

Report No.: 2020-07-01
Report Page: Page 1 of 3
Meeting Date: July 30, 2020
File No.:



To: Chair and Members
Lambton Area Water Supply System Joint Board of Management

From: Clinton Harper
General Manager

Subject: 2020 Major Maintenance Project Substitution Request

Recommendation

It is recommended that the LAWSS Board adjust the 2020 Major Maintenance Program as follows:

Remove:

MM20-02 VFD Floc Drive Replacement (\$45,000)

Replace with:

Annual VFD Floc Driver Failure Contingency Allowance (\$11,000)

MM20-02A Actiflo Refurbishment (\$6,000)

MM20-02B Filter Waste Rotork Valve Replacement (\$15,000)

MM20-02C Security System Upgrade (\$5,500)

MM20-02D Fire Panel Integration (\$3,000)

Background:

Major Maintenance is defined by the LAWSS/OCWA Management, Operations and Maintenance Agreement as any, "repairs or restoration of Facility equipment, under \$50,000, that is pre-approved by LAWSS, that does not include routine or corrective Maintenance". OCWA continually executes major maintenance projects and reviews and refines what is referred to as the Major Maintenance Program to minimize the likelihood of a corrective maintenance situation.

At the recommendation of staff, in 2019 the LAWSS Joint Board of Management approved \$312,000 in major maintenance work for 2020. The approved 2020 Program includes 18 projects spread between the Water Treatment Plant, West Lambton Pumping Station and distribution/transmission network. This work is currently underway.

Report No.: 2020-07-01
Report Page: Page 2 of 3
Meeting Date: July 30, 2020
File No.:

Comments:

Approved project MM20-02 includes the replacement of six drives used to control mixing equipment utilized in the water treatment plant's x3 flocculation trains. These drives had reached their anticipated end of life and had been identified for replacement under the Major Maintenance program. A budget of \$45,000 was established for the project.

At the beginning of 2020, OCWA initiated steps to replace the equipment by completing a final detailed inspection and investigation of best path for replacement. The investigation revealed that replacement drivers, while somewhat expensive, are still readily available. Due to the relatively good condition of the existing equipment and the availability of replacement equipment, OCWA is recommending that a "run-to-failure" scenario for the drives be implemented. The criticality of a single drive failure is very low due to multiple redundant trains and therefore failed equipment can be replaced as needed with minimal impact to operations. A Business Case, developed by OCWA is attached to this report and represents the Board's most economical option for this particular equipment at this time.

If the Board permits the "run-to-failure" scenario for the VFD Flocc Mixers, MM20-02 will be removed from the 2020 Major Maintenance program and replaced with a \$11,000 annual contingency allowance. The contingency allowance will be submitted annually until the drives have all been replaced. OCWA suggests x4 possible alternative projects that could be executed in 2020. The substitute projects are also described in the attached Business Case.

1. Actiflo Refurbishment (\$6000)

The Actiflo Systems is part of the Water Treatment Plant's Residual Management System (RMS). A recent investigation of the subsystem, complete by OCWA, has identified an inefficiency. The refurbishment is necessary to improve process operation and reduce sand use which will provide cost savings.

2. x10 Filter Waste Valve Replacement (5year program. 2 valves/year @ \$15,000/year)

The Water Treatment Plan utilizes x10 conventional dual media filters in the treatment process. Staggered and regular backwashing of the dual media filters is necessary for uninterrupted treatment of raw water at the WTP. The waste valve allows backwashed debris to be directed to the RMS. This work was identified in the capital plan and scheduled to begin in 2021.

3. Security System Upgrade and Fire Panel Integration (\$8,500)

Report No.: 2020-07-01
Report Page: Page 3 of 3
Meeting Date: July 30, 2020
File No.:



Updating and integration of the Intrusion and Man-Down and Fire Panel system. This work was identified in the Capital plan and scheduled to begin in 2021.

Consultation:

This report was prepared in consultation with the LAWSS General Accountant and OCWA Operational Manager

Financial Implications:

Approved- MM20-02 VFD Floc Replacement	\$11,000*	\$45,000
Proposed- MM20-02A Actiflo Refurbishment	\$6,000	
Proposed- MM20-02B Filter Waste Rotork Valve Replacement	\$15,000	
Proposed- MM20-02C Security System Upgrade	\$5,500	
Proposed- MM20-02D Fire Panel Integration	\$3,000	
Savings to 2020 Budget	\$4,500	

*The \$11,000 will be included in the 2020 Major maintenance budget and will be allocated to an annual contingency allowance beginning in 2021.

This report was prepared by Clinton Harper, General Manager

Attachment(s): Letter Dated July 16, 2020 Subject: Major Maintenance #20-02 (VFD Floc Mixer Replacement)