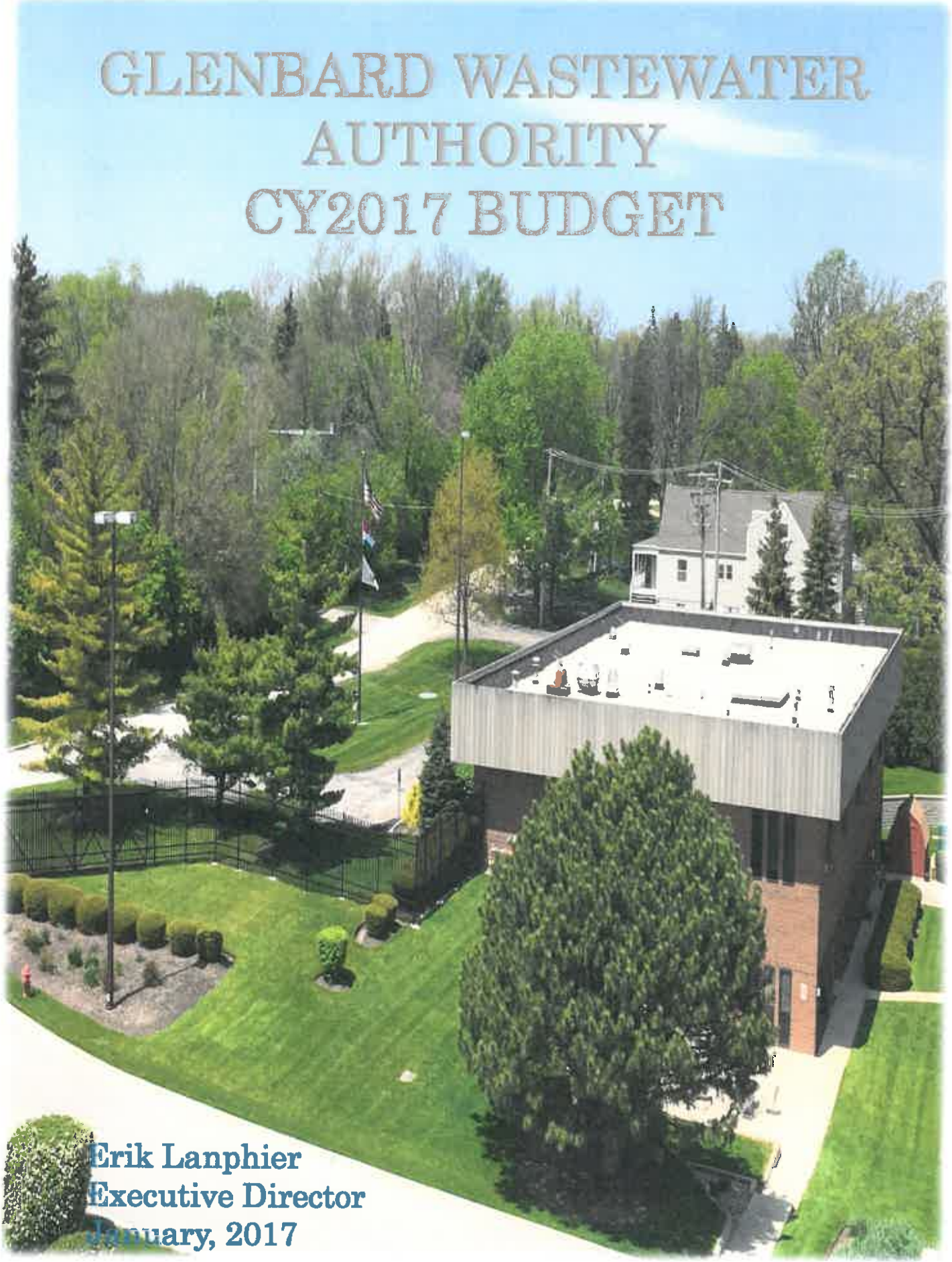
GLENBARD WASTEWATER AUTHORITY
CY2017 BUDGET



Erik Lanphier
Executive Director
January, 2017

GLENBARD WASTEWATER AUTHORITY

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Telephone: 630-790-1901 – Fax: 630-858-8119

November 3, 2016

President Keith Giagnorio and
Members of the Glenbard Wastewater Authority Board
Lombard, Illinois 60148

Subject: January 1, 2017 - December 31, 2017 Glenbard Wastewater Authority Budget (CY2017)

I am pleased to present for your review and consideration the proposed Glenbard Wastewater Authority (Authority) CY2017 Budget. The Glenbard Team, with the help of the Village Managers, Public Works Directors, and Finance Directors developed the proposed budget that is being recommended for approval to the Glenbard Wastewater Authority Board. The proposed CY2017 partner allocation shows an overall increase of $76,550 or 1.0% compared to the approved CY2016 budget. The budget reflects a substantial capital improvement plan with the completion of the Combined Heat and Power Project, the Facility Improvements Project construction which includes an improved Raw Pumping Station, new Disk Filtration as well as Non-Potable Water and Natural Gas Piping replacements. There are several moderate-sized projects such as the UV System Upgrade Project, Biological Phosphorus Removal Engineering and the Biogas Storage System project listed in the budget. The Facility Improvements Project construction expenses are scheduled to be offset with a loan through the IEPA Clean Water Initiative supported by Governor Rauner at a low interest rate of 1.75%. The proposed budget includes funding that will assure continued plant operation that exceeds regulatory standards resulting in improved water quality of the East Branch of the DuPage River.

BACKGROUND

REGIONALIZATION -- The Illinois Pollution Control Board required regionalization of wastewater treatment facilities in 1974 by creating Facility Planning Areas (FPA). The Glenbard FPA, Region IV-B, originally contained 14,000 acres or 22 square miles and has been amended several times by Glen Ellyn and Lombard and now appears to contain approximately 14,157 acres or 22 ¼ square miles. Recommendations for FPA amendments are made to the Villages by the EOC and are usually done to add small adjacent areas. On occasion small adjacent areas are lost to other FPA's. As of October 2016 the Glenbard FPA contains a population equivalent (P.E.) of 104,002 which is an increase of 144 (P.E.) from December, 2015. The FPA is projected to contain a P.E. of 109,125

when fully developed. Figure 1 shows the FPA map with the individual components of the Authority.

FACILITIES -- The Glenbard Wastewater Authority was created in 1977 by an intergovernmental agreement between the Village of Lombard and the Village of Glen Ellyn for the purpose of jointly constructing and operating advanced wastewater treatment facilities. The new facilities opened in 1982 and operate 24 hours per day 365 days per year.

The major components of the Authority, as depicted in Figure 1, are the 16.02 MGD (Million Gallons per Day) Glenbard Advanced Wastewater Treatment Facilities, the SRI Lift Station, the Sunnyside Lift Station, the 58.0 MGD Stormwater Plant, the Hill Avenue Lift Station, the North Regional Interceptor (NRI), the St. Charles Road Lift Station, the South Regional Interceptor (SRI), and the Valley View Lift Station.

The Glenbard Advanced Wastewater Treatment Facility is designed to provide Wastewater Treatment to an average flow of 16.02 MGD of domestic wastewater utilizing activated sludge with High Pure Oxygen. The plant utilizes a Supervisory Control and Data Acquisition (SCADA) system which enables the plant to run unmanned during off hours.

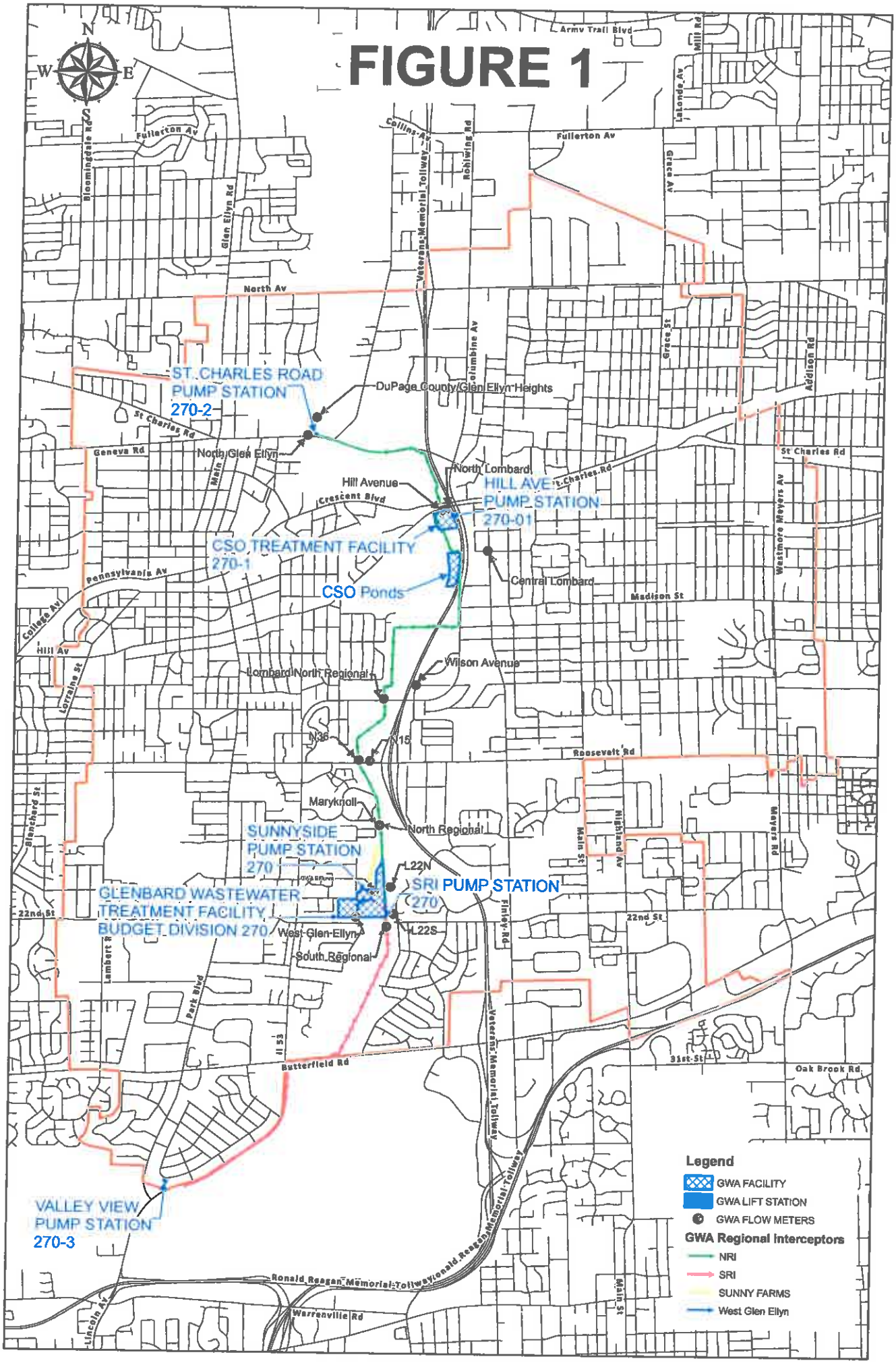
The Glenbard Wastewater Authority Stormwater Plant is an excess flow treatment plant that accepts combined sanitary and storm sewer from the Village of Lombard.

In addition to receiving flow from Glen Ellyn and Lombard the Authority also treats flow from the Illinois-American Water Company, a private utility company in the Valley View/Butterfield area, and from DuPage County, in the Glen Ellyn Heights area.

COST -- The grant eligible planning, design and construction costs of the new facilities totaled $42.6 million dollars in 1982. The individual components and costs are the Glenbard Advanced Treatment Facility at $27.2 million dollars, the Glenbard Wastewater Authority Stormwater Plant at $5.6 million dollars, the North Regional Interceptor (NRI) at $7.2 million dollars, and the South Regional Interceptor (SRI) at $2.6 million dollars. The design grant was applied for in 1974, and the construction grant was awarded in 1977. The United States Environmental Protection Agency (USEPA) contributed $32.0 million dollars toward construction. Lombard and Glen Ellyn contributed $10.6 million. Glen Ellyn, as lead agency, was the recipient of the USEPA funds and administered the federal grant application, processing, and close out. The USEPA grant was closed-out in January of 1990.

REGULATION -- The Glenbard Wastewater Treatment Plant treats approximately 3.5 - 5.5 billion gallons of wastewater (depending on the amount of rain) annually which is discharged to the East Branch of the DuPage River. The Illinois Environmental Protection Agency (IEPA), through a National Pollutant

FIGURE 1


N
W
E
S
ST. CHARLES ROAD PUMP STATION 270-2
DuPage County/Glen Ellyn Heights
North Glen Ellyn
Hill Avenue
Crescent Blvd
North Lombard
HILL AVE PUMP STATION 270-01
CSO TREATMENT FACILITY 270-1
CSO Ponds
Central Lombard
Lombard North Regional
Wilson Avenue
N36
N15
Maryknoll
North Regional
SUNNYSIDE PUMP STATION 270
L22N
SRI PUMP STATION 270
GLENBARD WASTEWATER TREATMENT FACILITY BUDGET DIVISION 270
West Glen Ellyn
L22S
South Regional
VALLEY VIEW PUMP STATION 270-3
Army Trail Blvd
Fullerton Av
North Av
St Charles Rd
Geneva Rd
Pennsylvania Av
Hill Av
Roosevelt Rd
Butterfield Rd
22nd St
31st St
Oak Brook Rd
Ronald Reagan Memorial Tollway
Warrenville Rd
Veterans Memorial Tollway
Legend
GWA FACILITY
GWA LIFT STATION
GWA FLOW METERS
GWA Regional Interceptors
NRI
SRI
SUNNY FARMS
West Glen Ellyn

Discharge Elimination System (NPDES) permit, regulates the discharge parameters.

AUTHORITY ORGANIZATION

AUTHORITY BOARD - The Board of Trustees from the Villages of Lombard and Glen Ellyn govern the Authority. The primary tasks of the Authority Board are to approve an annual budget and audit. Other major responsibilities are to amend the 2014 Intergovernmental Agreement and pass other resolutions as needed. The Board generally meets once a year.

EXECUTIVE OVERSIGHT COMMITTEE - The Executive Oversight Committee (EOC) was formed in 1984. The EOC is currently composed of the Village Presidents of Lombard and Glen Ellyn, a Trustee from each Village who is appointed by the respective Village President, the Village Managers from Lombard and Glen Ellyn, and the Public Works Director from each village. The EOC meets once a month or when necessary and has the primary responsibilities to set the strategic vision, review and approve all borrowing, contracts and expenditures, recommend FPA amendments, review the audit, and recommend an annual budget.

OPERATING "LEAD" AGENCY - The Village of Glen Ellyn is the operating or "lead" agency for the Authority and provides overall supervision, accounting, personnel, and other management services on a contractual basis for the Authority.

PERSONNEL – The day-to-day operation of the facilities is overseen by the Authority's Executive Director who is appointed and approved by the Executive Oversight Committee. A preliminary budget allotment of 18.8 highly qualified individuals who are employed with the Authority. Seventeen (17) employees work full-time while another seven (7) work part-time. Eleven employees are certified by the Illinois Environmental Protection Agency in wastewater treatment operations, and seven (7) of those ten (10) employees hold Class I certificates, the highest certification possible within the State of Illinois.

BUDGET ORGANIZATION

The Authority has adopted a calendar year budget to coincide with a January 1st to December 31st budget year consistent with the lead agency, the Village of Glen Ellyn. Most of the revenues for Authority operations are derived through monthly payments from the two Villages. Additional revenue is realized from connection fees collected on new structures built in the service area, landfill leachate treatment, cellular tower land lease agreements and interest income. There are two major funds: Operations and Maintenance (Fund 270) and the Capital Fund (Fund 40).

Div. 270 - Glenbard Plant (SRI Lift Station & Sunnyside Lift Station) includes:

270-1 – Glenbard Stormwater Plant (Hill Avenue Lift Station)
270-2 – North Regional Interceptor (St. Charles Lift Station)
270-3 – South Regional Interceptor (Valley View Lift Station)

The following is the fund allocation of the Capital fund:

Fund 40 - Equipment Replacement Fund

OPERATION AND MAINTENANCE (O&M) DIVISION

The O&M division records those transactions that are related to the daily operation and maintenance of the Authority. Operations are defined as the control of the treatment processes and equipment that make up the treatment works. This includes personnel management, equipment operation and monitoring, record keeping, laboratory, process control, solids handling, safety and emergency operation planning.

Maintenance is defined as the preservation of functional integrity of equipment and structures. This includes preventive, predictive, and corrective maintenance. The Operations and Maintenance Budget Revenue is allocated to Division 270 with Operations and Maintenance Budget Expenses tracked as follows:

Division	**Estimated** CY2016	**Proposed** CY2017
270 - Glenbard Plant SRI L.S Sunnyside L.S	$3,996,000	$4,025,000
270-1 - Stormwater Plant Hill Ave. L.S	98,100	115,450
270-2 - N. Reg. Int. St. Charles Rd. L.S	21,000	28,900
270-3 - S. Reg. Int. Valley View L.S	19,600	15,200
	$4,134,700	$4,184,550

Cash Reserves / Working Cash

CY 2016

Cash Reserves at January 1, 2016	1,178,743	
CY16 Projected Surplus/(Deficit)	39,800	
Projected Cash Reserves at December 31, 2016	1,218,543	
Less: Estimated Encumbrances at December 31, 2016	-	
Projected Working Cash at December 31, 20156	1,218,543	
Less: CY2016 Required Minimum Working Cash	(1,043,625)	*
Projected Working Cash Surplus at December 31, 2016	**174,918**	

Cash Reserves / Working Cash

CY 2017

Projected Cash Reserves at December 31, 2016	1,218,543	
CY2017 Projected Surplus/(Deficit)	-	
Projected Cash Reserves at December 31, 2017	1,218,543	
Less: Estimated Encumbrances at December 31, 2017	-	
Projected Working Cash at December 31, 2016	1,218,543	
Less: FY2016 Required Minimum Working Cash	(1,044,763)	**
Projected Working Cash Surplus at December 31, 2016	**173,780**	

* 25% of FY2016 Operating Expenses of $4,174,500
** 25% of FY2017 Operating Expenses of $4,179,050

The seven most significant cost centers in the proposed CY2017 O&M budget are as follows:

1. **Personnel:** The CY2017 proposed GWA team level is at 18.8 full time equivalents (FTE). Personnel costs for the past twenty years of full time equivalent staff are shown below. SY14 figures indicate expenses for only 8 months due to transitioning to a calendar year in 2015. The figures are indicative of the efficiencies realized through the elimination of multiple shifts, automation and monitoring, and other optimization measures:

	Budget	Actual	FTE
FY97	$1,587,600	$1,493,096	31.5
FY98	$1,433,080	$1,212,197	27.5
FY99	$1,286,970	$ 981,950	25.0
FY00	$1,074,863	$ 837,826	20.0
FY01	$ 897,041	$ 720,472	18.3
FY02	$ 882,500	$ 806,680	17.9
FY03	$ 936,000	$ 919,780	17.0
FY04	$ 979,600	$ 974,996	16.8
FY05	$1,065,500	$1,120,334	15.9
FY06	$1,163,100	$1,127,850	15.9
FY07	$1,219,100	$1,140,272	15.9
FY08	$1,254,550	$1,112,348	14.9
FY09	$1,197,300	$1,102,174	14.3
FY10	$1,235,100	$1,188,486	15.8
FY11	$1,328,200	$1,308,850	15.8
FY12	$1,372,900	$1,314,985	15.8
FY13	$1,368,150	$1,306,959	15.8
FY14	$1,410,000	$1,373,903	15.8
SY14	$1,066,800	$1,012,932	17.8
CY15	$1,555,700	$1,545,123	17.8
CY16	$1,619,400	$1,570,000	18.8 (Estimated)
CY17	$1,647,000		18.8 (Budgeted)

2. **O&M:** Expenses are budgeted in the amount of $625,950. This includes electrical, mechanical, operational, laboratory and administrative operation and maintenance of plant equipment and the maintenance of buildings and grounds. It is imperative that the capital investment that the Villages have made in their wastewater facility be operated and maintained appropriately. These funds, coupled with those in Fund 40 allocated to Plant Equipment Rehabilitation, provide an excellent plan to operate and maintain the Glenbard Plant process equipment. Maintenance funds cover both routine and non-routine repairs.

3. **Utilities**: Electric power, natural gas, water, and telecommunications comprise Utilities, the third largest cost center in the O&M budget. The sum of these utility costs is shown below. The largest component of the utility bill is electrical power used for oxygen generation, pumping systems, mixing and various in-plant processes.

	Actual
FY04	$617,574
FY05	$606,375
FY06	$588,400
FY07	$693,128
FY08	$1,194,869
FY09	$769,137
FY10	$873,093
FY11	$976,915
FY12	$1,163,751
FY13	$752,600
FY14	$799,084
SY14	$560,071 (8 Month Budget)
CY15	$760,826
CY16	$846,750 (Estimated)
CY17	$422,100 (Budgeted)

4. **Support Services:** The following are budgeted as support for each of the specific disciplines; Operations, Maintenance, Maintenance Building and Grounds, and Electrical. The CY2017 budget is proposed at a cumulative amount of $416,300. This includes the cost of specialized support services that are more effectively and/or efficiently purchased or contracted than completed internally. Support Services range from $300 per year for software support to $119,500 per year which includes upgraded flow meters, data analysis and meter maintenance fees.

5. **Insurance:** Expenses are budgeted in the amount of $411,000 for Liability and Health. This number represents all insurance required for the Authority's daily business.

6. **Liquid Oxygen:** The new process of having liquid oxygen delivered versus producing it onsite provides the Authority with flexibility to operate the biological process with lower dissolved oxygen levels which translate into saving cost on liquid hauling. The budget amount for this line item is $375,000.

7. **Fees:** Expenses are budgeted in the amount of $287,200. Fees include payments for service, memberships, or regulatory fees during CY2017.

CAPITAL FUND

This fund records those transactions that are related to the capital expenditures of the Authority. Capital can be spent on replacing "like for like" equipment at its useful life or for upgrading old processes to new technology.

The revenue for the capital plan is funded via the following components: equipment replacement fund, interest earned in the Capital and O&M funds, sanitary sewer/GWA connection fees paid to both Villages, landfill leachate treatment, cell tower revenues, miscellaneous revenues and borrowing.

	Estimated CY2016	**Proposed** CY2017
Fund 40 – Equip. Replacement		
Debt Payment	$ 637,000	$ 637,000
Project Expenses	$11,427,000	$13,978,000
Personnel	$ 69,000	$ 102,000
Property Acquisition	$ 273,000	$ 0
Total	$12,406,000	$14,717,000

Proposed CY2017 capital expenses of $14,717,000 are 15.7% or $2,311,000 higher than the CY2016 estimated capital expenses. The increase reflects the remaining construction and engineering of the Facility Improvements Project per the Equipment Replacement Plan presented to you within the Capital Equipment Replacement Fund 40 Footnotes. The increase also includes the UV System Upgrade Project, Biological Phosphorus Removal Engineering and the Biogas Storage System projects listed in the budget.

ALLOCATION OF EXPENSES

The Villages of Lombard and Glen Ellyn split the expenses for system operation and maintenance according to wastewater flows contributed by each partner based on the previous five (5) year average.

A total of 16 remote meters are located at key points in the Authority's system to enable the Authority to monitor flows which are allocated for billing purposes between the Villages of Lombard and Glen Ellyn. The Flow Meters also identify the flows associated with non-member entities such as DuPage County located on the North side of the GWA Facility Planning Area, and Illinois American Water Company located on the South side of the GWA Facility Planning Area.

In CY2017 a five-year average flow split of 45.25% (Glen Ellyn) and 54.75% (Lombard) is being utilized to estimate the expense allocations for the Wastewater Treatment Facilities. The true ups during the budget year will adjust the members budgeted portions as the flow splits become actual.

The CY2017 budget is inclusive of O&M Division 270 with expense allocation tracking for all facilities. Glen Ellyn recoups some of their operating costs through billings to DuPage County and Illinois-American Water Company.

The ***Total O&M Budget Allocation*** estimates are as follows:

	Budgeted CY2016	**Proposed CY2017**
Village of Lombard	$2,247,551	$2,289,125
Village of Glen Ellyn	$1,926,949	$1,891,925
Total	***$4,174,500***	***$4,181,050***

The overall O&M contribution by the two Villages has increased by $6,550 or 0.2% more than the CY2016 budget. The allocation to the Villages for the support of the O&M portion of the budget is $4,181,050. The allocation to the Villages for support of the proposed Capital Fund is $3,400,000.

CONCLUSION

The total proposed CY2017 budget and comparisons are as follows:

	Budgeted CY2016	**Proposed CY2016**
O&M	$ 4,178,000	$ 4,184,550
Capital	$11,518,000	$14,717,000
Total	$15,696,000	$18,901,550

Respectfully Submitted,

Erik Lanphier
Executive Director
Glenbard Wastewater Authority

Glenbard Wastewater Authority
Budget CY2017
All Funds
Expense Allocation to Partners

APPROVED CY2016 EXPENSES ALLOCATED TO PARTNERS			
	LOMBARD	GLEN ELLYN	TOTAL
Div. 270 -- Glenbard Plant / SRI L.S. / Sunnyside L.S.	2,247,551	1,926,949	4,174,500
270-1 -- Stormwater Plant / Hill Ave L.S.			
270-2 -- North Reg. Int. / St. Charles Rd. L.S.			
270-3 -- South Reg. Int. / Valley View L.S.			
TOTAL O&M BUDGET	**2,247,551**	**1,926,949**	**4,174,500**
CAPITAL EQUIPMENT REPLACEMENT FUND	**1,728,936**	**1,601,064**	**3,330,000**
TOTAL O&M AND CAPITAL BUDGETS	**3,976,487**	**3,528,013**	**7,504,500**

ESTIMATED ACTUAL CY2016 EXPENSES ALLOCATED TO PARTNERS			
	LOMBARD	GLEN ELLYN	TOTAL
Div. 270 -- Glenbard Plant / SRI L.S. / Sunnyside L.S.	2,151,446	1,844,554	3,996,000
270-1 -- Stormwater Plant / Hill Ave L.S.	52,817	45,283	98,100
270-2 -- North Reg. Int. / St. Charles Rd. L.S.	11,306	9,694	21,000
270-3 -- South Reg. Int. / Valley View L.S.	10,553	9,047	19,600
TOTAL O&M BUDGET	**2,226,122**	**1,908,578**	**4,134,700**
CAPITAL EQUIPMENT REPLACEMENT FUND	**1,728,936**	**1,601,064**	**3,330,000**
TOTAL O&M AND CAPITAL BUDGETS	***3,955,058***	***3,509,642***	***7,464,700***
CY2016 BUDGET OVER (UNDER)	**(21,429)**	**(18,371)**	**(39,800)**

PROPOSED CY2017 PARTNERS ALLOCATION				
		LOMBARD	GLEN ELLYN	TOTAL
Div. 270 -- Glenbard Plant / SRI L.S. / Sunnyside L.S.		2,289,125	1,891,925	4,181,050
270-1 -- Stormwater Plant / Hill Ave L.S.				
270-2 -- North Reg. Int. / St. Charles Rd. L.S.				
270-3 -- South Reg. Int. / Valley View L.S.				
TOTAL O&M BUDGET		**2,289,125**	**1,891,925**	**4,181,050**
CAPITAL EQUIPMENT REPLACEMENT FUND		**1,780,750**	**1,619,250**	**3,400,000**
TOTAL O&M AND CAPITAL BUDGETS		**4,069,875**	**3,511,175**	**7,581,050**
Proposed CY2017 Partners Allocation Compared to Approved Expenses Allocated to Partners CY2016:				
Operation & Maintenance	**$**	**$41,574**	**($35,024)**	**$6,550**
	%	**1.8%**	**-1.8%**	**0.2%**
Capital Improvements	**$**	**$51,814**	**$18,186**	**$70,000**
	%	**3.0%**	**1.1%**	**2.1%**
Total O&M and Capital Budgets	***$***	***93,388***	***-16,838***	***76,550***
	%	***2.3%***	***-0.5%***	***1.0%***

Operations & Maintenance

Glenbard Wastewater Authority
Budget CY2017
Operations & Maintenance

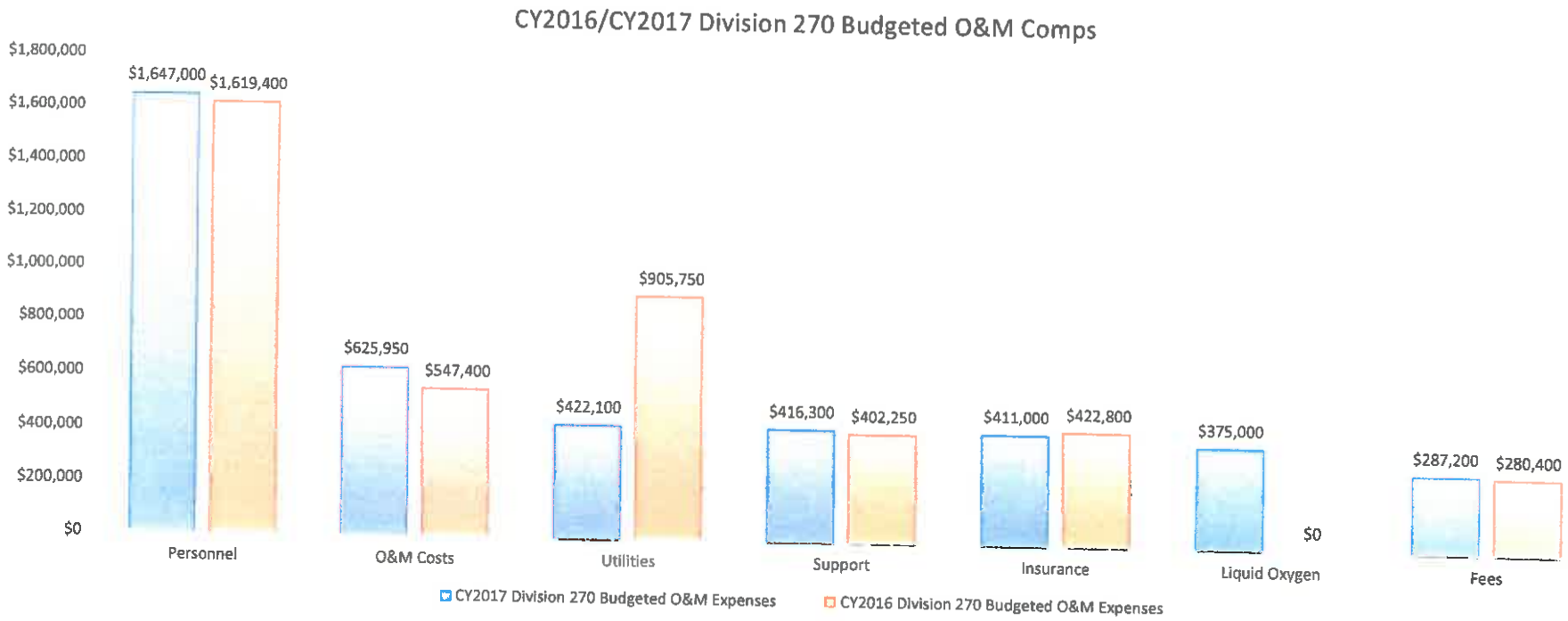
SUMMARY BY DIVISION

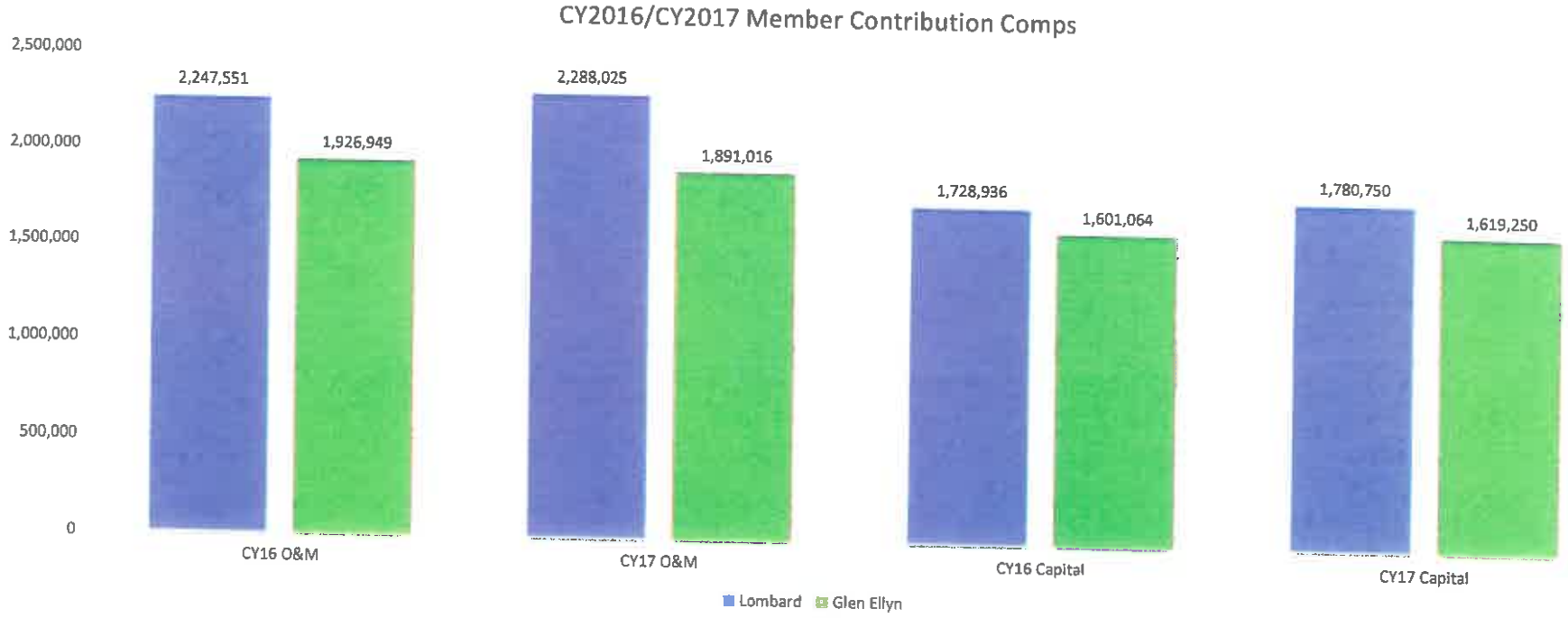
Expense Allocation to Partners **REVENUES**	**Actual CY2015**	**Budgeted CY2016**	**Estimated CY2016**	**Budgeting CY2017**
Div. 270 -- Glenbard Wastewater Authority	4,143,050	4,174,500	4,174,500	4,181,050
Interest O&M Fund	2,799	3,500	3,000	3,500
Miscellaneous Revenue	586	0	0	0
IRMA Reimbursement	5,829	0	0	0
Total Revenues	4,152,264	4,178,000	4,177,500	4,184,550

EXPENSES	**Actual CY2015**	**Budgeted CY2016**	**Estimated CY2016**	**Budgeting CY2017**
Div. 270 -- Glenbard Plant / SRI L.S. / Sunnyside L.S.	3,856,445	4,029,200	3,996,000	4,025,000
270-1 -- Stormwater Plant / Hill Ave L.S.	112,590	111,500	98,100	115,450
270-2 -- North Reg. Int. / St. Charles Rd. L.S.	18,627	27,500	21,000	28,900
270-3 -- South Reg. Int. / Valley View L.S.	19,414	9,800	19,600	15,200
Total O&M Expense:	4,007,076	4,178,000	4,134,700	4,184,550
Village of Glen Ellyn O&M Expenditures	1,879,319	1,928,565	1,908,578	1,893,509
Village of Lombard O&M Expenditures	2,127,757	2,249,435	2,226,122	2,291,041
Budget (Over) Under	145,188	0	42,800	0
Use of Available Cash				

Glenbard Wastewater Authority
CY2017 Total Budget

	Actual CY2015	**Budgeted CY2016**	**Estimated CY2016**	**Budgeting CY2017**
Operations & Maintenance	$4,007,076	$4,178,000	$4,134,700	$4,184,550
Capital Costs (Expenses & Debt Repayment)	$2,893,000	$11,518,000	$12,406,000	$14,717,000
TOTAL	$6,900,076	$15,696,000	$16,540,700	$18,901,550


CY2016/CY2017 Division 270 Budgeted O&M Comps
$1,800,000
$1,600,000
$1,400,000
$1,200,000
$1,000,000
$800,000
$600,000
$400,000
$200,000
$0
$1,647,000
$1,619,400
$625,950
$547,400
$422,100
$905,750
$416,300
$402,250
$411,000
$422,800
$375,000
$0
$287,200
$280,400
Personnel
O&M Costs
Utilities
Support
Insurance
Liquid Oxygen
Fees
CY2017 Division 270 Budgeted O&M Expenses
CY2016 Division 270 Budgeted O&M Expenses


CY2016/CY2017 Member Contribution Comps
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
2,247,551
1,926,949
2,288,025
1,891,016
1,728,936
1,601,064
1,780,750
1,619,250
CY16 O&M
CY17 O&M
CY16 Capital
CY17 Capital
Lombard
Glen Ellyn

270 Glenbard Plant

DIVISION 270
GLENBARD PLANT
and
THE SRI LIFT STATION
and
SUNNYSIDE LIFT STATION
O&M NARRATIVE

Division 270 is the main treatment facility. The facility treats, on average, 12 million gallons per day (MGD). The flow is conveyed via two interceptors:

~The North Regional Interceptor (SRI)
~The South Regional Interceptor (NRI)

These interceptors end at a junction chamber that is located on the eastern property line. Once they have reached the junction chamber, one 60" sewer conveys the flow under the East Branch of the DuPage River and into the GWA Treatment Facility. The 22nd Street sewer pipe also conveys flow to the junction chamber, but is not considered an interceptor since it is the property of the Village of Lombard.

The SRI Lift Station is located on the southeastern corner of the Glenbard Plant. The station was built in 1992 to alleviate the overpowering flow of wastewater from the NRI that created sanitary sewer overflows of the South Regional Interceptor. The wastewater that is pumped through the SRI Lift Station is conveyed to the station by the South Regional Interceptor which receives flow exclusively from collection systems operated and maintained by Illinois-American Water, a private utility company regulated by the Illinois Commerce Commission. Glenbard provides wastewater treatment for Illinois-American Water, who pays a user charge for this service to the Village of Glen Ellyn.

The Sunnyside Lift Station which was built in 1979 as part of the re-aligning of the North Regional Interceptor (NRI) during the construction of the new Glenbard Wastewater Authority Treatment Facility. The NRI at the time was on the west side of the East Branch of the DuPage River. The construction of the new Glenbard plant re-aligned the NRI to the east side of the East Branch of the DuPage River. The homeowners that had laterals leading directly to the NRI needed to be serviced, so the creation of the Sunnyside Lift Station came to be. The lift station serves less than twelve residents along Sunnybrook Road.

Flow through the Glenbard Plant is billed to both the Village of Lombard and the Village of Glen Ellyn based on monthly flow billing.

Budget CY2017
Operations & Maintenance
Division 270
Expense Allocation to Partners

REVENUE

		Actual CY2015	Budgeted CY2016	Estimated CY2016	Budgeting CY2017
Operation/Maintenance					
450010	Glen Ellyn Share - 45.25%	1,810,475	1,926,949	1,926,949	1,891,925
450015	Lombard Share - 54.75%	2,190,426	2,247,551	2,247,551	2,289,125
	Partners Allocation	4,000,901	4,174,500	4,174,500	4,181,050
	Interst Income - O&M Fund	**2,799**	**3,500**	**3,000**	**3,500**
	Misc. Revenue	**586**	**0**	**0**	**0**
	IRMA Reimbursement	**5,829**	**0**	**0**	**0**
DIVISION 270		**4,010,115**	**4,178,000**	**4,177,500**	**4,184,550**

NOTE: The flow splits used to calculate partner payments for CY2017 are as follows:
Flow Split for Glen Ellyn: 45.25%
Flow Split for Lombard 54.75%
(for 5 yrs. Average ending 12/31/15)

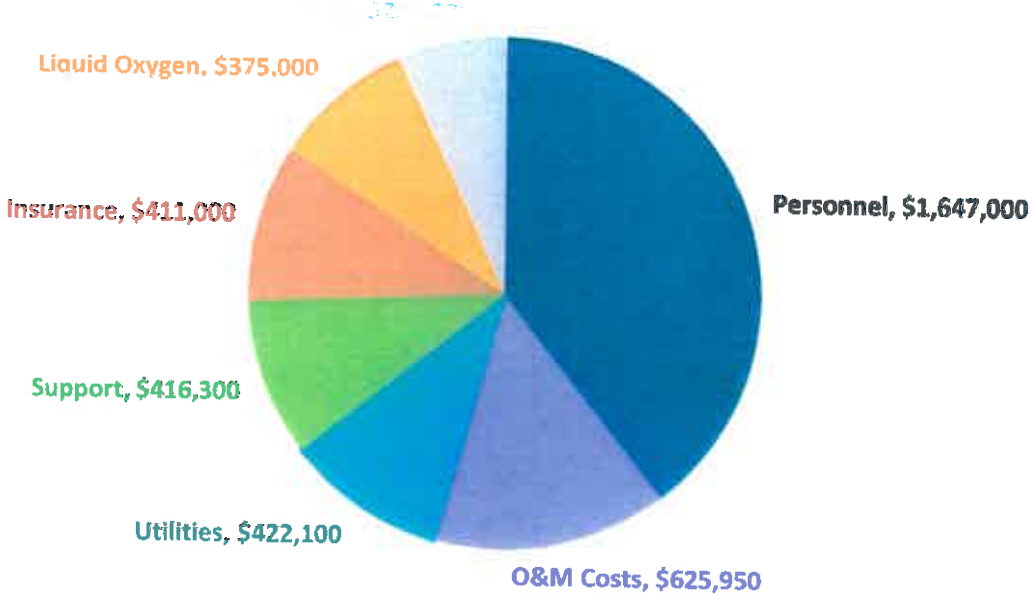
NOTE: The flow splits used to calculate partner payments for CY2016 are as follows:
Flow Split for Glen Ellyn: 46.16%
Flow Split for Lombard 53.84%
(for 5 yrs. Average ending 12/31/14)

NOTE: The flow splits used to calculate partner payments for CY2015 are as follows:
Flow Split for Glen Ellyn: 46.90%
Flow Split for Lombard 53.10%
(for 5 yrs. Average ending 12/31/13)

Budget CY2017
Operations and Maintenance
Division 270
Expense Allocation to Partners

		Footnotes	EXPENSES Actual CY2015	Budgeted CY2016	Estimated CY2016	Budgeting CY2017
Personnel Services						
510100	Salaries - Regular	*1*	1,213,405	1,246,000	1,246,000	1,284,000
510110	Salaries - Part-Time Ops.	*2*	36,593	53,000	39,000	40,000
510300	Salaries - Overtime	*3*	48,120	50,000	44,000	50,000
510500	Salaries - Temporary/Seasonal		20,426	25,000	15,000	25,000
510400	FICA		96,137	105,150	96,000	109,000
510550	IMRF	*4*	130,442	140,250	130,000	139,000
	Total		**1,545,123**	**1,619,400**	**1,570,000**	**1,647,000**
Contractual Services and Commodities						
520305	Employee Recognition		1,046	1,000	1,000	1,000
520310	Dues/Subs./Fees		12,567	12,500	12,500	15,900
520615	Recruiting/Testing		1,377	1,000	2,000	1,000
520620	Employee Education	*5*	14,974	24,300	15,000	19,000
520625	Travel (Mileage)		249	500	500	500
520700	Pro. Serv.-Legal Support	*6*	12,844	10,000	10,000	10,000
520750	Legal Notices		316	500	600	500
520771	Regulatory Fees		52,500	55,000	53,000	55,000
520772	DuPage River Salt Creek Work Group Fee	*7*	28,591	30,000	30,000	31,000
520806	Pro. Serv.-Lab Support		26,692	30,000	33,000	30,000
520811	External Consulting Fees	*8*	6,804	20,000	45,000	22,000
520812	Audit Fees / Pro. Serv. - Acct.	*9*	10,500	13,500	10,500	13,900
520885	Insurance - Liability (MICA)	*10*	185,391	192,000	184,000	192,000
520895	Insurance - Health	*11*	214,154	230,800	215,000	219,000
520970	Maint. - Bldg. & Grds.		10,625	17,200	12,000	10,000
520971	Bldg. & Grounds - Support		40,553	58,050	38,000	60,600
520975	Maint. - Equipment		63,717	69,500	68,000	165,000
520976	Maint. - Support	*12*	71,252	59,000	65,000	63,000
520980	Maint. - Electronics		59,414	65,000	61,000	65,000
520981	Elect. - Support	*13*	144,228	195,700	192,000	213,300
520990	Operations - Supplies		5,579	5,900	2,500	14,400
520991	Operations - Support		13,584	34,800	18,000	19,500
521050	Professional Services - Other Support		3,039	0	1,500	2,000
521130	Overhead Fees	*14*	126,500	128,400	128,400	128,400
521150	Sludge Disposal - Land Applied	*15*	150,591	170,000	150,000	170,000
521195	Telecommunications		59,427	30,750	31,000	32,600
521201	Electric Power	*16*	760,826	700,000	773,000	250,000
521202	Natural Gas	*17*	58,924	65,000	80,000	45,000
521203	Water		51,733	45,000	56,000	20,000
521204	Self-Gen Gas		3,701	6,000	5,000	6,000
530100	Office Expenses		25,319	20,000	22,000	20,000
530106	Operating Supplies - Lab		9,722	20,000	15,000	15,000
530107	Pretreatment Expenses		64	3,000	1,000	2,000
530200	Administrative Purchases		1,688	3,500	1,500	3,500
530225	Safety		15,827	16,900	18,000	16,900
530440	Chemicals	*18*	64,206	70,000	70,000	65,000
530443	Liquid Oxygen	*19*	0	0	0	375,000
530445	Uniforms		5,835	5,000	5,000	5,000
	Total		**2,314,361**	**2,409,800**	**2,426,000**	**2,378,000**
	TOTAL DIVISION 270		**3,859,484**	**4,029,200**	**3,996,000**	**4,025,000**

CY2017 O&M EXPENSES



CY2017 DIVISION 270
O&M FOOTNOTES

(1) **SALARIES ($1,284,000):**
This budget number includes salaries provided for seventeen (17) full-time staff members with only 20% or $20,500 of the budgeted salary for the Engineer/Assistant Director is included as the other 80% is being charged to the Capital Fund 40 due to the ratio of project related work versus operational administrative work. The full-time equivalent for all staff is approximately 18.8 including part-time operators and seasonal staff.

(2) **SALARIES - PART-TIME OPERATORS ($40,000):**
The Glenbard Plant operates 24 hours per day, 7 days per week. The SCADA System monitors the plant while it is not manned. Work ***is*** required on weekends and holidays to assure continued treatment and processing to meet stream discharge standards. Most of this work involves solids processing that must be done 7 days per week. For approximately seventeen (17) years we have used Part-Time Operators to provide operational inspections and solids processing on weekends and holidays. The use of five (5) part-time operations staff has allowed the full-time operations staff to work a regular work week without needing to work swing shifts or weekend work unless a situation arises. This has worked out well, and has resulted in not only better working arrangements for the full-time operations staff, but also utilizes an expanded pool of operators who can be called upon to help with the plant operations. This item is based on the equivalent of one (1) full time 40 hour per week employee.

(3) **SALARIES – OVERTIME ($50,000):**
GWA continues to trend overtime and manage this expense with best management practices in mind.

(4) **IMRF ($139,000):**
This represents a $750 reduction compared to the CY2016 budget number of $140,250. Only 20% or $2,120 of the IMRF contribution for the Engineer/Assistant Director is included as the other 80% is being charged to the Capital Fund 40 due to the ratio of project related work versus operational administrative work.

(5) **EMPLOYEE EDUCATION ($19,000):**
The employee education line item this year includes but not limited to the following:

Cryo System Training	$2,500
Illinois Public Sector Institute (IPSI) Training	$3,000
WEF Technical Conference	$2,500
OpWorks Database Training	$2,500
IWEA, CSWEA, IAWA Technical & Annual Conf.	$4,500

(6) **PROFESSIONAL SERVICE LEGAL ($10,000):**
Legal services remains the same as the approved and utilized funding for CY2016 budget number due to miscellaneous legal needs regarding property purchases, lease agreements and access.

CY2017 DIVISION 270
O&M FOOTNOTES

(1) **SALARIES ($1,284,000):**
This budget number includes salaries provided for seventeen (17) full-time staff members with only 20% or $20,500 of the budgeted salary for the Engineer/Assistant Director is included as the other 80% is being charged to the Capital Fund 40 due to the ratio of project related work versus operational administrative work. The full-time equivalent for all staff is approximately 18.8 including part-time operators and seasonal staff.

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(3) **SALARIES – OVERTIME ($50,000):**
GWA continues to trend overtime and manage this expense with best management practices in mind.

(4) **IMRF ($139,000):**
This represents a $750 reduction compared to the CY2016 budget number of $140,250. Only 20% or $2,120 of the IMRF contribution for the Engineer/Assistant Director is included as the other 80% is being charged to the Capital Fund 40 due to the ratio of project related work versus operational administrative work.

(5) **EMPLOYEE EDUCATION ($19,000):**
The employee education line item this year includes but not limited to the following:

Cryo System Training	$2,500
Illinois Public Sector Institute (IPSI) Training	$3,000
WEF Technical Conference	$2,500
OpWorks Database Training	$2,500
IWEA, CSWEA, IAWA Technical & Annual Conf.	$4,500

(6) **PROFESSIONAL SERVICE LEGAL ($10,000):**
Legal services remains the same as the approved and utilized funding for CY2016 budget number due to miscellaneous legal needs regarding property purchases, lease agreements and access.

(7) **DUPAGE RIVER SALT CREEK WORK GROUP ($31,000):**

The increase in the work group dues is a direct correlation to the support we provide as members to keep the administrative functions in tact as we continue to collaborate with the IEPA with regard to our NPDES permits. The project initiatives that the East / West Branch DuPage River & Salt Creek watersheds are providing to the IEPA are imperative to the impacts of the nutrient standards relating to point source dischargers. The work group has been recognized by the IEPA as a leader in developing remediation to stream standards particularly relating to habitat improvements. The work group believes that stream remediation is the path to healthier streams and rivers versus the implementation of nutrient discharge limits for phosphorus and total nitrogen. Educating communities about chloride utilization, storm water best management practices, and the discontinued use of coal tar sealants have also been important functions provided by this group. The IEPA has granted the Authority with two permit cycles (10) years without impending NPDES limits for phosphorus.

(8) **External Consulting Fees ($22,000):**

This item covers the cost to hire a consulting engineer for small specific tasks required to implement equipment changes, operational changes or general consultation. Continuing in CY2017 the Authority will be finalizing the work with regard to our special condition requirements for our 2015 NPDES permit requirements for both the Glenbard Plant and the Stormwater Plant.

(9) **AUDIT FEES ($13,900):**

The Audit fees for the Authority cover the cost of the Village of Glen Ellyn as the "Operating Agency" to hire a third party financial firm to provide an Audit of the CY2016 financials.

(10) **INSURANCE LIABILITY ($192,000):**

This item represents the annual premium cost of our coverage with Municipal Insurance Cooperative Agency (MICA), a pooled insurance program, which provides a protected self-insured plan. Included in this expense line is the annual premium payment to MICA for CY2017 and an excess liability policy. This Line item is the same number utilized for the CY2016 budget number of $192,000. Liability insurance consists of 2/3's Workman Comp costs and 1/3 Property insurance costs.

(11) **INSURANCE HEALTH ($219,000):**

Health care is provided through the Village of Glen Ellyn insurance plan. This line item reflects a $11,800 decrease over the CY2016 budget number of $230,800. Only 20% or an estimated $900 of the Health Insurance contribution for the Engineer/Assistant Director is included as the other 80% is being charged to the Capital Fund 40 due to the ratio of project related work versus operational administrative work.

(12) **MAINTENANCE SUPPORT ($63,000):**

This line item reflects work previously budgeted in the Maintenance-Contractual line item. A few of the most significant expenses included in this item in CY2017 are:

Vehicle Maintenance (Provided by VGE) Costs	$37,900
Miscellaneous Equipment Maintenance	$16,800
Maintenance Garage	$3,800
Combined Heat & Power	$4,000

(13) ELECTRICAL SUPPORT ($213,300)

This line item reflects a slight increase in CY2017 compared to CY2016 budget number of $195,700. The increase is attributed to ADS meter upgrades, Pretreatment software licensing and slight calendar year adjustments for costs associated with annual service contract increases.

(14) OVERHEAD FEES ($128,400):

Overhead fees per the Intergovernmental Agreement (IGA) are based on the annually published CPI-U Chicago increase of 0% for the CY2017 budget. In 2015 the administrators for the member Villages reviewed the demands of the Authority regarding the Operating Agency's responsibility for oversight and felt that after three years (per the IGA) the review of workload allocation and the cost to support the Authority is acceptable until the next review due in 2018.

(15) SLUDGE DISPOSAL FEES (170,000):

Sludge disposal fees have been calculated based off of CY15 and CY16 actual, calculated and estimated budget numbers.

(16) ELECTRIC POWER ($250,000):

The Authority is currently in our second year of a three (3) year agreement which began in CY2015 with Dynegy Energy for a Fixed Fee of $.0478/KWH. Our power consumption is directly impacted by wet weather conditions impacting our facilities. This line item was hit in CY2016 with another large unannounced 27% delivery charge increase imposed by Com-Ed in 2016. Comparably speaking, our previous two years of actual and estimated financial information indicates the Authority spent $761,000 in CY2015 and $773,000 in CY2016. On a positive note the electricity is now being impacted by Combined Heat & Power (CHP) engine generators that are producing electricity. This year the Authority is looking to significantly reduce our electricity costs with our CHP system and by outsourcing the production of oxygen to Airgas at a cost of $.25 delivered. The Authority currently produces 32 tons of oxygen which equates to $.14 produced at an annual cost of $401,168 versus purchasing 16 tons of oxygen per day at $.25 delivered at an annual cost of $368,336. The intent is to provide operational process flexibility while reducing electric energy, ancillary water usage and operational cost which also provide staff the ability to work on other tasks.

(17) NATURAL GAS ($45,000):

The Authority is currently in our second year of a three (3) year agreement which began in CY2015 with Integrys Energy for a Fixed Fee of $.419/therm. The Authority is looking to significantly reduce our natural gas costs with the CHP process which as a secondary savings driver will reduce the need for natural gas as a fuel for our 1.5 million BTU boilers used to heat the anaerobic digesters. The hot water created by the engines is used to heat the digester which lowers the temperature of the water as it recirculates back through the engine and gets reheated. The hydronic process of the CHP system is complicated due to the needs of two processes, the anaerobic digester heating demands and the CHP

engine cooling demands. The two must work together to successfully regulate the temperatures each one specifically needs. The hot water if not needed by the boilers, will be cooled by the radiators to keep the CHP's from overheating.

(18) CHEMICALS ($65,000):

Chemicals used in the daily operation of the plant are included in this section at expected levels consistent with our recent history. Different chemicals are used for sludge dewatering, odor control, acid wash, and mineral deposition throughout the plant. Polymer production costs continue to increase annually due to the product being petroleum based.

(19) Liquid Oxygen ($375,000)

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 as a result of moving directly from High Purity Oxygen (HPO) Activated Sludge process to Biological Nutrient Removal (BNR). The transition to liquid hauling would also consume less staff time since the cryogenic plant would no longer be in operation, and would reduce overall operational costs.

The Authority has done an analysis comparing shutting down the cryogenic plant that produces pure oxygen for the 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.

Total costs of operating the cryogenic plant mainly consist of the electricity costs to run a 700 HP compressor, which is a main component to the plant. There are other ancillary costs which include the potable water required for the process, significant operations/maintenance staff time, overtime, and several other related costs. Therefore, the evaluation was performed to determine if it would be more cost efficient to shut down the plant and instead haul in liquid oxygen for use in our HPO process. In addition, when using liquid oxygen GWA staff has the ability to lower the amount of oxygen used in the aeration process. The Cryogenic Oxygen Plant functions best when producing a higher amount of oxygen than needed. Currently, the plant produces roughly 32 tons of liquid oxygen per day, which is much higher than needed and is wasted energy. GWA staff can operate the activated sludge in the aeration tanks in a range of 13 - 16 tons of liquid oxygen per day. While we are able to produce the quantities of liquid at a cheaper rate per cubic foot, it is required to operate it at higher production rate than what is needed in the treatment process, which ultimately costs more and wastes energy. Therefore, it was determined more economically feasible to haul in liquid and have the ability to use less volume for the treatment process. However, this would also consist of regular truck traffic down Bemis road for the delivery of the liquid oxygen. It is estimated that there would be 4-5 semi-trucks per week for the deliveries.

A comparison of the all the related costs are detailed below.

Existing Operating Conditions with Anticipated 4% Annual Increase

Item	Year 1 Costs	Year 2 Costs	Year 3 Costs	Year 4 Costs	Year 5 Costs
700 HP Compressor	$ 304,074	$ 316,236.96	$ 328,886.44	$ 342,041.90	$ 355,723.57
Potable Water	$ 36,000	$ 37,440.00	$ 38,937.60	$ 40,495.10	$ 42,114.91
Overtime Costs	$ 5,000	$ 5,200.00	$ 5,408.00	$ 5,624.32	$ 5,8429.29
Vaporizer	$ 63,112	$ 65,636.48	$ 68,261.94	$ 70,992.42	$ 73,832.11
O2 Price Per 100 Cubic Feet	$ 0.14	$ 0.15	$ 0.16	$ 0.16	$ 0.17
Total Cost	**$ 408,168**	**$ 424,513.44**	**$ 441,493.98**	**$ 459,153.74**	**$ 477,519.89**

5-Year Comparison of Existing vs. 16 TPD Worst Cast Proposed

	Existing Conditions		Proposed Worst Case Scenario	
	O2 Price Per 100 Cubic Feet	Total Cost	O2 Price Per 100 Cubic Feet	Total Cost
Year 1	$0.14	$408,168	$0.25	$368,336
Year 2	$0.15	$424,513	$0.26	$379,624
Year 3	$0.16	$441,494	$0.27	$388,911
Year 4	$0.16	$459,154	$0.27	$402,199
Year 5	$0.17	$477,520	$0.28	$413,486

*TPD = Tons Per Day

5-Year Comparison of Existing vs. 13 TPD Best Cast Proposed

	Existing Conditions		Proposed Worst Case Scenario	
	O2 Price Per 100 Cubic Feet	Total Cost	O2 Price Per 100 Cubic Feet	Total Cost
Year 1	$0.14	$408,168	$0.25	$299,096
Year 2	$0.15	$424,513	$0.26	$308,268
Year 3	$0.16	$441,494	$0.27	$317,440
Year 4	$0.16	$459,154	$0.27	$326,611
Year 5	$0.17	$477,520	$0.28	$335,783

Glenbard Wastewater Authority
CY2017 Personnel Budget
Division 270 -- 510100-510500

	Item	Recommendations	CY16 Budgeted		CY17 Budgeting	
510100	Salaries - Regular		1,246,000		1,284,000	
510110	Part - Time Operations	1.0 Full Time Equivalent	53,000		40,000	
510200	Laboratory Overtime		2,000		2,000	
510200	Ops. Reg. Overtime		3,000		3,000	
510200	High Flow Overtime		3,000		3,000	
510200	Ops. Call-In Overtime		10,000		10,000	
510200	Ops. SCADA Monitoring Overtime		20,000		20,000	
510200	Maint. Regular Overtime		4,000		4,000	
510200	Maint. Call-In Overtime		2,000		2,000	
510200	Elec. Reg. Overtime		4,000		4,000	
510200	Elec. Call-In Overtime		2,000		2,000	
510300	Part Time Labor	1.0 Full Time Equivalent	25,000		25,000	
		Salaries Regular, PT Ops & Seasonal		1,324,000		1,349,000
		Salaries Overtime (3)		50,000		50,000
		Salaries		**1,374,000**		**1,399,000**
510400	FICA			105,150		109,000
510500	IMRF (4)			140,250		139,000
510600	State Unemployment Tax			0		0
		Personnel Services		**$1,619,400**		**$1,647,000**

Glenbard Wastewater Authority
CY2017 Recognition/Awards Budget
270 520305

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Recognition/Awards	Miscellaneous (Manager's Discretion)	1,000		1,000	
	Total		$1,000		$1,000

Glenbard Wastewater Authority
CY2017 Dues/Fees/Subscriptions Budget
270 520600

Item	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Dues/Fees/Subs.	Water Environment Federation - Memberships	1,100		1,200	
	WEF - Publications	400		500	
	NACWA	5,000		5,600	
	IAWA	6,000		7,200	
	NFPA Membership	0		150	
	Lab Meeting Registrations	0		0	
	American Public Works Associaton - Memberships	0		150	
	Fox Valley Operators Association	0		300	
	Julie - Locating Services	0		300	
	Miscellaneous (Managers Discretion)	0		500	
			$12,500		**$15,900**

Glenbard Wastewater Authority
CY2017 Recruit/Test Budget
270 520615

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Recruiting/Testing	Chicago Tribune				
	Daily Herald	1000		1,000	
	Coply Newspapers				
	Liberty Publicatons (Glen Ellyn News)				
	WEF				
	OMNI - Employment Physicals				
			1000		1000

Glenbard Wastewater Authority
CY2017 Employee Training/Education Budget
270 520620

		CY16 Budgeted	CY17 Budgeting
Administration	**Employee Education - Administration**		
	WEFTEC --	2,500	1,000
	CSWEA. IWEA, IAWA (Meetings/Conferences) - Lanphier, Streicher & Frieders	2,000	0
	Lanphier - CSWEA Tech & Annual, IAWA Tech & Annual, IWEA Tech & Annual	0	2,000
	Frieders - IWEA Tech & Annual, IAWA Tech	0	500
	Streicher - CSWEA Tech & Annual, IAWA Tech & Annual, IWEA Tech & Annual	0	2,000
	NACWA Pretreatment Conference - Frieders	0	1,000
	Opworks Database Training - Worksheet Creation	3,000	2,500
	College Reimbursement	3,500	0
	IPSI - Illinois Public Sector Institute Training:	1,500	0
	Frieders - Year 2 of 3 year training program	0	1,500
	Streicher - Year 1 of 3 year training program	0	1,500
Operations	**Employee Education - Operations (5 Operators)**		
	WEFTEC --	0	0
	Misc Tech Seminars	1,000	1,000
	College Reimbursement	3,500	0
	Cryo System Training	2,500	2,500
	Central States WEA, IAWA State Conferences	1,000	1,000
Maintenance	**Employee Education - Maintenance**		
	WEFTEC --	0	0
	Facilities Maintenance Show -- 4 Maint Mech (Chicago)	300	0
	Maintenance Based Courses/Seminars (APWA Snow and Ice)	500	500
	IPSI - Illinois Public Sector Institute Training	1,500	0
	Misc Tech Seminars	500	1,000
Electrical	**Employee Education - Electrical**		
	WEFTEC --	0	0
	Facilities Maintenance, ISA Shows -- R. Freeman, P. Dziewior & J. Solita (Chicago)	500	500
Lab	**Employee Education - Laboratory**		
	Misc Tech Seminars	500	500
		$24,300	**$19,000**

This fund is inclusive of all costs associated with each Training/Education item, including transportation(non-mileage), hotel, rental car, and meals.

Glenbard Wastewater Authority
CY2017 Mileage Reimbursement Budget
270 520625

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Travel	Travel for Seminars/Training				
	Manufacturing Trade Shows				
	I-Pass	500		500	
			$500		**$500**

Glenbard Wastewater Authority
CY2017 Pro. Svc. Legal Budget
270 520700

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Pro. Svc. Legal	Contracted Legal Assistance	10,000		10,000	
	Total		$10,000		$10,000

Glenbard Wastewater Authority
CY2017 Legal Notices
270 520750

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Legal Notices	Chicago Tribune Daily Herald	500	$500	500	$500

Glenbard Wastewater Authority
CY2017 Regulatory Fees
270 520775

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Glenbard Plant	IEPA Regulatory Fees associated with the NPDES permit and sludge disposal permit as legislated by State.	55,000		55,000	
			$55,000		**$55,000**

Glenbard Wastewater Authority
CY2017 DuPage River Salt Creek Work Group Commitment
270 520776

	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
GWA	Workgroup Membership Dues	30,000		31,000	

Based on the approval of TMDL (Total Max. Daily Load) reports which address the water quality of the local streams and rivers relative to their Dissolved Oxygen and Chloride Levels, the IEPA has directed all wastewater treatment facilities in DuPage County to reserve funds for the efforts to improve water in Salt Creek and the East/West Branches of the DuPage River. This proposed funding is based on Work Group method established on January 26, 2005 and represents Contribution for the Glenbard Wastewater Authority by Million Gallons per Day.

The Work group research has found that habitat improvement is showing positive signs after multiple dam removal efforts. DRSCWG is working with the IEPA to help promote scientific data for improved watershed quality.

	$30,000	**$31,000**

Glenbard Wastewater Authority
CY2017 Prof. Svc. Lab. Budget
270 520806

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Cont. Testing	Suburban Laboratories (Metals)	17,000		17,000	
	Additional Monthly Metals Testing	7,000		7,000	
	Additional Monthly Sludge Fecal Testing	6,000		6,000	
			$30,000		**$30,000**

Glenbard Wastewater Authority
CY2017 Prof. Svc. Eng. Budget
270 520816

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Pro. Serv. Engr.	External Consulting Fees	20,000		20,000	
	Chloride Toxicity Study (Huff & Huff)	0		2,000	
			$20,000		$22,000

Glenbard Wastewater Authority
CY2017 Prof. Svc. Accnt. Budget
270 520825

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Pro. Svc. Acct.	Contracted Audit/Accnt. Fees	10,500		10,800	
	Single Audit -	3,000		3,100	
	If SRF Distributions Have Been Received				
			$13,500		**$13,900**

Glenbard Wastewater Authority
CY2017 Health Insurance Fees Budget
270 520895

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Ins. - Health	Fees for Employee Health Insurance Coverage	230,800		219,000	
			$230,800		**$219,000**

Total Health Insurance amount reflects a 4% increase over estimated actual billed ($215,000) for CY2016

Increase only includes 20% of the O&M cost for the Engineer/Assistant Director.

The other 80% is captured in Capital Fund 40 in the amount of $5,000

Glenbard Wastewater Authority
CY2017 - Buildings and Grounds Budget
Maintenance
270 520970

Description	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
GWA Building/Grounds	Janitorial Supplies for Custodians	2,500		2,000	
	Door/Lock/Misc Repairs	2,500		1,000	
	Bldg./Equipment. Painting Supplies (Non-Contract)	4,500		2,000	
	Misc. Repair Parts	1,000		1,000	
	Mulch	2,000		1,000	
	Planting Beds	1,200		1,000	
	Topsoil	3,500		2,000	
			$17,200		**$10,000**

Glenbard Wastewater Authority
CY2017 - Buildings and Grounds - Support Budget
Maintenance
270 520971

DESIGNATION	RECOMMENDATIONS	CY16 Budgeted	Total	CY17 Budgeting	Total
Glenbard Plant	Roofing Systems Survey	4,500		4,500	
	Contractor Door/Lock Repairs	3,000		0	
	Spoil Removal	0		0	
	Shop Towel Service	1,600		2,100	
	Fire Extinguisher Service/Repairs	4,000		4,000	
	Elevator Services/Repairs	2,000		2,000	
	Elevator Press Tests	500		500	
	Elevator Inspections	250		300	
	Landscape Maintenance	16,000		18,000	
	Pest Control	700		700	
	Tru-Green Chemlawn - Turf/Shrub Disease Control	5,200		5,200	
	Contracted Window Repairs	2,000		2,000	
	Contracted Janitorial Service	15,000		18,000	
	Unanticipated Contracted Building/Grounds Repairs	2,300		2,300	
	Admin Window Cleaning Contract	1,000		1,000	
			$58,050		**$60,600**

Glenbard Wastewater Authority
CY2017 Equipment Maintenance Budget
270 520975

Building	Designation	CY16 Budgeted	CY17 Budgeting
A	Bar Screen	300	2,100
B	Raw Pump	1,200	900
C	Grit Removal	600	1,200
D	Primary Pump	1,100	1,500
E	Primary Scum	5,300	4,000
F	Unox	7,000	8,300
H	Screw Pump	4,900	7,000
I	Final Clarifiers	200	500
J	Pump & Metering	0	1,000
L	Sand Filter	1,100	700
N	Warehouse	2,200	500
T	CRAS	1,100	0
P	Press	9,800	3,800
Q	Cryo.	4,500	4,500
R	Administration	1,300	1,000
S	Maint. Garage	500	3,000
	Electrical Shop	100	3,200
U	Digester	1,900	3,000
V	Co-Gen	7,000	11,500
Y	Combined Heat and Power	0	86,000
Z	SRI Lift Station	0	3,000
	Miscellaneous	19,400	18,300
	TOTAL	**$69,500**	**$165,000**

Glenbard Wastewater Authority
CY2017 Equipment Maintenance Budget
Maintenance
270 520975

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Bldg A - Bar Screen	Bar Screen/Rag Washer Wear Plates, Seals	300		1,900	
	Oil and Grease	0		200	
			$300		$2,100
Bldg B - Raw Pump	Oil and Grease	900		900	
	Wet Well Lid Rings (Plant Wide Usage)	300		0	
			$1,200		$900
Bldg C - Grit	Oil and Grease and Pump Seals	400		1,000	
	Blower Drive Belts	200		200	
			$600		$1,200
Bldg D - Primary Pump	Compressor Filters	100		300	
	Pump Parts	800		800	
	Oil and Grease	200		400	
			$1,100		$1,500
Bldg E - Primary Scum	Odor Control Parts	3,000		3,000	
	Pump Parts	2,000		500	
	Compressor Filters/Oil	300		500	
			$5,300		$4,000

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Bldg F - Unox	Unox Control System Parts/Misc. Parts	400		700	
	Emergency Repair Parts	3,000		3,000	
	Seal Antifreeze	300		300	
	Mixer Oil	3,300		4,300	
			$7,000		**$8,300**
Bldg H - Screw Pump	V-Belts	700		2,000	
	Grease	3,600		3,000	
	Drive Oil	600		2,000	
			$4,900		**$7,000**
Bldg I - Final Clarifiers	Grease	200		500	
			$200		**$500**
Bldg J - Pump and Metering	Pump Parts	0		1,000	
			$0		**$1,000**
Bldg L - Sand Filter	Valve Repair	500		500	
	Filter Sand Sieve Analysis	400		0	
	Oil Sep. Cartridge for Air System	200		200	
			$1,100		**$700**
Bldg N - Warehouse	Shelving Rehab	2,200		500	
			$2,200		**$500**

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Bldg P - Press	Press Belt Set (1)	9,000		0	
	Oil and Grease	0		1,500	
	Pump Parts	0		1,500	
	Press Seal	800		800	
			$9,800		$3,800
Bldg Q - Cryo	Oil and Filters	900		900	
	Misc. Parts	800		800	
	Replacement PRV's	1,300		1,300	
	RHX Jamesburry/Valve Rehabs	1,000		1,000	
	Emergency Repair/Parts	500		500	
			$4,500		$4,500
Bldg R - Admin	Lavatory Repair Parts	500		500	
	Washer/Dryer Parts	800		500	
			$1,300		$1,000
Bldg S - Maintenance Garage	Welding Supplies	500		3,000	
			$500		$3,000
Bldg T - CRAS/Electric Shop	Compressor Filters	100		100	
	Check Valve Parts	1,000		1,000	
	Filters	100		100	
	Pump Seals	0		2,000	
			$1,200		$3,200

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Bldg U - Digester	Boiler Parts / Cleaning	900		1,000	
	Oil and Belts	1,000		2,000	
			$1,900		$3,000
Bldg V - Co-Gen	Coolant (Due in 2017)	1,200		7,000	
	Oil (Due in 2018)	4,600		0	
	Filters (Air/Oil)	1,200		1,500	
	Gauges	0		2,000	
	Miscellaneous (Plugs,Coils, etc.)	0		1,000	
			$7,000		$11,500
Bldg Y - CHP	300 Hour Service Interval (23 Intervals per engine)			46,000	
	1200 Hour Service Interval (6 Intervals per engine)			24,000	
	7500 Hour Service Interval (1 Interval per engine)			6,000	
	Recommended Spare Parts			10,000	
			$0		$86,000
Bldg Z - SRI	Pump Parts/Seals			3,000	
			$0		$3,000

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
GWA Facilities	**Miscellaneous**				
	Paints/Supplies	2,000		500	
	Replacement Tools	1,500		3,000	
	Oil Analysis	800		1,000	
	Radio Repair/Batteries	1,500		500	
	Hardware -- Bolts/Nuts/Drills/Taps	3,600		4,000	
	Parts Repair Shipping Costs (Freight)	2,000		500	
	Portable Pump Hose Replacements	1,400		500	
	Vacuum Hose Replacment	1,300		500	
	Safety Lane Vehicle Inspections	0		800	
	Hardware -- PVC Piping	400		2,000	
	Hardware -- Galvanized Piping	800		2,000	
	Misc. Valves/Repair Clamps	1,200		1,000	
	Manhole Repair Parts	1,000		500	
	Unanticipated Equipment Repair Parts	1,900		1,500	
			$19,400		$18,300
TOTAL			$69,500		$165,000

Glenbard Wastewater Authority
CY2017 Equipment Maintenance - Support Budget
270-520976

Building	Designation	CY16 Budgeted	CY17 Budgeting
Q	Cryogenics - Annual Maintenance	0	0
R	Administration	400	500
S	Maint. Garage	3,300	3,800
T	CRAS/Electric Shop	1,000	0
U	Digester	2,400	0
V	Co-Gen	100	0
	Intermediate Clarifiers	200	0
Y	Combined Heat & Power	0	4000
	Miscellaneous	9,500	16,800
	Vehicle Maintenance Services	42,100	37,900
	TOTAL	**$59,000**	**$63,000**

Glenbard Wastewater Authority
CY2017 Equipment Maintenance - Support
Maintenance
270-520976

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Bldg Q - Cryo	Routine Annual Maintenance Turnaround	0	$0	0	$0
Bldg R - Administration	Washer/Dryer Chemicals	400	$400	500	$500
Bldg S - Maintenance Garage	Safety Klean Parts Service	2,500		2,500	
	Torch Gas Cylinder Lease	300		800	
	Miscellaneous	500	$3,300	500	$3,800
Bldg T - CRAS/Electrical Shop	Boiler Repairs	200		0	
	Pump Repairs	800			
	Boiler Certification Inspections	0	$1,000	0	$0
Bldg U - Digester	Boiler Repairs	400		0	
	Boiler Tuneup/Inspection/Cleaning/Repairs	1,500		0	
	Boiler Certification Inspections	500	$2,400	0	$0

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Bldg V - Co-Generation	Patten - Engine Service	100		0	
			$100		$0
Intermediate Clarifiers	Repairs, Grease	200		0	
			$200		$0
Bldg Y - CHP	Support Services (First Year of Two Years)	0		4,000	
			$0		$4,000
GWA Facilities	**Miscellaneous Certifications/Services**				
	Overhead Crane Inspection/Repairs	2,300		2,500	
	State Boiler/Pressure Vessel Certifications	800		800	
	Elevator Service	900		1,200	
	Elevator Inspections - Lombard	400		500	
	RPZ - Lombard	400		400	
	RPZ Inspections	1,500		1,500	
	4" & 8" Portable Pump Repairs	1,200		0	
	Snowthrower Equipment Repairs	0		0	
	Electric Powered Tool Repairs	800		0	
	Oil Recycling	0		1,500	
	Heavy Equipment Rental	0		5,000	
	Contracted Crane Service	0		2,400	
	Unanticipated Contracted Repairs	1,200		1,000	
			$9,500		$16,800
	Vehicle Maintenance Services (VGE)	42,100		37,900	
			$42,100		$37,900
	TOTAL		$59,000		$63,000

Glenbard Wastewater Authority
CY2017 Maintenance Electronics Budget Details
270 520980

	Building	Designation	CY16 Budgeted	CY17Budgeting
A		Bar Screen	3,100	3,100
B		Raw Pumps	8,400	8,400
C		Grit	2,750	2,750
D		Primary Clarifier	500	500
E		Primary Pump	2,650	2,650
F		Unox Deck	3,850	3,850
G		ATAD	550	550
H		Screw Pump	2,150	2,150
I		Final Clarifier	1,450	1,450
J		Pump/Meter	2,900	2,900
K		Thickener	550	550
L		Sandfilter	2,250	2,250
N		Warehouse	900	900
O		UV	3,000	3,000
P		Press	4,000	4,000
Q		Cryo	3,500	3,500
R		Administration	3,000	3,000
S		Maint. Garage	1,300	1,300
T		CRAS	2,200	2,200
U		Digester	4,000	4,000
V		Co-Gen	3,000	3,000
		Elec. Supplies	9,000	9,000
			$65,000	**$65,000**

Glenbard Wastewater Authority
CY2017 Maintenance Electronics Budget Details
270 520980

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Bar Screen	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	200		200	
	HVAC Equipment PM/Repairs	200		200	
	Instrumentation PM Repairs	500		500	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	800		800	
	SCADA System PM/Repairs	800		800	
	Telecommunications PM/Repairs	100		100	
	Bar Screen Total		**$3,100**		**$3,100**
Raw Pumps	Control Panel PM/Repairs	200		200	
	Electrical Distribution PM/Repairs	2,000		2,000	
	HVAC Equipment PM/Repairs	700		700	
	Instrumentation PM/Repairs	2,000		2,000	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	1,000		1,000	
	Safety Equipment PM/Repairs	200		200	
	SCADA System PM/Repairs	2,000		2,000	
	Telecommunications PM/Repairs	100		100	
	Raw Pumps Total		**$8,400**		**$8,400**

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Grit	Control Panel PM/Repairs	200		200	
	Electrical Distribution PM/Repairs	400		400	
	HVAC Equipment PM/Repairs	300		300	
	Instrumentation PM/Repairs	500		500	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	100		100	
	Safety Equipment PM/Repairs	500		500	
	SCADA System PM/Repairs	500		500	
	Telecommunications PM/Repairs	50		50	
	Grit Total		**$2,750**		**$2,750**
Primary Clarifier	Control Panel PM/Repairs	0		0	
	Electrical Distribution PM/Repairs	300		300	
	HVAC Equipment PM/Repairs	0		0	
	Instrumentation PM/Repairs	100		100	
	LAN PM/Repairs	0		0	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	0		0	
	Safety Equipment PM/Repairs	0		0	
	SCADA System PM/Repairs	0		0	
	Telecommunications PM/Repairs	0		0	
	Primary Clarifier Total		**$500**		**$500**

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Primary Pump	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	100		100	
	HVAC Equipment PM/Repairs	400		400	
	Instrumentation PM/Repairs	100		100	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	500		500	
	SCADA System PM/Repairs	1,000		1,000	
	Telecommunications PM/Repairs	50		50	
	Primary Pump Total		**$2,650**		**$2,650**
Unox Deck	Control Panel PM/Repairs	500		500	
	Electrical Distribution PM/Repairs	500		500	
	HVAC Equipment PM/Repairs	200		200	
	Instrumentation PM/Repairs	1,000		1,000	
	LAN PM/Repairs	0		0	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	1,300		1,300	
	SCADA System PM/Repairs	0		0	
	Telecommunications PM/Repairs	50		50	
	Unox Deck Total		**$3,850**		**$3,850**

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
ATAD	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	100		100	
	HVAC Equipment PM/Repairs	0		0	
	Instrumentation PM/Repairs	0		0	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	100		100	
	Safety Equipment PM/Repairs	0		0	
	SCADA System PM/Repairs	0		0	
	Telecommunications PM/Repairs	50		50	
	ATAD Total		**$550**		**$550**
Screw Pump	Control Panel PM/Repairs	1,000		1,000	
	Electrical Distribution PM/Repairs	200		200	
	HVAC Equipment PM/Repairs	200		200	
	Instrumentation PM/Repairs	0		0	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	500		500	
	Motor PM/Repairs	100		100	
	Safety Equipment PM/Repairs	0		0	
	SCADA System PM/Repairs	50		50	
	Telecommunications PM/Repairs				
	Screw Pump Total		**$2,150**		**$2,150**

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Final Clarifer	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	500		500	
	HVAC Equipment PM/Repairs	0		0	
	Instrumentation PM/Repairs	250		250	
	LAN PM/Repairs	0		0	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	0		0	
	SCADA System PM/Repairs	200		200	
	Telecommunications PM/Repairs	100		100	
	Final Clarifier Total		**$1,450**		**$1,450**
Pump and Meter	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	100		100	
	HVAC Equipment PM/Repairs	100		100	
	Instrumentation PM/Repairs	1,000		1,000	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	100		100	
	SCADA System PM/Repairs	1,000		1,000	
	Telecommunications PM/Repairs	100		100	
	Pump and Metering Total		**$2,900**		**$2,900**

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Thickener	Control Panel PM/Repairs	0		0	
	Electrical Distribution PM/Repairs	200		200	
	HVAC Equipment PM/Repairs	200		200	
	Instrumentation PM/Repairs	0		0	
	LAN PM/Repairs	0		0	
	Lighting Equipment PM/Repairs	50		50	
	Motor PM/Repairs	100		100	
	Safety Equipment PM/Repairs	0		0	
	SCADA System PM/Repairs	0		0	
	Telecommunications PM/Repairs	0		0	
	Thickener Total		$550		$550
Sandfilter	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	200		200	
	HVAC Equipment PM/Repairs	200		200	
	Instrumentation PM/Repairs	300		300	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	0		0	
	SCADA System PM/Repairs	1,000		1,000	
	Telecommunications PM/Repairs	50		50	
	Sandfilter Total		$2,250		$2,250

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Warehouse	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	200		200	
	HVAC Equipment PM/Repairs	100		100	
	Instrumentation PM/Repairs	0		0	
	LAN PM/Repairs	0		0	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	100		100	
	SCADA System PM/Repairs	0		0	
	Telecommunications PM/Repairs	100		100	
	Warehouse Total		**$900**		**$900**
UV	Control Panel PM/Repairs	1,000		1,000	
	Electrical Distribution PM/Repairs	200		200	
	HVAC Equipment PM/Repairs	200		200	
	Instrumentation PM/Repairs	300		300	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	100		100	
	SCADA System PM/Repairs	700		700	
	Telecommunications PM/Repairs	100		100	
	UV Total		**$3,000**		**$3,000**

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Press	Control Panel PM/Repairs	200		200	
	Electrical Distribution PM/Repairs	500		500	
	HVAC Equipment PM/Repairs	500		500	
	Instrumentation PM/Repairs	1,000		1,000	
	LAN PM/Repairs	200		200	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	200		200	
	SCADA System PM/Repairs	1,000		1,000	
	Telecommunications PM/Repairs	100		100	
	Press Total		**$4,000**		**$4,000**
Cryo	Control Panel PM/Repairs	200		200	
	Electrical Distribution PM/Repairs	200		200	
	HVAC Equipment PM/Repairs	100		100	
	Instrumentation PM/Repairs	1,000		1,000	
	LAN PM/Repairs	0		0	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	400		400	
	Safety Equipment PM/Repairs	0		0	
	SCADA System PM/Repairs	1,000		1,000	
	Telecommunications PM/Repairs	500		500	
			$3,500		**$3,500**

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Administration	Control Panel PM/Repairs	200		200	
	Electrical Distribution PM/Repairs	300		300	
	HVAC Equipment PM/Repairs	300		300	
	Instrumentation PM/Repairs	400		400	
	LAN PM/Repairs	300		300	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	200		200	
	SCADA System PM/Repairs	500		500	
	Telecommunications PM/Repairs	500		500	
	Administration Total		$3,000		$3,000
Maintenance Garage	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	200		200	
	HVAC Equipment PM/Repairs	200		200	
	Instrumentation PM/Repairs	0		0	
	LAN PM/Repairs	200		200	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	100		100	
	SCADA System PM/Repairs	0		0	
	Telecommunications PM/Repairs	200		200	
	Maintenance Garage Total		$1,300		$1,300

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
CRAS	Control Panel PM/Repairs	100		100	
	Electrical Distribution PM/Repairs	100		100	
	HVAC Equipment PM/Repairs	100		100	
	Instrumentation PM/Repairs	800		800	
	LAN PM/Repairs	100		100	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	200		200	
	Safety Equipment PM/Repairs	200		200	
	SCADA System PM/Repairs	200		200	
	Telecommunications PM/Repairs	300		300	
	CRAS Total		$2,200		$2,200
Digester	Control Panel PM/Repairs	300		300	
	Electrical Distribution PM/Repairs	300		300	
	HVAC Equipment PM/Repairs	400		400	
	Instrumentation PM/Repairs	500		500	
	LAN PM/Repairs	200		200	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	500		500	
	Safety Equipment PM/Repairs	500		500	
	SCADA System PM/Repairs	1,000		1,000	
	Telecommunications PM/Repairs	200		200	
	Digester Total		$4,000		$4,000

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Co-Gen	Control Panel PM/Repairs	200		200	
	Electrical Distribution PM/Repairs	300		300	
	HVAC Equipment PM/Repairs	300		300	
	Instrumentation PM/Repairs	800		800	
	LAN PM/Repairs	200		200	
	Lighting Equipment PM/Repairs	100		100	
	Motor PM/Repairs	300		300	
	Safety Equipment PM/Repairs	300		300	
	SCADA System PM/Repairs	300		300	
	Telecommunications PM/Repairs	200		200	
	Co-Gen Total		$3,000		$3,000
Electrical Supplies	Conduit, wire, enclosures, fittings, switches, batteries, cleaning supplies, contact cleaners electronic components, Pneumatic Tubing & Fittings Thermal Overloads, fasteners, strut wire, nuts, etc.	9,000		9,000	
	Electrical Total		$9,000		$9,000
	Grand Total		$65,000		$65,000

Glenbard Wastewater Authority
CY2017 Electrical/Electronics - Support Budget
270 520981

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Administration	Network/Communications Consulting	10,000		10,000	
	Maximo CMMS Consulting	15,000		10,000	
	Intellution iFIX Global Support	12,500		10,500	
	Fire/Security Alarm Systems Testing & Monitoring	2,100		2,700	
	Software Support agreement Specter (Win-911)	1,300		500	
	Software Support Agreements Cisco Smartnet	1,000		2,500	
	Software Support Agreement IBM (Maximo)	5,650		6,000	
	Software Support Agreement Rockwell (PLC)	1,200		1,500	
	Software Support Agreement WIMS	0		0	
	Software Support Agreement TimeTrax (Time Clock)	250		300	
	Software Support Symantec (A/V)	2,000		1,100	
	Software Support Symantec Backup Exec	800		1,000	
	Servers Hardware Support	3,500		3,500	
	Telephone System Support Agreement Midco	2,300		2,300	
	Fire/Security Alarm Systems Support Agreement Siemens	11,000		11,700	
	Microsoft Server Select Agreement / Client Select Agreement	4,000		4,000	
	Mozy Pro Offsite Backup Service	0		1,000	
	ESRI Software Support Agreement	0		400	
Pretreatment	Linko Annual Software License Fee	0		6,500	
Flow Metering	ADS Flow Meter Maintenance/Data Analysis	114,000		119,500	
UV	Effluent Ammonia Analyzer Service Contract	4,100		4,300	
Plant Wide	HVAC Refrigeration Repairs	5,000		5,000	
Co-Generation	Switchgear Bi-Annual PM	0		7,000	
	Protection Relay Bi-Annual Calibration	0		2,000	
			$195,700		**$213,300**

Glenbard Wastewater Authority
CY2017 Operations - Supplies Budget
270 520990

Item	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Operating Supplies	Operational Supplies				
	Misc. Supplies	3,400		3,400	
	Home Depot				
	Blue Book				
	McMaster-Carr				
	McCann Equipment				
	Ace Hardware				
	Carbit Paint				
	Yard Hose Replacements	2,500		2,500	
	Primary Clarifier Deordorizer Nozzle Replacements	0		1,000	
	*Belt Filter Press Replacement Belts	0		7,500	
			$5,900		**$14,400**

* Moved from Maintenance Budget

Glenbard Wastewater Authority
CY2017 Operations - Support Budget
270 520991

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
	*Ford Hall Company - Clarifier Brush Service Contract	6,500		0	
Plant Wide	Solid Waste / Recycle Waste Disposal	8,800		7,000	
	Wetwell Cleaning	5,000		7,500	
Cryo	**Oxygen Purchase for Turnaround	10,000		0	
	**Geen -- Cooling Water Conditioning Consultation	4,500		0	
UV	Recycle Fees	0		5,000	
			$34,800		**$19,500**

*Ford Hall Service not needed in the future due to FIP impacts
* Savings $6,500/year

**Reduction due to the discontinuation of Oxygen Production. Oxygen supply will be provided by Liquid Oxygen solicited by competitive bid.
** Savings = $14,500/year

Glenbard Wastewater Authority
CY2017 Professional Services - Other
270 521055

Designation	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Administration	Temporary labor services are billed to this account	0		2,000	
			$0		$2,000

Glenbard Wastewater Authority
CY2017 Service Charge Budget
270 521130

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Service Charge	Village of Glen Ellyn -- Overhead fees	128,400		128,400	
			$128,400		**$128,400**

CY2017 Overhead fees at 0% CPI-U Chicago increase

Glenbard Wastewater Authority
CY2017 Sludge Disposal - Land App. Budget
270 521150

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Sludge Disposal	Stewart Spreading -- Trucking fees for Sludge Removal	170,000		170,000	
	Total		**$170,000**		**$170,000**

Glenbard Wastewater Authority
CY2017 Telecomm Budget
270 521195

Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
Call One - Admin - 790-1901 Main Phone Lines (1901, 1902, 1903, 1904) SCADA Dial-up Lines (0459, 0689, 2097) SCADA WIN-911 on SCADA 1 & 2 (0958, 4487) Office Private Lines (1960, 1974, 1975, 1995, 1996) Dedicated Elevator (1486) Brokered Nat. Gas Meter Reader (0407) V.V. Lift Station (1242)	18,000		17,000	
Cell Phone Reimbursements (Erik & Matt)	0		1,200	
AT&T - E-991 DID #'s	2,000		2,100	
Comcast Internet - Primary ISP	2,400		2,400	
AT&T Internet - Secondary ISP (U-Verse)	0		1,300	
Verizon Cellular Service - Phones, tablets	5,000		5,000	
Verizon Cellular Service - RTU Radio Network	2,700		2,900	
Comcast - Cable Service	650		700	
		$30,750		**$32,600**

The $76,250 budgeted in CY2015 is the 25% increase without the stub year 33% reduction.

CY 2016The Cellular Remote Site Communication Project will reduce the surging monthly expenses for the landlines listed above.

CY2016 A 27% Increase was found on the Call-One bills beginning in June 2016

CY2017 Reduction of $5,000 SCADA dial up lines due to new meter installations with wireless connectivity

Glenbard Wastewater Authority
CY2017 Electrical Power Budget
270 521201

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Electrical Power	Fees for Purchase of Electric Power & ComEd Delivery Services	700,000		250,000	
			$700,000		**$250,000**

ComEd delivery charges increased in 2016 by an additional 25%. This is not a fee that can be negotiated. The savings for 2017 will be noticed upon the completion of the Combined Heat and Power Project

Reduction due to purchasing Liquid Oxygen versus producing it along with the completion in August 2016 of the Combined Heat & Power Project

Glenbard Wastewater Authority
CY2017 Natural Gas - Brokered - Budget
270 521202

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Nat. Gas - Brokered	Fees for Direct and Brokered purchase of Natural Gas	65,000		45,000	
			$65,000		**$45,000**
	CY2017 should show a reduction in natural gas costs due to the Combined Heat and Power Project completion.				

Glenbard Wastewater Authority
CY2017 Water Budget
270 521203

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Water	Fees for Purchase of Potable Water - Village of Glen Ellyn	45,000		20,000	
			$45,000		**$20,000**

Reduction in cost due to hauling liquid oxygen into the facility versus producing it.

Savings = $25,000 less than CY2016 Budget

Glenbard Wastewater Authority
CY2017 Co-Gen Natural Gas Budget
270 521204

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Natural Gas	Fees for Purchase of Natural Gas (Co-Generation Unit)	6,000		6,000	
			$6,000		**$6,000**

Glenbard Wastewater Authority
CY2017 Office Supplies Budget
270 530100

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Office Supplies	Supplies for Administrative Management functions (I.e. Office Supplies, Federal Express, UPS, printer/fax, copier supplies, printing)	10,000		10,000	
	Minolta Bus. Sys. Support (copy machine)	5,000		5,000	
	Postage Meter Rental/Postage	2,000		2,000	
	Coffee Machine Services/Supplies	3,000		3,000	
	Total		**$20,000**		**$20,000**

Glenbard Wastewater Authority
CY2017 Laboratory Supplies Budget
270 530106

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Laboratory Supplies	Laboratory Consumables and Glassware	20,000		15,000	
			$20,000		**$15,000**

Glenbard Wastewater Authority
CY2017 Pretreatment Supplies Budget
270 530107

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Pretreatment Supplies	Sampling, Dyes, Test Kits, Tools	1,000		1,000	
Linko Software Support	Annual Software License Fee	2,000		0	
Public Outreach	Flyers/Brochures/Artwork/Magnets	0		1000	
			$3,000		**$2,000**

Glenbard Wastewater Authority
CY2017 Administrative Purchasing Budget
270 530200

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Administrative	Admin Vehicle Care	1,000		500	
	Ipass Charges	0		1,000	
Purchasing	Aerial Photography	1,000		1,000	
	Celebrating Success	1,000		1,000	
	Office Decorations	500		0	
	Total		$3,500		$3,500

Glenbard Wastewater Authority
CY2017 Safety Budget
270 530225

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Admin	Portable Gas Detection Meter Cal Gas	1,200		1,200	
	Portable Gas Detection Meter Repair/Replacement	2,500		2,500	
	Confined Space Equip. Repairs/Replacement	1,200		1,200	
	Safety shoes ($150 max. allowance)	3,500		3,500	
	Cintas (First Aid Kit Supplies)	1,000		1,000	
	Safety Supplies	1,500		1,500	
	Safety Program Consultations & Training	3,000		3,000	
	Safety Suggestiong Awards (monthly gift cards + Safety sug)	2,500		2,500	
	Site Safety and Signage	500		500	
	Total		**$16,900**		**$16,900**

Glenbard Wastewater Authority
CY2017 Chemical Supplies Budget
270 530440

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Treatment Costs	Chemicals that are utilized through daily operation. Polymer, odor control, struvite control, acid wash, and odor control chemicals Odor Management – Odor Chemicals High PSI - Sludgehammer - Press Bldg. Cleaning Polydyne - Polymer Schaners - Struvite Control Unison - Soda Ash for pH balance in CHP Hydrogen Sulfide Tank	70,000		65,000	
			$70,000		**$65,000**

Glenbard Wastewater Authority
CY2017 Liquid Oxygen Supply Budget
270 530443

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Cryo	Liquid Oxygen	0		375,000	
			$0		$375,000

Glenbard Wastewater Authority
CY2017 Uniforms Budget
270 530445

Item	Recommendation	CY16 Budgeted	Total	CY17 Budgeting	Total
Uniforms	Uniform Replacements	5,000		5,000	
	Total		**$5,000**		**$5,000**

270-1 CSO & Hill Ave. L.S.

270-1
STORMWATER PLANT
and
Hill AVENUE LIFT STATION
O&M NARRATIVE

The Glenbard Wastewater Authority Stormwater Plant is only utilized for operation during excess flow events. The Stormwater Plant is capable of processing 58 MGD of combined sewer flow.

The Hill Avenue Lift Station is also an integrated part of the Stormwater Plant. The lift station conveys flow to the plant as a result of flows greater than 2.5 times average daily flows through the Hill Avenue Regulator. The lift station only operates during wet weather events as part of the system that protects the Glenbard Plant from excessive high flow situations created in part by the combined sewers in the northern section of the Village of Lombard.

Budget CY2017 **EXPENSES**

Operations & Maintenance

Division 270-1

Stormwater Plant & Hill Avenue Lift Station

		Actual CY2015	Budgeted CY2016	Estimated CY2016	Budgeting CY2017
Operations & Maintenance					
[illegible]	Regulatory Fees	20,000	21,000	20,000	21,000
520970	Maint. - Bldgs. & Grnds. / Support	17,038	14,200	9,000	17,200
520975	Maint. - Equipment	5,303	3,100	1,000	5,250
520980	Maint. - Electronics	4,089	4,500	500	4,000
521201	Electric Power	32,724	30,000	37,000	35,000
521202	Natural Gas	2,951	3,500	5,000	4,500
521203	Water	2,455	3,500	3,100	3,000
530105	Operations Supplies	484	1,700	500	500
Commodities					
530440	Chemicals	27,546	30,000	22,000	25,000
	Total 270-1	**112,590**	**111,500**	**98,100**	**115,450**

Glenbard Wastewater Authority
CY2017 Budget - 270-1 - Stormwater Plant & Hill Avenue Lift Station

	Item	Recommendations	CY16 Budgeting	Total	CY17 Budgeting	Total
520775	IEPA Regulatory Fees		21,000		21,000	
				$21,000		**$21,000**
520970	Building/Grounds	Misc. Repairs	2,500		2,500	
		Sidewalk Repairs	0		0	
	Bldg/Grnds - Support	Door/Lock/Window Repairs	450		450	
		Landscape Maintenance	9,000		12,000	
		Pest Control	100		100	
		Fire Extinguisher Service/Repairs	100		100	
		Tru-Green Chemlawn	750		750	
		Roof Inspection	300		300	
		Roof Repairs	500		500	
		Sidewalk Repairs	500		500	
				$14,200		**$17,200**
520975	Maintenance	Unanticipated Equipment Repairs	500		500	
		Hill Avenue Submersible Pump Service	1,000		1,000	
		Grease/Oil/Belts	0		2,500	
		Riparian Maintenance	0		750	
		Peristaltic Pump Replacement Hose	400		500	
	Equipment - Support	Unanticipated Equipment Repairs	200		0	
		Underground Locates	500		0	
		RPZ Inspections	500		0	
				$3,100		**$5,250**

Glenbard Wastewater Authority
CY2016 Budget - 270-1 - Stormwater Plant & Hill Avenue Lift Station- (Continued)

	Item	Recommendations	CY16 Budgeting	Total	CY17 Budgeting	Total
520980	Elect. Maintenance	Control Panel PM/Repairs	200		200	
		Electrical Distribution PM/Repairs	1,500		1,200	
		HVAC Equipment PM/Repairs	300		300	
		Instrumentation PM/Repairs	800		800	
		LAN PM/Repair	0		0	
		Lighting Equipment PM/Repairs	400		200	
		Motor PM/Repairs	500		500	
		Safety Equipment PM/Repairs	0		0	
		SCADA System PM/Repairs	500		500	
		Telecommunications PM/Repairs	300		300	
				$4,500		**$4,000**
521201	Electricity			**$30,000**		**$35,000**
521202	Natural Gas	Building Heaters		**$3,500**		**$4,500**
521203	Water	Hosing, Lab, Chlor/DeChlor carrying water		**$3,500**		**$3,000**
530105	Operations	Replacement Tools and Yard Hose	1,000		500	
		Refuse Removal - Covered by one Facility Bill	700		0	
				$1,700		**$500**
530440	Chemicals	Hypochlorite / Sodium Thiosulfate		**$30,000**		**$25,000**
		Total 270-1		**$111,500**		**$115,450**

270-2 NRI & St. Charles Road
L.S.

270-2
NORTH REGIONAL INTERCEPTOR
and
ST. CHARLES RD. LIFT STATION
O&M NARRATIVE

The North Regional Interceptor (NRI) begins at the St. Charles Lift Station located next to Ackerman Park in Glen Ellyn. An 18" diameter force main exits the lift station and runs east down St. Charles Road to the I-355 Tollway, where the sewer turns south and becomes a gravity sewer. From there the NRI runs south 4.5 miles to the Glenbard Plant. The diameter of the NRI changes from 18" to 66" as collection systems from both member Villages enter and add more flow. Glen Ellyn has five connections to the NRI and Lombard has four. Three of the Lombard connections are from combined sewers. The three combined sewers have "regulators" before they enter the NRI. The purpose of these regulators is to limit the amount of storm water that is treated at the Glenbard Plant. This is done by diverting any flow above 2.5 times the average dry weather flow to the Stormwater Plant. These regulators were converted to Vortex Regulators as part of the Stormwater Plant upgrade in 2002.

The St. Charles Road Lift Station receives flow from the Village of Glen Ellyn and the DuPage County sanitary sewer systems. Flows range from 2 million gallons per day (MGD) to 10 MGD due to Inflow and Infiltration (I&I). The new lift station has been designed to operate cost effectively at low and high flow conditions utilizing variable speed drives. These drives control the speed of the pumps versus the previous method of on/off cycling of the pumps. The lift station also has redundant back-up power provided by onsite generation.

Budget CY2017 **EXPENSES**

Operations & Maintenance

270-2

NRI / St. Charles Road L.S.

		Actual CY2015	Budgeted CY2016	Estimated CY2016	Budgeting CY2017
St. Charles Rd. Lift Station					
520970 SC	Maint. - Bldg. & Grnds.	0	400	500	400
520975 SC	Maint - Equipment	1,925	8,000	2,000	8,000
520980 SC	Maint. - Electronics	16	3,600	500	3,000
521201 SC	Electric Power	16,685	15,000	18,000	17,000
Total		**18,627**	**27,000**	**21,000**	**28,400**
North Regional Interceptor					
520970 NRI	Maint. - Piping & Grnds.	0	500	0	500
	Total	**0**	**500**	**0**	**500**
Total 270-2		**18,627**	**27,500**	**21,000**	**28,900**

Glenbard Wastewater Authority
CY2017 Budget - 270-2 NRI / St. Charles Rd. L.S.

	Item	Recommendations	CY16 Budgeted	Total	CY17 Budgeting	Total
St. Charles L.S.						
520970 SC	Bldg and Grounds	Miscellaneous	150		150	
		Annual RPZ Certification	100		100	
		Annual Fire System Certification	150		150	
				$400		**$400**
520975 SC	Maint. Equip.	Misc Parts/Oils (Post Warranty)	500		500	
		Submersible Pumps Annual Maintenance	6,000		6,000	
		Generator Service	1,500		1,500	
				$8,000		**$8,000**
520980 SC	Maintenance Electronics	Control Panel PM/Repairs	200		200	
		Electrical Distribution PM/Repairs	500		400	
		HVAC Equipment PM/Repairs	200		200	
		Instrumentation PM/Repairs	500		500	
		Lighting Equipment PM/Repairs	100		100	
		Misc Spare Parts	1000		500	
		Motor PM/Repairs	200		200	
		SCADA System PM/Repairs	800		800	
		Telecommunications PM/Repairs	100		100	
				$3,600		**$3,000**
521201 SC	Electric Power		15,000		17,000	
				$15,000		**$17,000**
NRI						
520970 NRI	Maint Piping and Grounds	Misc. repairs to the exposed manholes	500		500	
		Cleaning & Televising Sewer	0		0	
				500		**$500**
		Total 270-2		**$27,500**		**$28,900**

270-3 SRI & Valley View L.S.

270-3
SOUTH REGIONAL INTERCEPTOR
and
VALLEY VIEW LIFT STATION
O&M NARRATIVE

The South Regional Interceptor (SRI) begins at the Valley View Lift Station which conveys flow approximately 1.0 mile before it becomes a .5 mile gravity sewer that flows into the SRI Pump Station. Through the 1.5 miles the pipe diameter changes from 18" to 30" as three additional sewers enter the SRI. The SRI Pump Station pumps the wastewater a short distance to a junction chamber for the NRI, SRI and 22nd Street flow. The junction chamber combines the three (3) interceptor pipes and conveys the flow through a 60" sewer line to the Glenbard Plant. The wastewater in the SRI is exclusively from collection systems operated and maintained by Illinois-American Water, a private utility company regulated by the Illinois Commerce Commission. Glenbard provides wastewater treatment for Illinois-American Water, who pays a user charge for this service to the Village of Glen Ellyn. This responsibility was acquired by the Village of Glen Ellyn as the "Operating Agency" for the Glenbard Wastewater Authority per an Intergovernmental Agreement. This limits the partners of the Glenbard Wastewater Authority to the Village of Glen Ellyn and the Village of Lombard.

The Valley View Lift Station was completely rebuilt during short year 2014 and a portion of calendar year 2015. The project included building a new wet well, valve vault, emergency by-pass pumping capabilities, a new control building that includes a control room, a new generator, and a utility closet. The project also addressed stormwater retention, low cost site maintenance, and site security. The total project cost for the station was $1,945,190 which is $32,622 less than the bid award. This project was designed and built with budgeted Capital Improvements Funds.

Budget CY2017
Operations & Maintenance
270-3
SRI / Valley View L.S.

EXPENSES

		Actual CY2015	Budgeted CY2016	Estimated CY2016	Budgeting CY2017
Valley View Lift Station					
520970 VV	Bldg. & Grnds. Support	111	0	300	700
520975 VV	Maint. - Equipment	6,242	1,300	1,000	4,000
520980 VV	Maint. - Electronics	1,007	1,000	500	1,000
521201 VV	Electric Power	10,605	7,000	16,000	7,000
521203 VV	Water	1,449	0	1,800	2,000
	Total	**19,414**	**9,300**	**19,600**	**14,700**
South Regional Interceptor					
520970	Maint. - Piping & Grnds.	0	500	0	500
	Total	**0**	**500**	**0**	**500**
	Total 270-3	**19,414**	**9,800**	**19,600**	**15,200**

Glenbard Wastewater Authority
CY2017 Budget - 270-3 - SRI / Valley View L.S.

DESIGNATION	Item	Recommendation	CY16 Budgeting	Total	CY17 Budgeting	Total
Valley View Lift Station						
520970 VV	Bldg./Grnds - Support	Miscellaneous	0		500	
		Annual RPZ Certification	0		200	
				$0		**$700**
520975 VV	Maint. Equip.					
		Misc Parts/Oils (Post Warranty)	1200		500	
		Seal Water Filters	100		0	
		Pump Maintenance	0		2,000	
		Generator Service	0		1,500	
				$1,300		**$4,000**
520980 VV	Maint, Electronics	Control Panel PM/Repairs	100		100	
		Electrical Distribution PM/Repairs	100		100	
		HVAC Equipment PM/Repairs	100		100	
		Instrumentation PM/Repairs	200		200	
		LAN PM/Repairs	100		100	
		Lighting Equipment PM/Repairs	100		100	
		Motor PM/Repairs	100		100	
		SCADA System PM/Repairs	100		100	
		Telecommunications PM/Repairs	100		100	
				$1,000		**$1,000**
521201 VV	Electricity			**$7,000**		**$7,000**
521203 VV	Water			**$0**		**$2,000**
SRI						
520970 SRI	Maint Piping and Grounds	Misc. repairs to the exposed manholes	500		500	
		Cleaning & Televising Sewers	0		0	
				$500		**$500**
		Total 270-3		**$9,800**		**$15,200**

Capital

GLENBARD WASTEWATER AUTHORITY FUND 40 CAPITAL PLAN

REVENUE in Thousands $	Footnotes	CY(2016) Estimated	CY(2017) Budgeting	CY(2018) Planning	CY(2019) Planning	CY(2020) Planning	CY(2021) Planning	CY(2022) Planning	CY(2023) Planning	CY(2024) Planning	CY(2025) Planning	CY(2026) Planning	CY(2027) Planning	CY(2028) Planning	CY(2029) Planning
Proceeds from Borrowing	*1*	6000	10334	6905	6905										
Investment Income		8	20	20	20	20	20	20	20	20	20	20	20	20	20
Glen Ellyn Conn Fees		38	25	25	25	25	25	25	25	25	25	25	25	25	25
Lombard Conn Fees		20	100	25	25	25	25	25	25	25	25	25	25	25	25
EnerNoc Demand Response Program		18													
Leachate Revenue	*2*	170	140	117	117	117	117	117	117	117	117	117	117	117	117
Fats Oil & Grease (FOG) / Industrial Waste Tipping Fees		0	100	100	100	100	100	100	100	100	100	100	100	100	100
Cell Tower Revenue	*3*	56	49	51	53	55	58	60	62	65	67	70	73	76	79
CHP Grant Revenue -	*4*	383	500						1000						
DCEO				0											
Water Technology Alliance Grant Opportunity				0											
ICECF				0											
Operating Surplus Transfers to be added to FIP Repayment Fund	*5*	142													
Pretreatment Fines		0													
Misc. Revenue		10	10	10	10	10	10	10	10	10	10	10	10	10	10
Capital Fund Contribution - Glen Ellyn		1598	1619	1684	1720	1756	1793	1829	1868	1914	1962	2011	2059	2108	2156
Capital Fund Contribution - Lombard		1725	1781	1791	1830	1869	1907	1946	1987	2036	2088	2139	2191	2242	2294
Total Capital Fund Contribution	*6*	*3323*	*3400*	*3475*	*3550*	*3625*	*3700*	*3775*	*3855*	*3950*	*4050*	*4150*	*4250*	*4350*	*4450*
TOTAL REVENUE		10168	14678	10728	10805	3977	4055	4132	5214	4312	4414	4517	4620	4723	4826
EXPENSES in Thousands $		**CY(2016) Estimated**	**CY(2017) Budgeting**	**CY(2018) Planning**	**CY(2019) Planning**	**CY(2020) Planning**	**CY(2021) Planning**	**CY(2022) Planning**	**CY(2023) Planning**	**CY(2024) Planning**	**CY(2025) Planning**	**CY(2026) Planning**	**CY(2027) Planning**	**CY(2028) Planning**	**CY(2029) Planning**
Debt Service Payments:															
Ana Digester Project Debt Payment (P&I)	*7*	637	637	637	637	637	637	637	637	637	319				
Debt Service Payment Subtotal		**637**	**637**	**637**	**637**	**637**	**637**	**637**	**637**	**637**	**319**				
FIP Repayment Fund Per April 14, 2016 EOC Award Criteria															
FIP Debt Payment Scheduled (P&I)	*8*			1268	1268	1268	1268	1268	1268	1268	1268	1268	1268	1268	1268
FIP Debt Payment Actual (P&I)				996	996	996	996	996	996	996	996	996	996	996	996
Debt Service Payment Subtotal				**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**
FIP Over Payment Schedule		*0*	*0*	*272*	*544*	*816*	*1088*	*1360*	*1632*	*1904*	*2176*	*2448*	*2720*	*2992*	*3264*
Debt Service Subtotal		**637**	**637**	**1905**	**1905**	**1905**	**1905**	**1905**	**1905**	**1905**	**1587**	**1268**	**1268**	**1268**	**1268**
Personnel	*9*														
Engineer/Assistant Director 80% Capital - 20% O&M															
Salary		55	81	83	86	89	91	94	97	100	103	106	109	112	115
FICA		5	7	8	8	9	9	10	11	12	12	13	14	16	17
IMRF		6	9	10	11	12	13	15	16	18	20	22	24	27	30
Health		3	5	6	6	7	7	8	9	10	11	12	14	15	17
Total		*69*	*102*	*106*	*111*	*116*	*121*	*127*	*133*	*139*	*146*	*153*	*161*	*170*	*179*
Capital Improvements															
Property Acquisition		273													
Capital Improvement Projects															
Vehicle and Equipment Replacement	*10*	102	104	45	36	25	127	71	183	248	137	141	130	130	130
Small Capital Projects	*11*	100	160	100	100	100	100	100	100	100	100	100	100	100	100
Infrastructure Improvements	*12*	146	315	300	300	300	300	300	300	300	300	300	300	300	300
Administration Building Renovations	*13*	0	100												
Roof Replacements - Updated based on Repl. Schedule	*14*	0	65	84											
Plant Equipment Rehabilitation	*15*	252	250	300	300	300	300	300	300	300	300	300	300	300	300
Cryo Maintenance/Atomospheric Vaporizer Lease		50	20	20	20										
Facility Plan				150					150					175	
DuPage River Salt Creek Work Group	*16*														
Assessment Cost for Watershed Projects		95	155	160	285	273	281	289							
Facility Improvements Project	*17*														
Engineering		475	475												
Construction (IEPA Loan)		6000	10334												
Digester Gas Recovery - Combined Heat & Power (CHP)															
Construction		3920													
Hauled Wastes Receiving															
Construction		287													
Combined Heat & Power Biogas Storage System	*18*														
Low Pressure Biogas Storage System			350												
UV System Upgrade - Pg 7.33, 7.34 & 7.35 of Approved Facility Plan	*19*														
Ironbrook UV - Collcorp Inc. Upgrade Current UV System			800												
Sludge Lagoon Cleanout															
North Sludge Lagoon															
South Sludge Lagoon				200											
Bemis Road and Administrative Parking Lot Improvements					400										
Grit Building MCC Replacement															
Engineering				29											
Construction				221											
Elect. Service, Backup & Redundancy Project															
Engineering					212										
Construction						2000									
Biological Phosphorus Removal	*20*														
Engineering			850	960											
Construction				6000	6000										
Biosolids Dewatering Equipment Replacement / Covered Storage															
Engineering															
Construction									603						
Stormwater Plant Barscreen & Grit Collection System Upgrade										2000	2000				
Engineering															
Construction												532			
													2200	2200	
Anticipated Future Projects per the 20 Year 2013 Facility Plan.															
O&M Manual Updates															
Primary Waste Activated Sludge Thickening													380		
Site Lighting													1600		
Liquid Biosolids Storage Improvements													300		
PLC Replacements - Campus Wide													1100		
2013 Facility Plan Estimates													1200		
													4580		
Project Total		11427	13978	8569	7633	2998	1108	1060	1636	2948	2837	1373	3030	3205	830
IFT/DEBT SERVICES / PROJ TOTAL		12406	14717	10580	9649	5019	3134	3092	3674	4992	4570	2794	4459	4643	2277
Cash on Hand 1/1		3371	1133	1094	1242	2397	1355	2276	3316	4856	4176	4019	5742	5903	5983
Gain/Loss FY		(2238)	(39)	148	1156	(1042)	921	1040	1540	(680)	(156)	1723	161	80	2549
Cash on Hand 12/31		1133	1094	1242	2397	1355	2276	3316	4856	4176	4019	5742	5903	5983	8532

Capital Fund 40 Notations:

~ Extended Planning From 2023 to 2029

~ Debt Payments CY18 through CY29

~ Operational Surpluses added to FIP Replacement Fund for CY2017

Improvements Removed Due to Planned Decommissioning of the Production Plant and Conversion to a Biological Phosphorus Removal Facility

~ UNOX Deck Control Improvements - $395,000	$395,000
~ Final Unox Stage Modifications - $234,000	$234,000
~ Cryo Building MCC and PLC Replacements - $306,000	$306,000
~ Intermediate Pump Station Modifications - Included in the BPR Project - $1,500,000	$1,500,000
~ Chemical Phosphorus Removal - Not needed due to the BPR Project - $761,000	$761,000
TOTAL REDUCTIONS OR OFFSETS IN CAPITAL SPENDING	**$3,196,000**

Budget CY2017
Glenbard Treatment Facility
Fund 40 Capital Plan
Capital Improvements Detail

	Estimated CY2016	Budgeting CY2017
PROCEEDS FROM BORROWING	6,000,000	10,334,000
INVESTMENT INCOME	8,000	20,000
CONNECTION FEES - GLEN ELLYN	38,000	25,000
CONNECTION FEES - LOMBARD	20,000	100,000
ENERNOC DEMAND RESPONSE PROGRAM	18,000	0
LEACHATE REVENUE	170,000	140,000
FATS OIL & GREASE (FOG) / INDUSTRIAL WASTE TIPPING FEES	0	100,000
CELL TOWER REVENUE	56,000	49,000
DCEO/ICECF GRANT REVENUE	383,000	500,000
PRETREATMENT FINES	0	0
MISCELLANEOUS REVENUE	10,000	10,000
FIP REPLACEMENT FUND PER APRIL 14, 2016 EOC AWARD CRITERIA		
OPERATING SURPLUS TRANSFERS	142,000	0
EQUIPMENT REPLACEMENT FUND		
GLEN ELLYN - 47.63%	1,598,000	1,619,000
LOMBARD - 52.38%	1,725,000	1,781,000
REVENUES TOTAL:	**10,168,000**	**14,678,000**
PRINCIPAL & INTEREST:		
IEPA DIGESTER PRINCIPAL	506,000	506,000
IEPA DIGESTER INTEREST	131,000	131,000
PRINCIPAL & INTEREST TOTALS:	**637,000**	**637,000**
PERSONNEL:		
Engineer/Assistant Director 80% Capital - 20% O&M		
Salary	55000	81000
FICA	5000	7000
IMRF	6000	9000
Health	3000	5000
PERSONNEL TOTALS:	**69,000**	**102,000**
CAPITAL IMPROVEMENTS		
PROPERTY ACQUISITION		
SPENT/ESTIMATED TO SPEND	273,000	0
CAPITAL IMPROVEMENT PROJECTS		
VEHICLE AND EQUIPMENT REPLACEMENT	102,000	104,000
SMALL CAPITAL PROJECTS	100,000	160,000
INFRASTRUCTURE UPGRADES	146,000	315,000
ADMIN BUILDING RENOVATIONS	0	100,000
ROOF REPLACEMENTS	0	65,000
PLANT EQUIPMENT REHABILITATION	252,000	250,000
CRYO MAINTENANCE/ATMOSPHERIC VAPORIZER PURCHASE OR LEASE	50,000	20,000
FACILITIES PLAN UPDATE	0	0
DUPAGE RIVER SALT CREEK WORKGROUP ASSESSMENT	95,000	155,000
FACILITY IMPROVEMENTS PROJECT	6,475,000	10,809,000
COMBINED HEAT AND POWER PROJECT	3,920,000	0
HAULED WASTE RECEIVING	287,000	0
COMBINED HEAT AND POWER BIOGAS STORAGE SYSTEM	0	350,000
UV SYSTEM UPGRADE		800,000
BIOLOGICAL PHOSPHORUS REMOVAL DESIGN ENGINEERING	0	850,000
CAPITAL IMPROVEMENTS TOTALS:	**11,427,000**	**13,978,000**
PRINCIPAL & INTEREST / CAPITAL IMPROVEMENTS TOTALS	**12,406,000**	**14,717,000**

CY2017
FUND 40
CAPITAL FOOTNOTES

(1) Proceeds From Borrowing ($10,334,000):

This line item depicts the borrowing needs for CY2017 necessary to fund the Facility Improvements Project (FIP). The total amount being requested to borrow between CY2016 and CY2017 is $16,334,000. The total estimated 15-year Debt payment to begin in CY2018 for the FIP is $1,268,000.

(2) Leachate Revenue ($140,000):

We have extended the contract to Waste Management to include delivering up to 42,000 gallons per day, five days per week at $0.025/gallon. The Authority has been averaging 21,000 gallons per day which equates to approximately $140,000/year in additional revenue. If for any reason the leachate has any ill effects on the treatment process, Waste Management will halt all deliveries until the process recuperates.

(3) Cell Tower Revenue ($49,000):

From and after the Commencement Date, GWA licenses to AT&T the use of a space in and/or on the Property, comprising not more than nine hundred square feet (900 sq. ft.) oriented in a roughly 20-foot x 45 foot area. GWA also granted to AT&T and its representatives the right of access to the Premises (and other necessary areas of the Property).

This License runs for five (5) years, plus three (3), five (5) year terms renewable at AT&T's option. The initial term begins on the Commencement Date. As used in the License, "term" means the initial term and any renewal term. The Agreement shall automatically renew upon the same terms and conditions unless AT&T notifies Licensor in writing of AT&T's intention not to renew this Agreement at least sixty (60) days prior to the expiration of the existing term.

AT&T will pay GWA a license fee of approximately Twenty-Eight Thousand Dollars ($28,000) in CY2016. The license fee has been increased by the agreed upon four percent (4.0%) increase over the CY2015 figure.

As of CY2015 the Authority and the Village of Glen Ellyn are negotiating with TowerCo to build a new tower capable of accepting up to four carriers. Land Lease agreements with the Village of Glen Ellyn are anticipated to be approved at a board meeting in October. The Authority has estimated approximately $21,600/year additional revenue for this lease in CY2017.

(4) **Grant Revenue ($500,000):**
The Illinois Department of Commerce and Economic Opportunity (DCEO) offered the Public Sector a Combined Heat and Power Pilot (CHP) Program. The amount granted varies based on the capacity of the CHP (kW installed) and the cost of the project. The Authority is working through the performance testing required to receive the remaining $569,000 of the $702,000 offered. Phases one (1), and two (2) of the three phase grant funding process have been completed. The grant will not be received until performance of the CHP's demonstrate the design intention of the project and the actual energy produced versus what was designed.

The Illinois Clean Energy Community Foundation (ICECF) $250,000 grant was an incentive in CY2016 for installing biogas conditioning systems. This grant was successfully received with the installation of the Unison gas conditioning skid as part of the Combined Heat and Power Project.

(5) **Operating Surplus Transfers ($142,000):**
The EOC approved the audit reported CY2015 O&M surplus to be transferred to the Capital Fund 40 at the June 9, 2016 meeting. Specific instructions for use of the transfer were approved by the EOC. The Authority shall utilize the additional operating surplus transferred into Capital Fund 40 for the purpose of paying off debt earlier than originally scheduled.

(6) **Capital Fund Contributions ($3,400,000):**
The Capital Improvement Fund 40 relies on dedicated contributions from both communities to support GWA capital expenses. Based on Facility Planning efforts during FY2013 and FY2014 the Capital Fund 40 will be increased annually based on project demands for an estimated 20 years. The current rate of increase for the Capital Fund is calculated at 2% annually.

(7) **Anaerobic Digester Improvement Project Debt Payment ($637,000):** This is the principal and interest payment for the IEPA Loan utilized for the 2007-2013 installation of a new 80' digester at the Glenbard Plant. Also included in this project was some cleanup work from the BIP Project. The amount of the loan was $7,543,026 to be paid back over fifteen (15) years at an interest rate of 2.5%. Substantial completion was awarded near the end of FY2011. Final Completion of the Anaerobic Digester Project was awarded in November 2013.

(8) Facility Improvements Project (FIP) Debt Payment $1,268,000:

This is the estimated principal and interest payment for the IEPA Loan that is being utilized for the FIP project during Calendar Years CY2016-CY2017. The amount of the loan is anticipated to be $16,334,000 to be paid back over fifteen (15) years at an interest rate of 1.75%. Repayment of the loan is not anticipated to begin until CY2018.

(9) Engineer/Assistant Director ($113,000):

This position has been filled in CY2016 by Matthew Streicher, P.E. who will primarily work on Capital Improvement Projects. The 80/20 cost split between O&M and the Capital Fund helps to show some of the offsetting engineering costs used to lower the bidding and construction services portion of the projects within the Capital Fund 40.

(10) Rolling Stock ($104,000):

This year GWA is planning on replacing our 24 year old Miller Welder, 12 year old Ford Utilimaster work van and two 9 & 8 year old utility vehicles per the vehicle replacement schedule identified in the appendix of the CY2017 budget.

(11) Small Capital Improvements ($160,000):

This cost center provides for small capital improvements. A few of the planned improvements for CY2017 are listed below:

Grinder Exchange Program	$20,000
House Demolition	$20,000
Electrical Combined Heat & Power Spare Parts	$10,000
Mechanical Combined Heat & Power Spare parts	$10,000
CRAS Building Garage Overhead Door & Operator Replacement	$10,000
Elevator Code Upgrade	$10,000
PVC Stock	$10,000
Metal Stock	$10,000

(12) Infrastructure Improvements ($315,000):

This cost center provides for various infrastructure improvements throughout the GWA Facilities. A few of the planned projects for CY2017 are listed below:

Motor Operated Valves for FOG Station Optimization	$100,000
Plant Buildings Electrical Usage Meters (Purchase Installation)	$50,000
Polymer Blending Unit Replacement	$40,000
Primary Scum Building AHU Replacement & Ductwork Reconfiguration	$35,000
Plant Fiber Testing/Repairs & Patch Panel Replacement	$30,000
Elevator Panel Upgrade	$20,000
Co-Gen Outdoor Bus Duct Replacement	$20,000
Maintenance Shop Rehabilitation	$20,000

(13) Administration Building Renovations ($100,000):

The administration building requires updating to the main level bathrooms along with converting half of the laboratory into an updated meeting room for staff. The lower level bathrooms, showers and locker rooms all need updating, as well as tuck pointing to the exterior of the Administration Building. The administration building flooring is also in need of repair in the future.

(14) Roof Replacements ($65,000):

This year GWA will be performing minor roofing replacements at the Glenbard Plant while we evaluate the updated plan for future needs.

(15) Plant Equipment Rehabilitation ($220,000):

This cost center provides for various equipment rehabilitations throughout the GWA Facilities. The planned projects for CY2016 are listed below:

Year One of Three Year Plan to televise and inventory our interceptors	$70,000
North and South Intermediate Clarifier Bridge Painting	$60,000
Moyno Pumps Spare Parts	$50,000
Gravity Thickener Mechanism and Bridge Painting	$40,000

(16) DuPage River Salt Creek Work Group ($155,000):

The project initiatives that the East / West Branch DuPage River & Salt Creek watersheds are providing to the IEPA are imperative to the impacts of the nutrient standards relating to point source dischargers. The work group has been recognized by the IEPA as a leader in developing remediation to stream standards particularly relating to habitat improvements. The work group believes that stream remediation is the path to healthier streams and rivers versus the implementation of overly stringent nutrient discharge limits for phosphorus and total nitrogen. Educating communities about chloride utilization, storm water best management practices, and the discontinued use of coal tar sealants have also been important functions provided by this group. The IEPA has granted the Authority with first of two potential permit cycles (10) years without impending NPDES limits for phosphorus. If the Authority fails to support the assessed fees as agreed to per the commitment agreement with the DRSCWG we may be facing a phosphorus limit as low as .1 mg/l versus a 1.0 mg/l

(17) Facility Improvements Project (FIP) ($10,809,000):

The FIP project has been awarded to Boller Construction Company of Waukegan, IL in the amount of $16,334,000 and focuses on the aging infrastructure of our Influent Pumping Station, Sand Filters and underground utility replacements of natural gas and non-potable water lines. The majority of all of these systems are approximately 17 years old with some of the components being original 1977 equipment. The most

recent improvement to all of this was to the influent gates for the barscreen and raw pumping station which were replaced in the early 2000's. The main focus at the influent pumping station is to replace the Raw Pumps, Variable Frequency Drives, Motor Control Centers, and Hydraulic Actuators. The station will be updated with pumps that will be able to reduce impacts to the interceptor sewers during high flow events due to their high head loss suction capabilities. The Sand Filters are being replaced with what is called a disk filter in an effort to remove significant recycles flows, and mechanical maintenance demands.

(18) Combined Heat and Power(CHP) Biogas Storage System ($350,000):

The CHP project was substantially completed May 31, 2016 which enabled the Authority to begin work on the industrial waste receiving station. The station will receive up to 30,000 gallons per day of industrial waste that will provide additional feed stock to our anaerobic digesters to help promote increase biogas production. The generation of biogas during the anaerobic digestion process depends on the volatile solids loading to the process. As of now we do not have enough gas to operate the CHP engines continuously. We have peaks and valleys of production and no way to level off the volume of gas when we are overproducing. The biogas storage system will allow us to store excess biogas when we don't need it and use it when we do. This is a major improvement that will help the Authority run the CHP engines continuously. In CY2016 Baxter & Woodman consulting engineers are working toward completing a study for us to help identify the best solution for the additional gas storage.

(19) UV System Upgrade ($800,000):

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 designers and engineers of the Fisher and Porter UV Systems are Ironbrook UV Corp. The design concept for this system was based on the Arlat design which utilizes low pressure lamp technology. 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

Comparably speaking the 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 versus buying a different system.

(20) Biological Nutrient Removal Design ($850,000)

Changes to the Aeration System:

The existing facilities that supply pure oxygen to the biological treatment are approximately 40 years old and have exceeded the normal life-expectancy for such equipment. Furthermore, this method for aeration is very energy inefficient and difficult to control. Due to the critical nature of controlling the oxygen feed rates it is recommended to change the aeration system from surface aeration with pure oxygen to bottom aeration using compressed air provided by controllable high efficiency turbo compressors. The compressed air will be delivered through fine bubble diffusors mounted at the bottom of each of the four stages of the 10 trains, thereby replacing the surface aerators.

As the existing surface aerators also serve as mixers, it will also be required to remove existing aerators and install a new mixer in each compartment. This will be required as the aeration itself will be insufficient to keep the activated sludge suspended. It is suggested to utilize existing manholes in the deck of the treatment lines, and mount the diffusor grids and mixers through these. However, additional manholes might be needed in order to ensure optimal position of the new mixers. Pipes for the air supply to the diffusor grids are connected to four supply pipes (mounted on the deck) via controllable valves securing the right distribution of air across the treatment lines. The four supply pipes are connected to a common manifold via controllable valves which will distribute the airflow according to the required supply to each supply pipe. The manifold is connected to the turbo compressors. It is suggested to use more than one turbo compressor in order to secure sufficient spare capacity in case of breakdown. To increase flexibility in delivery of air it is suggested to use compressors with different capacities in order to ensure optimal turn-down capability. Furthermore, it is recommended to design the pipe connection for the blower-station in such a way that the compressors are able to supply different sections of the manifold and the manifold as such. This will give flexibility to operate with different pressures and flows in each of the supply pipes and thereby having fully open valves to these and still follow the demand for aeration in the most energy efficient manner.

Changes required for biological nitrogen and phosphorous removal:

Nitrogen removal is carried out using simultaneous nitrification/denitrification in a process configuration known as a "plug flow configuration" using the 10 existing process trains. Nitrogen removal is not a specific requirement in NPDES Permit No. IL021547, but with this

design the plant will be able to operate as a BNR facility as stated in clause 15. Furthermore, the Nitrogen removal will reduce the energy consumption as NO3 produced as part of the NH3 elimination will be utilized for aeration in the biological processes. Last but not least the removal of NO3 is required to ensure a stable biological removal of phosphorous.

The plant configuration suggested in this Feasibility Study eliminates the need for recirculation, but requires aeration control using ammonium and nitrate sensors.

The online sensors will also be used to secure an even distribution of the load to the 10 process trains as these signals will be used as part of an active control of valves in the inlet to each line. Alternatively, the "best obtainable" distribution could be considered. This will result in an uneven distribution of the load that will have to be compensated through the aeration control.

Biological phosphorous removal is introduced using side stream hydrolysis of return sludge. This requires that the concentration of the suspended solids is as high as possible in the return sludge. Increased solids content is to be obtained via clarifier control in order to produce enough volatile fatty acids (VFA's) to secure an adequate phosphorous release.

Return sludge is pumped from the secondary clarifiers back to the biological treatment by the existing return activated sludge (RAS) pumping station. As part of the process changed developed in the feasibility study, new controllable pumps will also be needed in order to pump part of the return sludge into a buffer tank. This tank needs to be equipped with a submerged mixer and a controllable pump. Sludge is pumped from the buffer tank to the existing intermediate clarifiers, which have to be equipped with mixers and are thereby changed to hydrolysis tanks. From the hydrolysis tanks the sludge is returned to the inlet of the process trains, possibly using the existing return sludge pump system from the former 1st-stage. Phosphorus uptake will take place in the first compartment of the 10 process trains, as a minimum level of nitrate will be secured here by the control system.

Further, it shall be possible to pump supernatant from the concentration tank to the buffer tank, if VFA production is too low – the supernatant is an excellent carbon source. However, as the need for carbon source for the Bio-P is competing with the wish to use the same carbon source for biogas production, it is recommended to establish a supporting precipitation of phosphate in the tertiary treatment and maybe even before the secondary clarifiers.

It shall also be considered to precipitate phosphate during the sludge handling in order to avoid recycling of phosphate to the process together with the reject water from sludge dewatering. Several methods can be used, 1) dosing of iron-chloride before the digester, 2) remove CO2 before dewatering in order to elicit a struvite precipitation, or 3) dosing a precipitation chemical before the dewatering.

Finally, it could be considered to introduce side-stream treatment of the reject water from sludge dewatering. A tank close to the sludge handling is available and could be used for an Anammox process in order to reduce the internal load of ammonia to the activated sludge tanks. This will reduce both the energy consumption for aeration and the use of carbon source for denitrification.

Conclusion:
The low percentage of readily available chemical oxygen demand (rbCOD) of only 7% of the total COD turned out to have a more significant impact on the treatment process than anticipated. As a result of the low rbCOD fraction, the removal of Nitrate in the Biological treatment stage becomes more difficult despite the inflow of VFA from the side-stream hydrolysis. Despite this, the additional model analyses indicate that it possible to establish a stable removal of both Nitrogen and Phosphorous in the plant with the proposed plant layout design. In case the low rbCOD concentration should turn out to be a limiting factor for the biological processes in the main treatment train it should be possible to add additional VFA from the primary sludge concentration tank. The additional modeling that has been carried out in connection with the Feasibility Study has indicated that such an addition is required in order to achieve a stable Biological Phosphorus process.

It should be mentioned that using a side-stream process for Biological Phosphorous removal is essential for achieving stable Biological Phosphorous removal at the Glenbard WWTP due to the production of VFA that takes place in the side-stream process. A conventional Biological Phosphorous removal in the main process would suffer from the very low level of rbCOD. This would minimize the effect of this process or make it unstable.

Thus, it is the conclusion that the proposed redesign of the plant will turn Glenbard WWTP into a very robust BNR plant using state-of-the-art treatment solutions. The proposed treatment processes have been in operation for several years at WWTPs in Denmark and have demonstrated to be remarkably stable which is essential for the operation of a WWTP. The experiences gained at the Danish plants can be

transferred to Glenbard WWTP due to the high degree of similarity in climate and load variations.

The low level of rbCOD is a cause for concern as sufficient VFA is essential for the Bio-P process. Based on the additional information about rbCOD and extra modelling addition of the supernatant from the concentration-tank for primary sludge is necessary to drive the Bio-P process. Shunting VFA from the digesters to drive the Bio-P will reduce the production of biogas and thereby lower the energy self-sufficiency at the plant. To maximize the biogas production COD shunt should be limited to the extent possible. The split of COD delivery from the primary sludge concentration tank should be optimized so that the Bio-P process is supported and stable, but not at the expense of biogas production. Thus, it would be a good idea to investigate the level of rbCOD in more detail before starting a detailed design.

The new design will reduce the energy consumption significantly compared to present conditions. Most savings will be achieved by replacing the existing aeration system with modern bottom aeration. Further, the change to bottom aeration is expected to eliminate the present problems with floating sludge in the secondary clarifiers caused by very high Oxygen levels at the outlet from the process tanks.

The Biological Phosphorous removal in the side-stream process will effectively remove Phosphorous from the wastewater to a level of 0.5 – 1.0 mg/l. As part of the Phosphorous will be released during the anaerobic treatment of sludge in the digesters it is recommended to add a small amount of chemicals for precipitation of this. It might also be necessary to add chemicals before the filter to ensure compliance with the above mentioned effluent limits. Thus, we suggest installation of dosing facilities that allows dosing at the optimal places. This will allow trimming the dosing to a minimum level and thereby minimizing the costs for chemicals and for handling of sludge. The amount of chemicals used will largely be a function of operational practices; will the plant be operated such that chemical dosing is minimized to the extent possible or shall the plant be operated in a manner where chemical dosing is used in a more conservative manner providing a larger margin of safety as compared to the permitted effluent limit.

Should Illinois EPA require an effluent limit of 0.1 mg/l for Phosphorous this would require a significant increase of the chemical addition. This will reduce the possibilities for the Phosphorous accumulating bacteria to uptake Ortho-P and thereby reduce or even eliminate the function of the Biological Phosphorous removal. Thus, the costs operating the plant under such an effluent limit will increase substantially.

The proposed redesign of the Glenbard WWTP will allow turning the plant into an advanced BNR plant and yet utilize the existing tanks instead of having to invest in new tanks and structures. The proposed design includes a high degree of flexibility or adjustment and optimization which is essential in order to ensure stable operation. With the installation of the new CHP units, the Authority has taken a big step forward in reducing our dependence on the purchase of electricity. The project proposed in the Feasibility Study will be another big step as it will increase the energy self-sufficiency to approximately 86%. Considering that the equivalent number in 2015 was 0% this would be a remarkable step forward. With the FOG receiving program in place the Authority could actually become energy producing.

This project has been discussed at the administrative budget meetings as we have multiple opportunities to evaluate. Baxter & Woodman in partnership with the Danish Hydraulic Institute (DHI) have presented a 20-year net zero cost $12,000,000 design build project proposal with guaranteed savings. The other design alternative for the project would be as a typical design bid build which may still provide us with a few opportunities, but will not have any performance guarantees. The capital fund allocation has been budgeted with the more conservative scenario as the Authority administratively continues working through identifying the best alternative heading into CY2017.

Glenbard Wastewater Authority
CY2017 Small Capital Improvement
40 580120

Designation	Recommendations	CY16 Budgeted	CY17 Budgeting
Administrative	Miscellaneous Office Furniture Upgrades	0	4,000
	Office Décor - Display Case	0	3,000
	Health & Wellness- Exercise Equipment Upgrades	0	2,000
Electronics	Software Upgrades (OS & Application)	5,000	5,000
	Dewatering Main Exhaust Fan Service	5,000	5,000
	SCADA/LAN UPS Replacement	0	0
	Workstation Replacements SCADA & LAN	5,000	5,000
	Scissor Lift Batteries/Service	0	0
	Website Development	5,000	0
	Generator Battery Replacement	7,000	0
	CRAS Building Garage Overhead Door & Operator Replacement	10,000	10,000
	Elevator Code Upgrades	10,000	10,000
	PLC/RTU Battery Replacements	2,000	0
	Grit Effluent Actuator Replacement	6,000	6,000
	SCADA Remote Sites Communication - Spare Parts	16,000	0
	Combined Heat & Power Spare Parts	0	10,000
	Pressure Calibrator	0	6,000
Maintenance	Grinder Exchange Program	7,500	20,000
	Multiple Work Orders for Window Replacements Facility Wide	10,000	0
	Replace Muffle Furnace	0	0
	New West Gate Operator	0	0
	Traffic Loop Installation	10,000	0
	Demolish House at 21W 518 Bemis Rd	0	20,000
	Moyno Pump Spare Rotar/Stator	10,000	0
	Metal Stock and Metal for Various Projects	0	10,000
	PVC Pipe, Fittings and Valves	0	10,000
	Primary Pump Check Valve Replacement (2 Total)	0	5,000
	Pump and Metering Check Valve Replacement (2 Total)	0	5,000
	Combined Heat & Power Spare Parts	0	10,000
CSO Plant	Grit and Main Building Window Replacements	10,000	0
Laboratory	Sampler Replacement	7,500	0
	New Fecal Water Bath	0	4,000
	Grand Total	**$126,000**	**$150,000**

Glenbard Wastewater Authority
CY2017 Infrastructure Improvement
40 580140

Designation	Recommendations	CY16 Budgeted	CY17 Budgeting
Electronics	Dewatering MCC Room AHU Replacement	30,000	0
	Exit/Emergency Lighting Replacement	0	0
	Polymer Blending Unit Replacement	40,000	40,000
	Digester Boiler Room Supply Fan/Duct Heater Replacement	30,000	0
	Pump & Metering Basement Actuator Replacement	40,000	0
	Elevator Panel Upgrade (Fire Alarm Integration)	20,000	20,000
	Co-Gen Facility PLC Replacement	25,000	0
	Dewatering FACP Replacement & Relocation to Exterior Wall	25,000	0
	Operational Database (Replacing Hach Wimms)	30,000	0
	Primary Scum Building AHU Replacement & Ductwork Reconfiguration	0	35,000
	Plant Fiber Testing/Repairs & Patch Panel Replacement at PP-U (3 rows of 8)	0	30,000
	Motor Operated Valves for FOG Station Optimization	0	100,000
Glenbard Plant	Utility Locator	20,000	0
	Co-Gen Outdoor Bus Duct Replacement	0	20,000
	Plant Buildings Electrical usage Meters (Purchase Installation)	0	50,000
	Maintenance Shop Rehabilitation	0	20,000
	Grand Total	**$280,000**	**$315,000**

Glenbard Wastewater Authority
CY2017 Plant Equipment Rehabilitation
40 580150

Designation	Recommendations	CY16 Budgeted	CY17 Budgeting
	Digester Cleaning	70,000	0
Glenbard Plant	Moyno Pumps Spare Parts (Total of 10 Moyno Pumps)	0	50,000
	Grinder Exchange	0	0
	Televising & Cleaning of NRI & SRI	0	100,000
Unox	Inlet Valve Replacement	187,000	0
Intermediate Clarifiers	North and South Clarifier Bridge Painting	0	60,000
Gravity Thickener	Clarifier Mechanism and Bridge Painting	30,000	40,000
Sand Filter Building	Sandfilter Sand Replacement	0	0
CSO Plant	Grit and Main Building Window Replacements	0	0
Glenbard Plant	Multiple Work Orders for Window Replacements Facility Wide	0	0
	Grand Total	**$287,000**	**$250,000**

Glenbard Wastewater Authority Vehicle and Equipment Replacement Schedule
CY2017 -- Annual Appreciation Rate -- 2% per Year

Unit No.	Year	Unit Description	Scheduled Replacement	Purchased Price	Anticipated Sale Income	Appreciated Planned Year Purchase Cost*	Total
628	1985	Bridgeport Vertical Milling Machine	HOLD	$3,750			
623	1993	MEC Scissor Lift	HOLD	$3,950			
617	1997	Pace Trailer (Confined Space)	HOLD	$29,687			
612	1998	Daewoo Fork Lift (CSO)	HOLD	$30,000			
619	2001	Miller Spectrum Plasma Cutting Machine	HOLD	$3,500			
618	2003	Miller Trailblazer Welding Machine (Crane Truck)	HOLD	$6,823			
621	2003	Alladin Hot Water Pressure Washer	HOLD	$1,213			
635	2007	Salt Dog Salt Spreader	HOLD	$3,456			
638	2009	Bobcat Skid Steer Backhoe Attachment	HOLD	$6,683			
641	2009	Bobcat Skid Steer Sweeper Attachment	HOLD	$2,403			
629	2013	Knuth Metal Cutting Lathe	HOLD	$10,595			
620*	1993	Miller - Shopmaster 300 Welding Generator (TIG)	2017	$2,300		$10,000	
606*		New MIG Welder				$10,000	
627	2005	Ford Utilimaster Low Cube (Electric)	2017	$29,300		$37,159	
634*	2008	Bobcat Utility Cart	2017	$18,079		$23,000	
640*	2009	Bobcat Utility Cart	2017	$15,924		$23,000	
							$103,159
615	2001	Godwin 4" Trailer Mounted Pump	2018	$17,113		$23,962	
616	2001	Ingersol-Rand Trailer Air Compressor	2018	$15,000		$21,004	
		HOLD ITEM - Or Item moved up/down in schedule	2018			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2018			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2018			$0	
							$44,966
632	2006	Doosan/Daewoo Fork Lift (GWA Plant)	2019	$27,200		$35,186	
		HOLD ITEM - Or Item moved up/down in schedule	2019			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2019			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2019			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2019			$0	
							$35,186

* Appreciated Plan Year Purchase Cost adjusted to reflect current rates.

Unit No.	Year	Unit Description	Scheduled Replacement	Purchased Price	Anticipated Sale Income	Appreciated Planned Year Purchase Cost*	Total
642	2010	Dodge Grand Caravan	2020	$19,916		$24,277	
		HOLD ITEM - Or Item moved up/down in schedule	2020			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2020			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2020			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2020			$0	
							$24,277
610	2002	John Deere Wheel Loader	2021	$86,500		$126,014	
		HOLD ITEM - Or Item moved up/down in schedule	2021			$0	
		HOLD ITEM - Or Item moved up/down in schedule	2021			$0	
							$126,014
643	2012	F250 Pick Up w/plow (Fuel Truck)	2022	$29,799		$36,325	
645	2012	Transfer Flow Fuel Tanks (Unleaded/Diesel on 643)	2022	$2,443		$2,978	
648	2015	Explorer (Director's Vehicle - 7 year cycle)	2022	$27,659		$31,771	
							$71,074
644	2012	Crane Truck	2023	$122,375		$152,158	
637	2009	Bobcat Skidsteer	2023	$24,018		$31,691	
							$183,849
611	2004	Volvo Semi-Tractor	2024	$76,425		$113,564	
646	2014	F350 Maintenance Truck	2024	$62,816		$76,572	
647	2014	F450 Dump Truck with Plow	2024	$47,052		$57,356	
							$247,492
625	2016	Vac-Tron Vacuum Trailer with Jetter	2025	$77,497		$92,616	
649	2015	F350 with Utilimaster Body (Electric)	2025	$35,875		$43,731	
		HOLD ITEM - Or Item moved up/down in schedule	2025			$0	
							$136,348
605	2016	C-Max Hybrid (Pretreatment)	2026	$24,294		$29,614	
630	2006	Tandem Dump Trailer	2026	$37,181		$55,249	
633	2006	Godwin 8" Trailer Mounted Pump	2026	$37,181		$55,249	
							$140,112
						ANNUAL PURCHASES -- 2017	**$103,159**

* Appreciated Plan Year Purchase Cost adjusted to reflect current rates.

Appendix

CY2017

GLENBARD WASTEWATER AUTHORITY EQUIPMENT REPLACEMENT FUND

	FUND 40	Actual CY15 Bdgt	Approved CY16 Bdgt	Estimated CY16 Bdgt	Budgeting CY17 Bdgt
5966	**Equipment Replacement Flow Split - Total = Half of the Whole**	**1,633,500**	**1,665,000**	**1,665,000**	**1,700,000**
	* Glen Ellyn Flow Split - 45.25%	766,112	768,564	768,564	769,250
	* Lombard Flow Split - 54.75%	867,388	896,436	896,436	930,750
	Equipment Replacement Split in Equity - Total = Half of the Whole	**1,633,500**	**1,633,500**	**1,633,500**	**1,700,000**
	Glen Ellyn Flow Split - 50%	816,750	832,500	832,500	850,000
	Lombard Flow Split - 50%	816,750	832,500	832,500	850,000
	Total	**3,267,000**	**3,330,000**	**3,330,000**	**3,400,000**

				Total Contributions	Percentage by Contribution
Total Glen Ellyn Equipment Replacement Fund Contribution:	**1,582,862**	**1,601,064**	**1,601,064**	**1,619,250**	**47.63%**
Total Lombard Equipment Replacement Fund Contribution:	**1,684,138**	**1,728,936**	**1,728,936**	**1,780,750**	**52.38%**

* Indicates Current 5 Year Avg. Flow Split for CY2017

Original Fund 27 & 28 FY1986 through FY1997

Glenbard Wastewater Authority
Equipment Replacement Fund

* Fund 27 was defined as the Operation & Maintenance Account * Fund 28 was defined as the Capital Account

Fiscal Year	Fund 27 Glenbard 84.6% Glen Ellyn	Lombard	Total Budgeted Contribution	IFT Transfers to Fund 28	Glenbard Flowsplits	Fund 27 Stormwater 12% Lombard	IFT Transfers to Fund 28	Fund 27 NRI 2.1% Glen Ellyn	Lombard	Total Budgeted Contribution	IFT Transfers to Fund 28	NRI Flowsplits	Fund 27 SRI 1.3% Glen Ellyn	IFT Transfers to Fund 28	Actual Contributions	Total to Fund 28	Fund 28 % Increase	Total Glen Ellyn	Total Lombard	Accumulated Funding
FY(1986)	$ 28,027.13		$ 28,027.13			$ 3,975.48		$ 238.00	$ 458.00	$ 696.00			$ 430.68		$ 33,129.29	0.00	0%	$ 28,695.81	$ 4,433.48	$ -
FY(1987)	486,027.00		486,027.00			68,940.00		4,129.00	7,936.00	12,065.00			7,468.50		574,500.50	0.00	0%	497,624.50	76,876.00	-
FY(1988)	242,987.00	282,256.00	525,243.00	520,200.00		73,800.00	73,700.00	4,418.00	8,493.00	12,911.00	13,750.00		7,992.40	7,150.00	619,946.40	614,800.00	100%	255,397.40	364,549.00	614,800.00
FY(1989)	242,987.00	282,256.00	525,243.00	556,600.00		79,000.00	78,950.00	4,496.00	9,138.00	13,634.00	14,000.00		8,551.40	8,475.00	626,428.40	658,025.00	7%	256,034.40	370,394.00	1,272,825.00
FY(1990)	243,519.00	323,236.00	566,755.00	596,000.00	43.4/56.6	84,444.00	85,000.00	4,832.00	9,945.00	14,777.00	15,000.00	32.7/67.3	9,148.10	9,000.00	675,124.10	705,000.00	7%	257,499.10	417,625.00	1,977,825.00
FY(1991)	308,090.00	371,910.00	680,000.00	637,200.00	44/56	90,372.00	90,200.00	5,061.00	10,754.00	15,815.00	16,100.00	32/68	9,790.30	9,600.00	795,977.30	753,100.00	6%	322,941.30	473,036.00	2,730,925.00
FY(1992)	253,884.00	296,485.00	550,369.00	533,000.00	44/56	75,600.00	75,600.00	4,128.00	9,104.00	13,232.00	13,400.00	32/68	8,191.30	8,100.00	647,392.30	630,100.00	-20%	268,203.30	381,189.00	3,361,025.00
FY(1993)	256,274.00	268,331.00	524,605.00	560,192.00	45/55	79,500.00	79,400.00	4,380.00	9,524.00	13,904.00	14,000.00	32/68	8,607.20	8,500.00	626,616.20	662,092.00	5%	269,261.20	357,355.00	4,023,117.00
FY(1994)	265,659.00	341,029.00	606,688.00	588,000.00	45.2/54.8	83,400.00	83,400.00	4,736.00	9,859.00	14,595.00	14,700.00	32.5/67.6	9,035.00	8,900.00	713,718.00	695,000.00	5%	279,430.00	434,288.00	4,718,117.00
FY(1995)	243,431.00	348,656.00	592,087.00	617,600.00	48/54	87,600.00	87,600.00	5,212.00	10,118.00	15,330.00	15,500.00	34/66	9,490.00	9,300.00	704,507.00	730,000.00	5%	258,133.00	446,374.00	5,448,117.00
FY(1996)	256,157.00	335,727.00	591,884.00	648,500.00	44.5/55.5	92,000.00	92,000.00	5,312.00	10,785.00	16,097.00	16,200.00	33/67	9,964.50	9,800.00	709,945.50	786,500.00	5%	271,433.50	438,512.00	6,214,617.00
FY(1997)	278,157.00	369,235.00	647,392.00	681,000.00	42.92/57.08	96,600.00	96,200.00	5,692.00	11,213.00	16,905.00	17,100.00	31.21/68.79	10,465.00	9,800.00	771,362.00	804,100.00	5%	294,314.00	477,048.00	7,018,717.00
TOTALS	$ 3,105,199.13	$ 3,219,121.00	$ 6,324,320.13	$ 5,938,292.00		$ 915,231.48	$ 842,050.00	$ 52,634.00	$ 107,327.00	$ 159,961.00	$ 149,750.00		$ 99,134.38	$ 88,625.00	$ 7,498,646.99	$ 7,018,717.00		$ 3,256,987.51	$ 4,241,679.48	

Original Fund 40 FY1998 through FY2010

Fiscal Year	Glenbard 84.6% Glen Ellyn	Lombard	Glenbard Flowsplits	Stormwater 12% Lombard	NRI 2.1% Glen Ellyn	Lombard	NRI Flowsplits	SRI 1.3% Glen Ellyn	Actual Contributions	Percentage Increase	Total Glen Ellyn	Total Lombard	Accumulated Funding
FY(1998)	$ 237,362.00	$ 476,938.00	44.48/55.52	$ 101,400.00	$ 5,733.00	$ 12,012.00	32.31/67.69	$ 10,985.00	$ 845,000.00	5%	$ 254,080.00	$ 590,350.00	$ 7,863,717.00
FY(1999)	331,337.00	418,463.00	44.19/55.81	106,440.00	6,190.00	12,437.00	33.23/66.77	11,531.00	887,000.00	5%	$ 349,058.00	$ 537,340.00	$ 8,750,717.00
FY(2000)	401,631.00	491,876.00	43.10/56.90	126,720.00	7,236.00	14,940.00	32.63/67.37	13,728.00	1,056,000.00	16%	$ 422,595.00	$ 633,536.00	$ 9,806,717.00
FY(2001)	516,247.00	632,245.00	44.95/55.06	161,300.00	9,416.00	18,608.00	33.36/66.64	17,472.21	1,344,016.00	21%	$ 543,135.21	$ 812,353.00	$ 11,150,733.00
FY(2002)	608,349.00	698,803.00	46.54/53.46	185,411.00	10,477.00	21,970.00	32.29/67.71	20,086.26	1,545,097.00	13%	$ 638,912.26	$ 908,184.00	$ 12,695,830.00
FY(2003)	674,746.00	814,429.00	45.31/54.69	211,230.00	11,958.00	25,007.00	32.35/67.65	22,883.30	1,760,254.00	12%	$ 709,587.30	$ 1,050,666.00	$ 14,456,084.00
FY(2004)	718,811.00	816,454.00	46.82/53.18	217,770.00	12,996.00	25,114.00	34.10/65.9	23,591.54	1,814,734.00	3%	$ 755,398.54	$ 1,059,338.00	$ 16,270,818.00
FY(2005)	786,524.00	849,663.00	47.87/52.13	233,000.00	15,297.00	25,483.00	37.51/62.49	25,244.62	1,941,894.00	7%	$ 827,065.62	$ 1,108,146.00	$ 18,212,712.00
FY(2006)	849,633.00	908,422.00	48.328/51.672	249,400.00	17,075.00	26,559.00	39.133/60.867	27,011.75	2,077,827.00	7%	$ 893,719.75	$ 1,184,381.00	$ 20,290,539.00
FY(2007)	821,398.00	870,602.00	48.546/51.454	240,000.00	16,588.00	25,412.00	39.496/60.504	26,000.00	2,000,000.00	-4%	$ 863,986.00	$ 1,136,014.00	$ 22,290,539.00
FY(2008)	729,051.00	762,949.00	48.864/51.136	216,000.00	15,033.00	22,767.00	32.769/60.231	23,400.00	1,800,000.00	-11%	$ 767,484.00	$ 1,001,716.00	$ 24,090,539.00
FY(2009)	746,126.32	776,674.00	48.997/51.003	216,000.00	14,895.00	22,905.00	39.405/60.595	23,400.00	1,800,000.00	0%	$ 784,421.32	$ 1,015,579.00	$ 25,890,539.00
FY(2010)	826,237.44	865,762.56	48.832/51.168	264,000.00	16,834.31	26,059.32	37.954/62.046	26,000.00	2,000,000.00	10%	$ 888,671.75	$ 1,155,621.88	$ 27,890,539.00
TOTALS	$ 8,247,452.76	$ 9,383,280.56		$ 2,528,671.00	$ 159,528.31	$ 279,473.32		$ 271,333.68	$ 20,871,822.00		$ 8,678,314.75	$ 12,191,424.88	

Intermediate Capital Funding FY2011 through FY2013

Fiscal Year	Division 40 Glenbard Plant 65.7%	Division 41 Stormwater Plant 12%	Fund 42 NRI 6.9%	Fund 43 SRI 3.1%	Fund 44 St. Charles Rd L.S 6.7%	Fund 45 Valley View L.S 2%	Fund 46 SRI L.S 2%	Fund 47 Sunnyside L.S .5%	Actual Contributions	Percentage Increase	Total Glen Ellyn	Total Lombard	Accumulated Funding
FY(2011)	1,467,400.00	264,000.00	151,800.00	68,200.00	147,400.00	45,100.00	45,100.00	11,000.00	2,200,000.00	9%	$ 1,625,800.00	$ 377,300.00	$ 30,090,539.00
FY(2012)	1,467,400.00	264,000.00	151,800.00	68,200.00	147,400.00	45,100.00	45,100.00	11,000.00	2,200,000.00	0%	$ 1,067,340	$ 1,132,660	$ 32,290,539.00
FY(2013)	1,600,800.00	288,000.00	165,600.00	74,400.00	160,800.00	49,200.00	49,200.00	12,000.00	2,400,000.00	8%	$ 1,160,788	$ 1,239,212	$ 34,690,539.00
TOTALS	$ 3,068,200.00	$ 552,000.00	$ 317,400.00	$ 142,600.00	$ 308,200.00	$ 94,300.00	$ 94,300.00	$ 23,000.00	$ 4,600,000.00		$ 2,228,127.76	$ 2,371,872.24	

Fund 40 FY2014 through CY2025

Fiscal Year	Glen Ellyn Split 50/50	Lombard Split 50/50	1/2 Half of Actual	Glen Ellyn Split By Flow	Lombard Split By Flow	% Flow Split By Partner	1/2 Half of Actual	Actual Contributions	Percentage Increase	Total Glen Ellyn	Total Lombard	Accumulated Funding
FY(2014)	675,000.00	675,000.00	1,350,000.00	642,600.00	707,400.00	47.60 / 52.40	1,350,000.00	2,700,000.00	11%	$ 1,317,600.00	$ 1,382,400.00	$ 37,390,539.00
SY(2014)	490,050.00	490,050.00	980,100.00	459,666.90	520,433.10	46.90 / 53.10	980,100.00	1,960,200.00	-38%	$ 949,716.90	$ 1,010,483.10	$ 39,350,739.00
CY(2015)	816,750.00	816,750.00	1,633,500.00	766,111.50	867,388.50	46.90 / 53.10	1,633,500.00	3,267,000.00	40%	$ 1,582,861.50	$ 1,684,138.50	$ 42,617,739.00
CY(2016)	832,500.00	832,500.00	1,665,000.00	768,564.00	896,436.00	46.16 / 53.84	1,665,000.00	3,330,000.00	2%	$ 1,601,064.00	$ 1,728,936.00	$ 45,947,739.00
CY(2017)*	850,000.00	850,000.00	1,700,000.00	769,250.00	930,750.00	45.25 / 54.75	1,700,000.00	3,400,000.00	2%	$ 1,619,250.00	$ 1,780,750.00	$ 49,347,739.00
CY(2018)	868,750.00	868,750.00	1,737,500.00	814,887.50	922,612.50	46.90 / 53.10	1,737,500.00	3,475,000.00	2%	$ 1,683,637.50	$ 1,791,362.50	$ 52,822,739.00
CY(2019)	887,500.00	887,500.00	1,775,000.00	832,475.00	942,525.00	46.90 / 53.10	1,775,000.00	3,550,000.00	2%	$ 1,719,975.00	$ 1,830,025.00	$ 56,372,739.00
CY(2020)	906,250.00	906,250.00	1,812,500.00	850,062.50	962,437.50	46.90 / 53.10	1,812,500.00	3,625,000.00	2%	$ 1,756,312.50	$ 1,868,687.50	$ 59,997,739.00
CY(2021)	925,000.00	925,000.00	1,850,000.00	867,650.00	982,350.00	46.90 / 53.10	1,850,000.00	3,700,000.00	2%	$ 1,792,650.00	$ 1,907,350.00	$ 63,697,739.00
CY(2022)	943,750.00	943,750.00	1,887,500.00	885,237.50	1,002,262.50	46.90 / 53.10	1,887,500.00	3,775,000.00	2%	$ 1,828,987.50	$ 1,946,012.50	$ 67,472,739.00
CY(2023)	963,750.00	963,750.00	1,927,500.00	903,997.50	1,023,502.50	46.90 / 53.10	1,927,500.00	3,855,000.00	2%	$ 1,867,747.50	$ 1,987,252.50	$ 71,327,739.00
CY(2024)	987,500.00	987,500.00	1,975,000.00	926,275.00	1,048,725.00	46.90 / 53.10	1,975,000.00	3,950,000.00	2%	$ 1,913,775.00	$ 2,036,225.00	$ 75,277,739.00
CY(2025)	1,012,500.00	1,012,500.00	2,025,000.00	949,725.00	1,075,275.00	46.90 / 53.10	2,025,000.00	4,050,000.00	2%	$ 1,962,225.00	$ 2,087,775.00	$ 79,327,739.00
CY(2026)	1,037,500.00	1,037,500.00	2,075,000.00	973,175.00	1,101,825.00	46.90 / 53.10	2,075,000.00	4,150,000.00	2%	$ 2,010,675.00	$ 2,139,325.00	$ 83,477,739.00
CY(2027)	1,062,500.00	1,062,500.00	2,125,000.00	996,625.00	1,128,375.00	46.90 / 53.10	2,125,000.00	4,250,000.00	2%	$ 2,059,125.00	$ 2,190,875.00	$ 87,727,739.00
CY(2028)	1,087,500.00	1,087,500.00	2,175,000.00	1,020,075.00	1,154,925.00	46.90 / 53.10	2,175,000.00	4,350,000.00	2%	$ 2,107,575.00	$ 2,242,425.00	$ 92,077,739.00
CY(2029)	1,112,500.00	1,112,500.00	2,225,000.00	1,043,525.00	1,181,475.00	46.90 / 53.10	2,225,000.00	4,450,000.00	2%	$ 2,156,025.00	$ 2,293,975.00	$ 96,527,739.00
TOTALS	$ 11,159,300.00	$ 11,159,300.00		$ 11,409,677.40	$ 12,983,922.60			$ 61,837,200.00		$ 43,142,895.52	$ 49,702,491.10	

* Indicates Actual 5 Year Flow Split

Comments Pertaining to the Historical Value of the Equipment Replacement Fund

~ As a condition of Grant funding, the United States Environmental Protection Agency required that an equipment replacement fund be established. The purpose of the replacement fund is to be sure adequate funds are in place to replace equipment and make improvements as they are needed.

~ The 1985 Fred P. Johnson and Associates study recommended that a seven percent (7%) Sinking Fund be set up for equipment replacement. That meant that the fund would grow by seven percent (7%) each year. The Johnson study projected the Sinking Fund through FY 1991.

~ In FY1986 the O&M Sinking Fund was established with contributions being made to Fund 27, Glenbard Wastewater Authority Operations and Maintnance Fund.

~ In 1988 a new Fund was created based off of the Johnson Study recommendations. This was Fund 28, Glenbard Wastewater Authority Capital Equipment Replacement Fund. Fund 27 was the depository for Fund 28 with Inter Fund Trasfers (IFT's) being the vehicle to transfer needed funds into Fund 28. The Equipment Replacement Fund spreadsheet illustrates the deposits, transfers, splits and accumulations of the money.

~ In FY1992, after analyzing likely FY1992 - FY1997 equipment replacement needs, Glenbard Staff and the Executive Oversight Committee concluded that a five percent (5%) sinking fund will be adequate. It took four fiscal years between FY1992 and FY1996 to return to the contribution level of 1991. The Sinking Fund is shown as growing by five percent (5%) from FY1992 - FY1999.

~ A Facility Plan developed in FY(1998) caused the Glenbard Staff and the Executive Oversight Committee to commit to increasing the Sinking Fund to the Fred Johnson calculated values by FY2004.

~ The Sinking Fund was re-evaluated during the FY2007 budget discussions with Village Managers and Finance Directors when it was decided to no longer follow the recommended seven percent (7%) annual increase, but to evaluate the contribution on an annual basis. The Managers agreed to return to the seven percent (7%) annual increase in FY2008.

~ The Sinking Fund was again evaluated during budget planning for FY2008 when the decision by Village Managers and Finance Directors moved the Authority away from dedicated annual contributions, but to evaluate the contribution annually. At this time Village Managers and Finance Directors agreed to reduce the annual contribution to the Sinking Fund. It took three fiscal years between FY2008 and FY2010 to return to the contribution level of FY2007.

~ FY2011 was the first year that the EOC agreed to change the budget format without an executed IGA. The change to the percentages regarding how the Regional Treatment System was constructed did nothing more than devalue the Glenbard Plant to create arbitrary funds and increase value in others.

~ FY 2013 is the third year the budget has been formatted without a supporting IGA. Both Village presidents agreed at the December 2011 EOC meeting that this would be the last budget formatted without a supporting IGA. If an agreeable funding mechanism cannot be achieved by November 2012 the budget will revert back to the 1998 IGA supporting the FY10 budget format.

~ Beginning with the FY2013 Facility Plan the Capital Equipment Replacement Fund shall be funded with a mandatory ten percent (10%) increase from fiscal year to fiscal year through the 10 year plan as agreed to by the EOC. The increase to the Fund for FY2014 is actually eleven percent (11%). With this figure the period between FY2000 & FY2014 averages seven percent (7%) contribution.

~ FY2014 The Capital Equipment Replacement Fund 40 is utilizing a unique revenue split approved by both partners. The revenue split shall divide the agreed contribution in half, of which the first half shall be split 50% between partners. The second half of the agreed contribution will be split by the flow utilized to calculate the partners payments. A single Capital Fund (40) shall be used to expense all projects with the approval of the Executive Oversight Committee.

Glenbard Wastewater Authority
Summary of Projected Future Debt Service Payments
As of January 1, 2017

	Digester Project	Facility Improvements Project	Total Debt Service
CY17*	637,001		637,001
CY18	637,001		637,001
CY19	637,001	995,684	1,632,685
CY20	637,001	995,684	1,632,685
CY21	637,001	995,684	1,632,685
CY22	637,001	995,684	1,632,685
CY23	637,001	995,684	1,632,685
CY24	637,001	995,684	1,632,685
CY25	318,501	995,684	1,314,185
CY26		995,684	995,684
CY27		995,684	995,684
CY28		995,684	995,684
CY29		995,684	995,684
CY30		995,684	995,684
CY31		995,684	995,684
CY32		995,684	995,684
CY33		995,684	995,684
CY34		995,684	
CY35		995,684	
CY36		995,684	
CY37		995,684	
CY38		995,684	
	5,414,509	19,913,680	20,349,769

Final **Budgeted**

Budget CY2017
Anaerobic Digester
Loan # L17-287400
Total Value of Loan (Principal + Interest): $9,242,026.30

IEPA Loan - Payback Schedule
Current Amount Borrowed: $7,543,076
Interest Rate: 2.5%

Fiscal Year	Due Date	Beginning Balance	Principal Payment	Interest Payment	Interest Rate %	Total Payment	Ending Balance
FY 2011	7/29/2010	$7,167,105.82	$179,436.51	$81,035.93	2.50	$260,472.44	$6,987,669.31
	1/29/2011	$6,987,669.31	$181,679.47	$78,792.97	2.50	$260,472.44	$6,805,989.84
FY 2012	7/29/2011	$6,805,989.84	$183,950.46	$76,521.98	2.50	$260,472.44	$6,622,039.38
	1/29/2012	$6,622,039.38	$207,577.05	$82,721.72	2.50	$290,298.77	$6,414,462.33
FY 2013	7/29/2012	$6,575,454.33	$210,171.76	$80,127.01	2.50	$290,298.77	$6,365,282.57
	1/29/2013	$6,365,282.57	$218,352.18	$79,522.32	2.50	$297,874.50	$6,146,930.39
FY 2014	7/29/2013	$6,146,930.39	$221,081.58	$76,792.92	2.50	$297,874.50	$5,925,848.81
	1/29/2014	$5,925,848.81	$223,845.10	$74,029.40	2.50	$297,874.50	$5,702,003.71
SY 2014	7/29/2014	$6,077,402.76	$226,643.16	$71,231.34	2.50	$297,874.50	$5,850,759.60
CY 2015	1/29/2015	$5,850,759.60	$245,366.14	$73,134.50	2.50	$318,500.64	$5,605,393.46
	7/29/2015	$5,605,393.46	$248,433.22	$70,067.42	2.50	$318,500.64	$5,356,960.24
CY 2016	1/29/2016	$5,356,960.24	$251,538.64	$66,962.00	2.50	$318,500.64	$5,105,421.60
	7/29/2016	$5,105,421.60	$254,682.87	$63,817.77	2.50	$318,500.64	$4,850,738.73
CY 2017*	1/29/2017	$4,850,738.73	$257,866.41	$60,634.23	2.50	$318,500.64	$4,592,872.32
	7/29/2017	$4,592,872.32	$261,089.74	$57,410.90	2.50	$318,500.64	$4,331,782.58
CY 2018	1/29/2018	$4,331,782.58	$264,353.36	$54,147.28	2.50	$318,500.64	$4,067,429.22
	7/29/2018	$4,067,429.22	$267,657.77	$50,842.87	2.50	$318,500.64	$3,799,771.45
CY 2019	1/29/2019	$3,799,771.45	$271,003.50	$47,497.14	2.50	$318,500.64	$3,528,767.95
	7/29/2019	$3,528,767.95	$274,391.04	$44,109.60	2.50	$318,500.64	$3,254,376.91
CY 2020	1/29/2020	$3,254,376.91	$277,820.93	$40,679.71	2.50	$318,500.64	$2,976,555.98
	7/29/2020	$2,976,555.98	$281,293.69	$37,206.95	2.50	$318,500.64	$2,695,262.29
CY 2021	1/29/2021	$2,695,262.29	$284,809.86	$33,690.78	2.50	$318,500.64	$2,410,452.43
	7/29/2021	$2,410,452.43	$288,369.98	$30,130.66	2.50	$318,500.64	$2,122,082.45
CY 2022	1/29/2022	$2,122,082.45	$291,974.61	$26,526.03	2.50	$318,500.64	$1,830,107.84
	7/29/2022	$1,830,107.84	$295,624.29	$22,876.35	2.50	$318,500.64	$1,534,483.55
CY 2023	1/29/2023	$1,534,483.55	$299,319.60	$19,181.04	2.50	$318,500.64	$1,235,163.95
	7/29/2023	$1,235,163.95	$303,061.09	$15,439.55	2.50	$318,500.64	$932,102.86
CY 2024	1/29/2024	$932,102.86	$306,849.35	$11,651.29	2.50	$318,500.64	$625,253.51
	7/29/2024	$625,253.51	$310,684.97	$7,815.67	2.50	$318,500.64	$314,568.54
CY2025	1/29/2025	$314,568.54	$314,568.54	$3,932.10	2.50	$318,500.64	$0.00
Totals			**$7,703,496.87**	**$1,538,529.43**		**$9,242,026.30**	

The EOC awarded an Anaerobic Digester Engineering Services Contract on August 10, 2005, for the Anaerobic Digester Improvement Project. This projected payback schedule is included to cover the required funding.

Position Classification

ADMINISTRATION	Salary Range	FY14	SY14	CY15	CY 16	CY 17
Executive Director	T	1	1	1	1	1
Engineering, Assistant Executive Director	Q	0	0	0	1	1
Enviromental Resources Coordinator	I	0	1	1	1	1
Seasonal Admin Secretary - FTE = .25		1	1	1	1	1
Administrative Secretary	F	1	1	1	1	1
FT Employee Totals		**2**	**3**	**3**	**4**	**4**
PT Employee Totals		1	1	1	1	1
FTE Totals		**2.25**	**3.25**	**3.25**	**4.25**	**4.25**
Operations						
Operations Superintendent	O	1	1	1	1	1
Plant Operator I	I	2	3	3	2	2
Plant Operator II	H	0	0	0	0	0
Plant Operator III	G	0	0	0	0	0
Plant Operator IV	F	2	2	2	2	2
Operator-in-Training	E	0	0	0	0	0
Operator PT - FTE = 1.0	E	5	5	5	5	5
Wastewater Laboratory Technician	I	1	1	1	1	1
PT Laborer - FTE = .50	D	2	1	1	1	1
FT Employee Totals		**6**	**7**	**7**	**6**	**6**
PT Employee Totals		**7**	**6**	**6**	**6**	**6**
FTE Totals		**7.5**	**8.5**	**8.5**	**7.5**	**7.5**
MECHANICAL MAINTENANCE						
Mechnical Maintenance Superintendent	O	1	1	1	1	1
Maintenance Mechanic I	I	2	1	1	1	1
Maintenance Mechanic II	G	0	0	0	2	2
Maintenance Mechanic III	F	0	1	1	0	0
FT Employee Totals		**3**	**3**	**3**	**4**	**4**
PT Employee Totals		**0**	**0**	**0**	**0**	**0**
FTE Totals		**3**	**3**	**3**	**4**	**4**
ELECTRICAL MAINTENANCE						
Electrical Electronics Superintendent	O	1	1	1	1	1
Electronic Technician	J	1	1	1	1	1
Plant Electrician	J	1	1	1	1	1
FT Employee Totals		**3**	**3**	**3**	**3**	**3**
PT Employee Totals		**0**	**0**	**0**	**0**	**0**
FTE Totals		**3**	**3**	**3**	**3**	**3**
TOTAL OF ALL CATEGORIES						
Total Full Time Employees		14	16	16	17	17
Total PT/Seasonal Employees		8	7	7	7	7
Total Full Time Equivalent (FTE)		15.75	17.75	17.75	18.75	18.75

Glenbard Wastewater Authority
Salary Schedule - January 1, 2017 through December 31, 2017

Range	Annualized			Hourly		
	Min	Mid	Max	Min	Mid	Max
	CY17 Salary Schedule Adjustment = No Increase to Salary Ranges from CY16					
A	35,339	44,512	53,664	16.99	21.40	25.80
B	37,066	46,717	56,347	17.82	22.46	27.09
C	38,938	49,088	59,238	18.72	23.60	28.48
D	40,872	51,501	62,130	19.65	24.76	29.87
E	42,931	54,122	65,312	20.64	26.02	31.40
F	45,094	56,846	68,598	21.68	27.33	32.98
G	47,382	59,696	72,010	22.78	28.70	34.62
H	49,754	62,691	75,608	23.92	30.14	36.35
I	52,229	65,832	79,414	25.11	31.65	38.18
J	54,808	69,077	83,346	26.35	33.21	40.07
K	57,574	72,571	87,568	27.68	34.89	42.10
L	60,486	76,190	91,894	29.08	36.63	44.18
M	63,461	79,955	96,429	30.51	38.44	46.36
N	66,643	83,949	101,254	32.04	40.36	48.68
O	70,054	88,296	106,538	33.68	42.45	51.22
P	73,549	92,664	111,779	35.36	44.55	53.74
Q	77,147	97,198	117,250	37.09	46.73	56.37
R	81,078	102,170	123,240	38.98	49.12	59.25
S	85,114	107,266	129,397	40.92	51.57	62.21
T	89,336	112,570	135,782	42.95	54.12	65.28

TABLE 1. TOTAL WASTWATER FLOWS AND PERCENTAGES FOR CY2017 BUDGET

	MONTH	TOTAL AREA METERS (MG)	GLEN ELLYN AREA (MG)	PERCENT OF TOTAL	LOMBARD AREA (MG)	PERCENT OF TOTAL
	Jan-11	285.299	142.664	50.01%	142.635	49.99%
	Feb-11	430.922	196.062	45.50%	234.860	54.50%
Year One	Mar-11	527.506	245.454	46.53%	282.052	53.47%
	Apr-11	565.997	261.959	46.28%	304.038	53.72%
	May-11	476.910	225.060	47.19%	251.850	52.81%
	Jun-11	449.842	224.257	49.85%	225.585	50.15%
	Jul-11	341.006	165.983	48.67%	175.023	51.33%
	Aug-11	331.590	157.770	47.58%	173.820	52.42%
	Sep-11	259.184	119.152	45.97%	140.032	54.03%
	Oct-11	254.966	121.643	47.71%	133.323	52.29%
	Nov-11	328.584	150.589	45.83%	177.995	54.17%
	Dec-11	376.184	176.681	46.97%	199.503	53.03%
	Jan-12	365.415	171.128	46.83%	194.287	53.17%
	Feb-12	316.518	152.713	48.25%	163.805	51.75%
	Mar-12	339.473	162.597	47.90%	176.876	52.10%
Year Two	Apr-12	269.939	130.528	48.35%	139.411	51.65%
	May-12	303.295	144.740	47.72%	158.555	52.28%
	Jun-12	221.502	106.729	48.18%	114.773	51.82%
	Jul-12	251.263	110.964	44.16%	140.299	55.84%
	Aug-12	232.703	104.770	45.02%	127.933	54.98%
	Sep-12	214.256	100.230	46.78%	114.026	53.22%
	Oct-12	248.615	112.922	45.42%	135.693	54.58%
	Nov-12	213.457	103.551	48.51%	109.906	51.49%
	Dec-12	267.336	124.434	46.55%	142.902	53.45%
	Jan-13	329.627	152.609	46.30%	177.018	53.70%
	Feb-13	384.706	172.768	44.91%	211.938	55.09%
	Mar-13	472.827	218.299	46.17%	254.528	53.83%
Year Three	Apr-13	619.351	303.384	48.98%	315.967	51.02%
	May-13	431.200	201.647	46.76%	229.553	53.24%
	Jun-13	361.166	162.553	45.01%	198.613	54.99%
	Jul-13	260.487	117.489	45.10%	142.998	54.90%
	Aug-13	228.944	99.808	43.59%	129.136	56.41%
	Sep-13	229.706	100.114	43.58%	129.592	56.42%
	Oct-13	258.677	108.512	41.95%	150.165	58.05%
	Nov-13	306.145	134.647	43.98%	171.498	56.02%
	Dec-13	277.820	125.681	45.24%	152.139	54.76%
	Jan-14	343.023	153.652	44.79%	189.371	55.21%
	Feb-14	316.547	138.954	43.90%	177.593	56.10%
	Mar-14	520.731	228.751	43.93%	291.98	56.07%
Year Four	Apr-14	441.060	201.787	45.75%	239.273	54.25%
	May-14	553.185	257.255	46.50%	295.93	53.50%
	Jun-14	512.987	225.33	43.93%	287.657	56.07%
	Jul-14	436.204	187.492	42.98%	248.712	57.02%
	Aug-14	420.414	167.406	39.82%	253.008	60.18%
	Sep-14	318.223	134.549	42.28%	183.674	57.72%
	Oct-14	309.155	132.35	42.81%	176.805	57.19%
	Nov-14	266.985	115.666	43.32%	151.319	56.68%
	Dec-14	293.723	127.548	43.42%	166.175	56.58%
	Jan-15	313.002	130.025	41.54%	182.977	58.46%
	Feb-15	260.791	112.78	43.25%	148.011	56.75%
	Mar-15	403.033	166.466	41.30%	236.567	58.70%
Year Five	Apr-15	398.814	173.456	43.49%	225.358	56.51%
	May-15	443.926	187.303	42.19%	256.623	57.81%
	Jun-15	540.440	240.244	44.45%	300.196	55.55%
	Jul-15	335.868	155.714	46.36%	180.154	53.64%
	Aug-15	312.778	136.548	43.66%	176.23	56.34%
	Sep-15	336.494	144.547	42.96%	191.947	57.04%
	Oct-15	258.499	112.427	43.49%	146.072	56.51%
	Nov-15	442.929	185.084	41.79%	257.845	58.21%
	Dec-15	624.384	274.565	43.97%	349.819	56.03%
	AVERAGE	**357.260**	**161.667**	**45.25%**	**195.594**	**54.75%**

AVERAGED WASTEWATER FLOWS UTILIZED FOR CY2017 BUDGET