

GLENBARD WASTEWATER AUTHORITY
Executive Oversight Committee
Agenda

October 13, 2016

7:30 a.m.

**Meeting will be held at the Glenbard Wastewater Plant
21 W 551 Bemis Rd, Glen Ellyn, IL**

1. Call to Order
2. Roll Call
3. Pledge of Allegiance
4. Public Comment
5. Consent Agenda – The following items are considered to be routine by the Executive Oversight Committee and will be approved with a single vote in the form listed below:

Motion the EOC to approve the following items including Payroll and Vouchers for the Month of September 2016 totaling \$839,524.26 (Trustee Clark)

- 5.1 Executive Oversight Committee Meeting Minutes:
 - o September 8, 2016 EOC Meeting
- 5.2 Vouchers Previously Reviewed by Trustee Clark:
 - o September 2016
6. UV Disinfection System Rebuild Request for Authorization – (Erik Lanphier)

The Ultraviolet Light Disinfection System (UV Disinfection) has provided the Authority seasonal disinfection since the early 1990's. The system replaced chlorine gas due to safety concerns and impending EPA regulations pertaining to use and storage of chlorine gas. The Original Equipment Manufacturer (OEM) and engineers of the Fisher and Porter UV Systems is Ironbrook UV Corp. The design concept for this system was based on the Arlat design which utilizes low pressure lamp technology.

Since 2012 the Authority has recognized that the UV system was beginning to show its age. The almost twenty years of service life started to show when ballasts started to intermittently go bad. At this time Iron Brook UV Corp. were still supporting parts of the existing systems, but as the years past the parts have become expensive and more difficult to acquire.

The two options the Authority has with regard to updating the UV process system is reengineering the system and buying new, or rehabilitating the existing system through the OEM. The system **cannot** be serviced or rehabilitated by any other company other

than the OEM Ironbrook UV. During the Facility Planning completed in 2013 Strand evaluated horizontal, vertical, and inclined-style UV systems for replacement of the existing system. These new systems require significantly fewer lamps compared to the existing system, which has 2,304 lamps. The TrojanUV 3000Plus equipment can be installed in three of the existing channels with new concrete baffle walls at the equipment. The Xylem Wedeco Duron equipment could be installed either in a four-channel or two-channel arrangement. The two-channel arrangement for the Xylem Wedeco Duron equipment requires two of the existing channels to be widened to accommodate the equipment. The four-channel arrangement for the Xylem Wedeco Duron equipment can be installed in the four existing channels with baffle walls at the equipment. The TrojanUV Signa and Ozonia Aquaray 3X equipment require channel modifications to provide a deeper and wider channel.

Per the 2013 Facility Plan these capital improvements cost range from \$2,500,000 to \$3,300,000. The Wedeco Duron 4 channel was recommended by the plan as the best improvement with a total opinion of probable construction cost of \$2,400,000

	Ironbrook UV Base Price	Supply of PLC Hardware & Communication MicroLogix	Update CAD Drawings to As- built status	Panel Factory Acceptance Testing	Replace Ex. Panelview with new iFix Thin Client	Total UV Upgrade Cost
Base Price	\$646,500	\$123,000	\$7,900	\$2,500	\$4,400	\$784,300

Comparably speaking the OEM rebuild will provide us with the same results without the expense of engineering, bidding and construction. The Authority will continue to receive the same high quality service we have received from Ironbrook UV as we have for more than 20 years. The savings of \$1,538,700 over a 20 year period equates \$76,935/year of savings. This savings pays for the lamp replacements every 4 years or 10,000 hours. Based on the \$50,000 for replacement of lamps every 4 years we would utilize \$200,000 of the savings during that twenty years. This leaves the Authority a residual savings of \$1,300,000.

The UV system is currently due for the 10,000 hour lamp replacement. This line item is normally found in our capital budget in the amount of \$50,000. For CY2017 this budgetary item has been removed due to the lamps being supplied under this contract for a reduced purchase price.

The Authority's staff is requesting the authorization to proceed with this work immediately following the GWA Full Board approval of the CY2017 budget. The reasoning for this request is due to the mandatory need for the work to be completed during the offseason for plant effluent disinfection which is November 1, 2016 through March 31, 2017. Lead times for purchased equipment and shipping of the equipment to and from Canada take a significant amount of time. Maximizing the months during

CY2016 for breakdown and shipping with the agreement with Ironbrook UV to withhold invoicing until January 2017, will provide us with the best opportunity to meet the startup deadline of March 31.

Motion to waive competitive bidding for a single source purchase which is an authorized exception in the purchasing policy for an OEM manufacturers rebuild awarded to Ironbrook UV of Ontario, Canada for the not too exceed amount of \$785,000. Award shall be pending the GWA Full Board CY2017 budget approval on November 3, 2016.

7. Airgas Liquid Oxygen Contract Amendment and Vaporizer Lease Agreement
(Matt Streicher/Erik Lanphier)

The Authority's staff would like to propose to the EOC a transitional process that if approved would take place in January of 2017. Prior to eventually converting to a biological nutrient removal facility in the future, an evaluation has been performed on whether or not to continue maintaining the cryogenic plant and producing pure oxygen on site, or to haul it in from an outside provider. The transition to hauling it from an outside provider would allow us to start using less energy, while still operating the high purity oxygen system, and give us the ability to fine tune our operations prior to converting to a biological nutrient removal processes. Performing the transition could avoid shocks to the biological components of the overall treatment process. The transition to liquid hauling would also consume less staff time since the cryogenic plant would no longer be in operation, and would reduce operational costs overall.

An analysis has been completed comparing shutting down the cryogenic plant that produces pure oxygen for the High Purity Oxygen (HPO) Activated Sludge process versus continuing to operate with it in service. The plant separates pure oxygen out of the atmospheric air, which is then sent to our aeration tanks as part of the activated sludge process. The equipment is nearing 40 years old, out of date, and expensive to operate.

Another component involved with switching over to liquid hauling would be the replacement of our existing hot water bath vaporizer. When the oxygen is held in the storage tanks it is held in liquid form, therefore when it is transferred to the aeration tanks, it needs to be vaporized into a gaseous form first. The liquid oxygen is vaporized as it passes through the hot water bath, which is also nearing 40 years old, is not reliable, and is not energy efficient. Three quotes were requested for the purchase and installation of new atmospheric vaporizers. Based on the future regulatory requirements the Authority will be presented with options necessary to convert to biological nutrient removal, and the vaporizers would no longer be needed, quotes for leasing atmospheric vaporizers were also requested. Only one provider was able to quote a direct lease option, which also happened to be the provider that our existing liquid hauling contract is with; Airgas. Under the lease option Airgas will perform the installation as part of the lease agreement; therefore, there would be no upfront capital costs. Another provider was able to provide us with a lease option, but only under the condition that they also operate it, which was not economical to us since there are very few operating costs associated with the units. Not included in the lease cost of the vaporizers is the

installation of concrete pads that the vaporizers will be installed on. Price proposals for the concrete will come at a later date prior to installation; however, they're anticipated to be \$20,000-\$30,000. Both proposals for the purchasing of liquid oxygen and the proposed installation/lease of the vaporizers were reviewed by our Cryogenic consultant, Mohawk, LLC, and both proposals were deemed to be acceptable.

After detailed evaluation and analysis, and based on qualifications and price, the Authority is seeking approval to award Airgas for the leasing of atmospheric vaporizers for the amount of **\$1,500** per month for the 5 year proposed liquid oxygen hauling schedule.

For added safety to the existing system, Airgas recommends replacing the tank pressure relief device with a dual pressure relief valve system, at a total additional cost of \$7,158.00. This is a one-time cost to be performed with the installation of the vaporizers. It is recommended to authorize Airgas to install the dual safety system for a cost of **\$7,158.00**.

Motion the EOC to approve an amendment to the liquid oxygen hauling contract and the dual safety system installation to Airgas USA LLC of West Chicago, IL to be invoiced to O&M account #270-530443. Award of this agreement amendment and dual safety valve installation shall be pending the GWA Full Board CY2017 budget approval on November 3, 2016.

Motion the EOC to approve the 5 year lease agreement for the atmospheric vaporizers in the amount of \$1,500 per month to be invoiced to Capital Fund 40. Award of this agreement shall be pending the GWA Full Board CY2017 budget approval on November 3, 2016.

8. CY2017 Budget Recommendation for GWA Board Approval – Erik Lanphier- 20 minutes

The CY2017 final draft budget is proposed for your review per the managers meeting held October 3, 2016.

Motion the EOC recommends to the GWA Board for approval the proposed CY2017 Annual Budget for the Operation, Maintenance and Capital Improvements for the Glenbard Wastewater Authority in the amount of \$18,899,550.

9. Discussion

- 9.1 Facility Improvement Project Update (Matt Streicher)
- 9.2 Combined Heat & Power Update (Matt Streicher)
- 9.3 Pending Agenda Items

10. Other Business

- 10.1 NACWA Gold Peak Performance Award Recognition (Erik Lanphier)

11. ***Annual GWA Full Board Meeting*** – The annual board meeting is scheduled for November 3, 2016 from 5:30 p.m. to 7:00 p.m.
Tentative Schedule is as follows:
5:30 p.m. – 6:00 p.m. - Meet & Greet
6:00 p.m. – Meeting Call to Order
6:30 p.m. – 6:45p.m. – Meeting Dismissal
12. ***Next EOC Meeting*** – The next regularly scheduled EOC Meeting is set for ***Thursday, November 10, 2016 at 7:30 a.m. at the Glenbard Facility.***