the increase in membrane filtration capacity from 1.0 million gallons per day (mgd) to a 5.0 mgd, Phase 2 project elements include:

- Primary Clarifier 3 with odor control
- Secondary Clarifier 3
- Secondary Control Building 2
- Secondary Scum Pumping Station
- Dewatering Sumps
- New SEPS Pumps
 - Increased secondary effluent pumping capacity to 6 mgd to deliver secondary effluent to the tertiary membrane filtration system. The pumps are designed to operate through Phase 3.
- Conversion of the Expanded Solids Contact Tank into additional Chemical Mixing
 - Decommissioning of the trickling filter effluent and return secondary sludge transfer pumping at the commencement of the Tertiary Treatment Phase 2 project.
- New 3W pumping and UV disinfection system
- Modifications to Chemical Systems Center for additional alum, caustic, and alternate coagulant storage
- Power supplies, controls, and support utilities for the new buildings and equipment

Design of Tertiary Treatment Phase 2 Improvements project has been completed and will go to construction in early 2017. Construction of the Phase 2 Tertiary Treatment facility is scheduled to be completed in late 2018.

During design, some of the equipment for the Tertiary Treatment Phase 2 Improvements project was identified as being equipment that should be sole sourced. That equipment and sole source justification is described in detail below.

Procurement Requirements

Procurement requirements for all political subdivisions of the State of Idaho are governed by Idaho Statute Title 67 - State Government and State Affairs, Chapter 28 Purchasing by Political Subdivisions. The full statute is available at <http://www.legislature.idaho.gov/idstat/Title67/T67CH28.htm>. The legislative intent of this statute for purchasing by a political subdivision includes:

- Efficient and cost-effective procurement of goods and services
- Procurement by way of a publicly accountable process that respects the shared goals of economy and quality
- Purchase from vendors with a significant Idaho economic presence

Section 67-2808, Subsection (2) applies to sole source expenditures if the governing board declares that there is only one vendor for the personal property to be acquired. Situations where only one source is reasonably available include, but are not limited to the following:

- Where the compatibility of equipment, components, accessories, computer software, replacement parts or service is the paramount consideration;
- The purchase of property for which it is determined there is no functional equivalent;
- Where competitive solicitation is impractical, disadvantageous or unreasonable under the circumstances.

Notice of sole source procurement shall be published in the official newspaper of the political subdivision at least fourteen (14) calendar days prior to the award of the contract.

Tertiary Treatment Phase 2 Sole Source Equipment

The following equipment has been identified as being necessary to sole source for the Tertiary Treatment Phase 2 Improvements project:

- Primary Sludge Pump 4
- Return Tertiary Sludge (RTS) Pumps 3 and 4
- Waste Secondary Sludge (WSS) Pump 3
- Alternate Coagulant Pumps

PRIMARY SLUDGE PUMP 4

The City has three existing primary sludge pumps in operation at the AWTF. The existing system has been in operation for almost three decades. A fourth primary sludge pump is necessary to serve the new primary clarifier and maintain pump redundancy. By installing a fourth pump from the same manufacturer that is the same model as the existing pumps, the City will be able to expand

the existing system with commonality of systems and equipment. If the City were to not pursue a sole source expenditure, it may be faced with a different pump manufacturer which has alternate operations and maintenance procedures requiring additional operator training, increased spare parts inventory, and modifications to improvements already constructed. Compatibility of equipment will allow for the most efficient operations and maintenance.

RETURN TERTIARY SLUDGE (RTS) PUMPS 3 AND 4

Two RTS pumps were installed at the AWTF during Phase 1 of the Tertiary Treatment improvements. The existing system maintains the chemical and biological solids inventory in the Chemical Mixing Tanks and has been in operation for over a year. A third RTS pump is necessary to accommodate the increased flows to the TMF facility. By installing a third pump in the RTS channel, and providing one shelf spare, from the same manufacturer that is the same model as the existing pumps, the City will be able to expand the existing system with commonality of systems and equipment. If the City were to not pursue a sole source expenditure, it may be faced with a different pump manufacturer which has alternate operations and maintenance procedures requiring additional operator training, increased spare parts inventory, and modifications to improvements already constructed. Compatibility of equipment will allow for the most efficient operations and maintenance.

WASTE SECONDARY SLUDGE (WSS) PUMP 3

The City has two Waste Secondary Sludge (WSS) pumps in operation at the AWTF. The existing system has been in operation for over three decades. A third WSS pump is necessary in Secondary Control Building 2 to serve the new secondary clarifier and maintain pump redundancy. By installing a third WSS pump from the same manufacturer that is the same model as the existing pumps, the City will be able to expand the existing system with commonality of systems and equipment. Additionally, the City has the same rotary lobe pump in operation for other applications within the facility and operators are familiar with the operation and maintenance of the pump. If the City were to not pursue a sole source expenditure, it may be faced with a different pump manufacturer which has alternate operations and maintenance procedures requiring additional operator training and increased spare parts inventory. Compatibility of equipment will allow for the most efficient operations and maintenance.

ALTERNATE COAGULANT PUMPS

Two alternate coagulant pumps will be installed during the Tertiary Treatment Phase 2 Improvements project. The pumps will deliver alternate coagulant, such as ferric chloride or polyaluminum chloride, to the TMF Facility. The pumps will be located in the Chemical Systems Center with the existing alum and caustic pumps. By installing two alternate coagulant pumps from the same manufacturer that is the same model as the existing chemical feed pumps, the City will be able to expand the existing system with commonality of systems and equipment. If the City were to not pursue a sole source expenditure, it may be faced with a different pump manufacturer which has alternate operations and maintenance procedures requiring additional operator training,

increased spare parts inventory, and modifications to improvements already constructed. Compatibility of equipment will allow for the most efficient operations and maintenance.

Implementation

Implementation of Tertiary Treatment Phase 2 Improvements project can be improved by matching existing equipment and systems where feasible. The manufacturer and model for proposed sole source equipment is listed below.

- Primary Sludge Pump 4: WEMCO Model C
- Return Tertiary Sludge (RTS) Pumps 3 and 4: ABS Model RCP 500
- Waste Secondary Sludge (WSS) Pump 3: Vogelsang Model VX100-128Q
- Alternate Coagulant Pumps: Watson Marlow Model 620DuN

Following a sole source determination by the City, a notice of sole source procurement shall be published in the local newspaper at least fourteen (14) calendar days prior to the award of the contract.

Sincerely,
HDR Engineering, Inc.

Michael S. Zeltner, PE
Associate | Project Manager

Cc: Sid Fredrickson, City Coeur d'Alene Wastewater Department
Don Keil, City Coeur d'Alene Wastewater Department
Casey Fisher, City Coeur d'Alene Wastewater Department
Dave Clark, HDR
Rickey Schultz, HDR



AWTF Tertiary Treatment Phase 2

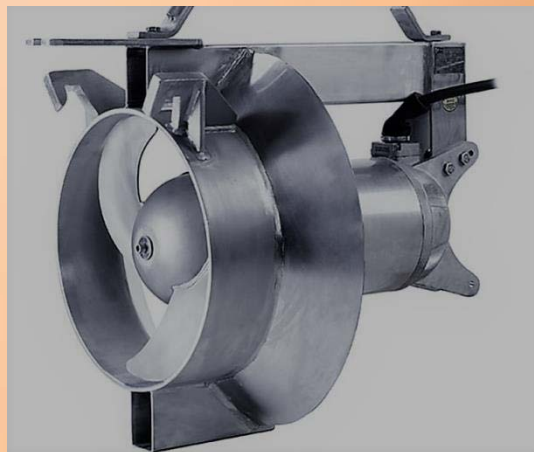
Sole Source Equipment Procurement



Primary Sludge Pumps



Return Tertiary Sludge Pump



Waste Secondary Sludge pump



Alternate Coagulant Pumps



PUBLIC WORKS STAFF REPORT

DATE: December 12, 2016
FROM: Kim Harrington, Assistant Project Manager (Drainage Utility)
Tim Martin, Streets/ Engineering Director

SUBJECT: DECLARATION FOR SOLE SOURCE PROCUREMENT VIDEO CAMERA, AV SYSTEM FROM WESTERN SYSTEMS OF SPOKANE

DECISION POINT:

Request Council authorization to purchase new video camera, AV system from Western Systems of Spokane

HISTORY:

The current system was purchased in 2004 by the City of Coeur d'Alene Wastewater Dept. In 2010 the wastewater department upgraded to a new camera truck and their old camera truck and equipment was taken over by the drainage utility. As with any computer and A/V technology, equipment becomes obsolete quickly and support for older equipment becomes very challenging. At this time, the drainage utility upgraded the video capture program to POSM. However, the cameras remained the same until 2011 when one of the two cameras was updated to have Pan, tilt and zoom capability. There are no longer parts available to upgrade the other camera or to repair the one that was upgraded as this technology is now obsolete. During the last fiscal year the utility has spent in excess of \$2600.00 attempting to repair our camera.

Camera Truck Mission/ Usage The camera/ Video truck is a box truck that is equipped with a remote control camera system that drives into storm drainage lines to inspect them for obstructions, defects, illicit connections, infrastructure condition rating, risk assessment and planning.

Having the ability to video lines is essential during rain events where ponding is occurring to identify/ fix the issue before damage to property occurs. It is also vital to use this technology to inspect pipe conditions prior to asphalt overlays or wastewater open trench projects to ensure sound storm water infrastructure and identify storm water system repairs / upgrades that can be done in conjunction with other city projects.

It is not uncommon to discover gas mains or water lines that have been bored through our storm water lines. Mechanically jetting these lines without performing a visual inspection with the camera can be very dangerous and is avoided whenever possible.

The City of Coeur d'Alene Streets/ Engineering department have performed 430 man hours of video in the last 12 months. We have an average of 6 core videoing

months which equates to 71 hours per month during the video season. Could have done more!!!

FINANCIAL ANALYSIS:

The purchase of this equipment was not included in budget. The funds required will be made available by utilizing the street department to perform the majority of our collection system replacement work.

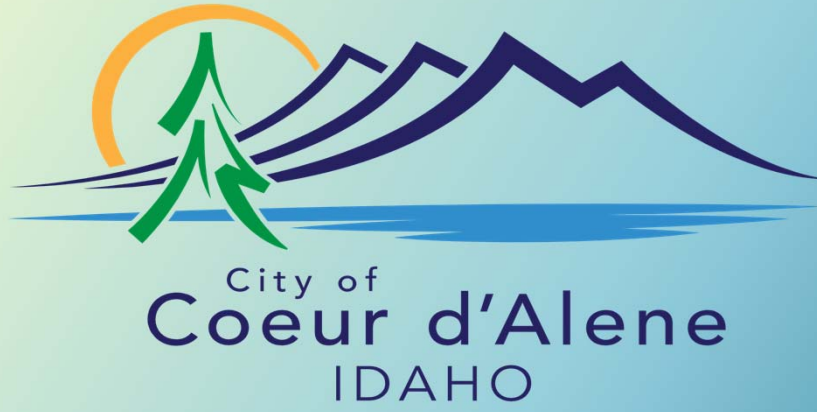
PERFORMANCE ANALYSIS:

The Drainage Utility and Street/ Engineering Department would greatly benefit from having a new camera system to support our rapidly growing needs. Due to a lack of customer support and difficulty during repairs, we have explored other manufacturers of comparable systems. The Wastewater dept. has had tremendous success and dependability out of the systems which they are currently using (RST). Having the same system as wastewater would allow us to always have backup equipment that is completely compatible should we have an issue with ours. RST also has a presence in Spokane with support and loaner equipment for use while our equipment is getting repaired. RST pays for the shipping of our camera and is on the west coast. The new equipment from RST would also have a 24-60 month warranty.

An additional benefit of using the same system that wastewater has is that they have lots of specialty accessories that would be extremely valuable during special projects. We typically wouldn't purchase these items due to the little use that we would have for them. These items will be extremely helpful during those extraordinary circumstances and are currently owned by the city already. Examples of these items would be oversized/ specialty tires and different tractors that elevate the level of the camera several feet.

DECISION POINT/RECOMMENDATION:

The Council is requested to authorize staff to publish a declaration for the sole source procurement of a new video camera / AV system from Western Systems for \$56,180.00



Video Truck



Video Truck



Debris in Storm Line



Illegal Connection



Gas line thru Storm line





Collapsed Line

