



AGENDA

November 27, 2018

7:30 p.m.

Packet Page #

- I. Call to Order
- II. Approval of Minutes: October 23, 2018 Meeting
- III. Approval of Payments: November 2018
- IV. Introduction of RBC Bond Issuance
- V. Authority Administration Reports
 - A. Clean Water, Inc. Monthly Report
 - B. ARRO Consulting Monthly Report
 - C. Authority Administrator's Report
 - D. Public Works Department Report
- VI. Open Session
- VII. Next Meeting Dates: December **18**, 2018 7:30 PM
January **15**, 2019 7:30 PM
- VIII. Adjournment

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33
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November 21, 2018
11:00 AM

Upper Uwchlan Township
Check Register By Check Id

Page No: 1

Range of Checking Accts: MA MERIDIAN to MA MERIDIAN Range of Check Ids: 1695 to 1724
Report Type: All Checks Report Format: Super Condensed Check Type: Computer: Y Manual: Y Dir Deposit: Y

Check #	Check Date	Vendor	Amount Paid	Reconciled/Void	Ref Num
1695	11/06/18	CLEANWAT CLEAN WATER, INC.	11,155.00		1882
1696	11/27/18	ALSGROUP ALS GROUP USA, CORP	3,568.10		1898
1697	11/27/18	AQUAP010 AQUA PA	357.03		1898
1698	11/27/18	ARROC010 ARRO CONSULTING, INC.	43,464.86		1898
1699	11/27/18	BUCKL010 BUCKLEY, BRION, MCGUIRE, MORRI	1,143.55		1898
1700	11/27/18	CHRISFRA FRANTZ, CHRISTOPHER	525.00		1898
1701	11/27/18	CLEANWAT CLEAN WATER, INC.	6,355.00		1898
1702	11/27/18	DECKM010 DECKMAN ELECTRIC, INC.	2,214.18		1898
1703	11/27/18	DYNAT010 DYNA TECH INDUSTRIES LTD	5,556.76		1898
1704	11/27/18	EAGLHARD EAGLE HARDWARE	58.06		1898
1705	11/27/18	EDMUN010 EDMUNDS & ASSOCIATES, INC.	7,730.00		1898
1706	11/27/18	ELLENZAC ELLEN ZACCHEO-CAPELL	248.90		1898
1707	11/27/18	HAWEI010 H.A. WEIGAND, INC.	48.00		1898
1708	11/27/18	HOPKINS HOPKINS & SCOTT, INC	9,430.00		1898
1709	11/27/18	INKS0010 INK'S DISPOSAL SERVICE, INC.	1,207.50		1898
1710	11/27/18	LUDWI060 LUDWIG'S CORNER SUPPLY CO.	161.78		1898
1711	11/27/18	MARTI040 MARTIN'S TIRE & ALIGNMENT	402.98		1898
1712	11/27/18	MCGOV020 MCGOVERN ENVIRONMENTAL, LLC	5,458.62		1898
1713	11/27/18	MCI00001 MCI COMM SERVICE	70.00		1898
1714	11/27/18	MGL00010 MGL PRINTING SOLUTIONS	180.75		1898
1715	11/27/18	MJREIDER M. J. REIDER ASSOCIATES, INC.	1,256.50		1898
1716	11/27/18	NAPA0010 NAPA	130.09		1898
1717	11/27/18	PECO0010 PECO	19,221.66		1898
1718	11/27/18	PENNS080 PENNSYLVANIA ONE CALL	149.16		1898
1719	11/27/18	PRED0010 PREDOC	880.00		1898
1720	11/27/18	PROMAX PRO MAX FENCE SYSTEMS	113,633.87		1898
1721	11/27/18	SMALE010 SMALE'S PRINTERY	101.00		1898
1722	11/27/18	UNIVA010 UNIVAR USA INC	2,147.14		1898
1723	11/27/18	VERIZFIO VERIZON	1,060.05		1898
1724	11/27/18	VERIZFIO VERIZON	132.40		1898

Report Totals	<u>Paid</u>	<u>Void</u>	<u>Amount Paid</u>	<u>Amount Void</u>
Checks:	30	0	238,047.94	0.00
Direct Deposit:	0	0	0.00	0.00
Total:	30	0	238,047.94	0.00

Upper Uwchlan Township Municipal Authority

Balance Sheet

As of October 31, 2018

ASSETS

	<u>Cash</u>	
06-100-000-010	General Checking - Fulton Bank	\$ 42,942.68
06-100-000-015	General Checking - Meridian Bank	140,943.38
06-100-000-020	General Checking - WIPP	466,935.14
06-106-000-002	Tap-in Fee Account	313,681.10
	Total Cash	964,502.30

PSDLAF Investments:

06-109-000-003	CD Program	-
06-109-000-004	Full Flex	180.01
		<u>180.01</u>
	Total Investments	180.01

Accounts Receivable

06-145-000-001	Usage Fees Receivable	275,243.20
06-145-000-002	Capital Assessment Receivable	-
06-147-000-000	Misc Accounts Receivable	-
	Total Accounts Receivable	275,243.20

Other Current Assets

06-130-000-001	Due from MA Capital Fund	-
06-130-000-002	Due from UUT General Fund	208.16
06-130-000-003	Due from UUT Capital Fund	-
06-130-000-004	Due from Solid Waste Fund	795.01
06-130-000-005	Due from Stormwater Fund	-
06-130-000-006	Due from Sewer Fund	-
06-152-000-000	Undeposited Funds	-
06-155-000-000	Pre-Paid Expenses	-
06-155-000-010	Pre-Paid Attorney Fees	-
	Total Other Current Assets	1,003.17

Fixed Assets

06-162-000-001	Fixed Assets	1,360,193.65
06-162-000-050	Accumulated Depreciation	(315,301.16)
06-163-000-100	Phase II Construction Project (CIP)	-
	Total Fixed Assets	1,044,892.49

Other Long Term Assets

06-162-000-002	Excess Treatment Capacity	1,649,293.24
	Total Other Long Term Assets	1,649,293.24

Total Assets	\$	3,935,114.41
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Upper Uwchlan Township Municipal Authority
Balance Sheet
As of October 31, 2018

LIABILITIES AND FUND BALANCE

		<u>Current Liabilities</u>	
06-200-000-020	Accounts Payable	-	
06-230-000-010	Due to UUT General Fund	19,518.25	
06-230-000-020	Due to UUT Capital Fund	-	
06-230-000-021	Due to MA Capital Fund	-	
06-230-000-030	Due to Solid Waste Fund	8,090.71	
06-230-000-040	Due to Water Resource Protection Fund	-	
06-230-000-050	Due to Sewer Fund	-	
06-230-000-060	Due to Developer's Escrow Fund	200.00	
06-240-000-000	Accrued Expenses	43,464.86	
06-241-000-100	Retainage on Phase II Construction Project	-	
06-245-000-000	Due to Customers	275.00	
	Total Current Liabilities	<u>71,548.82</u>	
		<u>Equity</u>	
06-272-000-001	Opening Bal Equity	753,500.35	
06-272-000-002	Retained Earnings	2,967,663.79	
	Current Period Net Income (Loss)	142,401.45	
	Total Equity	<u>3,863,565.59</u>	
	 Total Fund Balance	 3,863,565.59	
	Total Liabilities & Fund Balance	\$ 3,935,114.41	

Upper Uwchlan Township Municipal Authority
Statement of Revenues and Expenditures

For the Period Ended October 31, 2018

		Actual 2018 YTD	Budget 2018	% of Budget	Actual 2017 (Audited)	Budget 2017
REVENUES						
06-340-000-000	Interest Income	12,471.11	7,300.00	170.8%	7,811.00	6,500.00
06-365-000-000	Usage Fees Residential	1,656,382.57	2,027,640.00	81.7%	1,924,864.00	1,757,532.00
06-365-000-001	Usage Fees Commercial	65,205.00	101,014.00	64.6%	113,285.00	101,014.00
06-365-000-010	Tapping Fees	31,255.74	2,176,350.00	1.4%	139,413.00	331,063.00
06-370-000-000	Misc revenue	208.16	1,000.00	20.8%	174,949.00	1,000.00
06-395-000-000	Refund of Prior Year Expenditures	1,200.00	-	#DIV/0!	-	-
06-395-000-100	Transfer from Sewer Fund	-	-	#DIV/0!	385,000.00	487,635.00
	TOTAL REVENUES	\$ 1,766,722.58	\$ 4,313,304.00	41.0%	\$ 2,745,322.00	\$ 2,684,744.00

EXPENDITURES						
<u>General:</u>						
06-400-000-001	Administration	172,246.73	234,219.00	73.5%	212,464.00	216,667.00
06-400-000-002	Authority Administrator	102,196.37	120,000.00	85.2%	123,249.00	120,000.00
06-400-000-003	Professional Fees	7,533.74	12,000.00	62.8%	3,001.00	10,000.00
06-400-000-200	Admin Supplies	-	1,000.00	0.0%	10.00	1,000.00
06-400-000-341	Advertising	2,715.76	1,000.00	271.6%	-	1,000.00
06-400-000-352	Insurance - Liability	11,634.52	2,337.00	497.8%	8,133.00	10,000.00
06-400-000-355	Bank Fees	309.44	650.00	47.6%	530.00	-
06-402-000-450	Audit Fees	5,300.00	5,200.00	101.9%	5,050.00	5,000.00
06-404-000-000	Legal Fees	12,067.19	20,800.00	58.0%	19,969.00	20,000.00
06-406-000-100	Utility Billing Costs	8,078.94	18,000.00	0.0%	18,530.00	6,000.00
06-408-000-000	Engineering Fees	335,184.02	150,000.00	223.5%	166,097.00	140,000.00
06-408-000-100	Reimbursable Engineering Fees	-	-	#DIV/0!	-	-
		657,266.71	565,206.00	116.3%	557,033.00	529,667.00

<u>Building Expenses:</u>						
06-409-000-031	Lawn Care	1,194.24	7,500.00	15.9%	11,528.00	7,500.00
06-409-000-032	Telephone	12,425.60	15,000.00	82.8%	13,228.00	15,000.00
06-409-000-035	Insurance	-	9,297.00	0.0%	-	7,500.00
06-409-000-036	Electric	190,996.56	250,000.00	76.4%	204,222.00	320,000.00
06-409-000-037	Water	10,560.32	25,000.00	42.2%	6,366.00	25,000.00
06-409-000-052	Bldg Maint & Repair	1,513.72	8,000.00	18.9%	600.00	7,500.00
06-409-000-260	Building Supplies & Small Tools	259.00	15,000.00	1.7%	1,014.00	6,000.00
06-409-000-427	Waste Disposal	-	-	#DIV/0!	-	-
		216,949.44	329,797.00	65.8%	236,958.00	388,500.00

<u>Operations:</u>						
06-420-000-020	Supplies	12,613.52	20,000.00	63.1%	11,076.00	20,000.00
06-420-000-022	Chemicals	8,532.42	15,450.00	55.2%	7,377.00	15,000.00
06-420-000-023	Propane and Fuel Oil	4,649.20	2,575.00	180.6%	467.00	2,500.00
06-420-000-025	Maintenance & Repair	80,686.24	120,000.00	67.2%	134,712.00	100,000.00
06-420-000-030	Testing	28,534.65	40,000.00	71.3%	35,664.00	40,000.00
06-420-000-031	Pump & Haul	35,834.46	50,000.00	71.7%	59,530.00	40,000.00
06-420-000-032	Vegetation Management	10,925.69	20,000.00	54.6%	16,256.00	15,000.00
06-420-000-035	Permits	3,768.00	5,000.00	75.4%	2,967.00	5,000.00
06-420-000-042	Dues and Memberships	2,100.00	2,500.00	84.0%	2,100.00	2,500.00
06-420-000-045	Contracted Services	89,561.40	135,000.00	66.3%	119,358.00	120,000.00
06-420-000-048	Misc expenses	43,910.00	5,000.00	878.2%	-	5,000.00
06-420-000-235	Vehicle Maintenance	-	2,000.00	0.0%	-	-
06-420-000-329	PA One Call	1,302.13	2,500.00	52.1%	-	2,500.00
		322,417.71	420,025.00	76.8%	389,507.00	367,500.00

Upper Uwchlan Township Municipal Authority
Statement of Revenues and Expenditures

For the Period Ended October 31, 2018
(Continued)

		Actual 2018 YTD	Budget 2018	% of Budget	Actual 2017 (Audited)	Budget 2017
	<u>Capital:</u>					
06-483-000-000	Capital Repair	63,348.06	30,000.00	211.2%	2,497.00	30,000.00
06-493-000-083	Depreciation		36,000.00	0.0%	56,406.00	36,000.00
		63,348.06	66,000.00	96.0%	58,903.00	66,000.00
Total Expenditures before Operations Agreement and Transf		\$ 1,259,981.92	\$ 1,381,028.00	91.2%	\$ 1,242,401.00	\$ 1,351,667.00
Net Income before Operations Agreement and Transfers		\$ 506,740.66	\$ 2,932,276.00	17.3%	1,502,921.00	1,333,077.00
	<u>Other:</u>					
06-471-000-010	Operations Agreement Fee to UUT	364,339.21	364,463.00	100.0%	364,562.00	364,563.00
	Operations Agreement Fee to UUT-new debt		50,000.00		-	-
		364,339.21	414,463.00	87.9%	364,562.00	364,563.00
06-492-000-010	Transfer to Sewer Fund	-	-	#DIV/0!	-	-
06-492-000-020	Transfer to Water Resource Protection Fu	-	-	#DIV/0!	-	-
06-492-000-030	Transfer to UUT Capital Fund	-	-	#DIV/0!	-	-
		-	-	#DIV/0!	-	-
TOTAL EXPENDITURES		\$ 1,624,321.13	\$ 1,795,491.00	90.5%	\$ 1,606,963.00	\$ 1,716,230.00
OPERATING INCOME		\$ 142,401.45	\$ 2,517,813.00	5.7%	\$ 1,138,359.00	\$ 968,514.00

Clean Water, Inc.

170 Dallas St.
Box 475
Argyle, Pa. 19310

Phone 610-593-5710
Fax 610-593-6311

November 18, 2018

Upper Uwchlan Township Municipal Authority
140 Pottstown Pike
Chester Springs, PA 19425

RE: Report for the November meeting.

Dear Authority,

Enclosed you will find copies of the monthly reports that were submitted to the DEP on your behalf. The reports are for September. Information items are current

Route 100

We continue to spray as able. The weather has created some delays with the final cut and harvest at some fields. I am hopeful we will be able to get these done. The dilemma is shut down for cutting or continue disposal as the weather has allowed. I have been opting for continued spray.

Eaglepoint

Plant is running well. I have sent Arro a series of charts and graphs showing the various loading issues. Flows are now at around 10,000 gpd since epicureans is now opened. Jay Jackson and I met there and wanted to make sure they are cleaning their grease trap. They are, however in my opinion these small traps located inside are not that effective. The temperature required to disinfect the dishes leaving the washer is too high so grease stays suspended. Grease will not separate and rise till it is cool. Liberty also uses this type of trap.

St. Andrews Brae

Plant continues to run well. There were no operational issues to report.

Marsh Harbour

The plant is running fine. Spray has continued. This is one of the sites I am hopeful for a final cut.

Clean Water, Inc. Wastewater Treatment Specialists

Saybrooke

Plant continues to operate well. McGovern removed sludge.

Lakeridge

Plant is running fine. Brian Owens continues to clean and paint the inside of the building. Looks great! Predoc was out to repair a small break in one of the trenches mentioned last month.

Greenridge

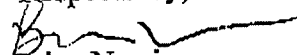
Drip has continued.

Additional Information

All of the generators have been serviced by Dynatech. W G Malden will be calibrating all flow meters soon.

That is all for now, please call with any questions.

Respectfully,



Brian Norris

Clean Water, Inc. Wastewater Treatment Specialists

RECEIVED

NOV 19 2018

UPPER UWCHLAN TWP



350 West Main Street
Suite 200
Trappe, PA 19426
T 610.495.0303
F 610.495.5855

MEMORANDUM

TO: Upper Uwchlan Township Municipal Authority

FROM: G. Matthew Brown, P.E., DEE

RE: Project Status Report

PROJECT NO.: 17000.00

DATE: November 20, 2018

The following is the status of current wastewater projects within the Township:

Byers Station

Village at Byers Station (5C), Lot #1 Townhouse Parcel: At Byers Station Lot 5C ARRO is providing assistance to Toll with regards to capacity needs in determining sanitary sewer flow estimation for various potential building uses. ARRO is reviewing the Village at Byers Station (5C) sanitary sewer system package prepared by Bohler Engineering for Executive Land Holdings, LP. ARRO will be submitting review comments to the Township. ARRO completed its review of the Village at Byers Station (5C) sanitary sewer system package and submitted review comments to the Township. Revised Village at Byers Station (5C) sanitary sewer plans, dated September 12, 2016, was submitted to ARRO for review. ARRO completed its review of the plans and will issue a review comments letter to the Township by September 23, 2016. ARRO reviewed a Sewage Facilities Planning Module exemption package for The Village at Byers Station (5C). The package was signed and returned to the Township for forwarding to the Developer's engineer who will submit the package to PADEP. ARRO reviewed the full Village at Byers Station (5C) Planning Module package and returned it to the Township. The Township forwarded Components 4B and 4C to the Chester County Board of Health and Chester County Planning Commission for completion. ARRO issued a May 5, 2017 review letter to the Township with comments to the March 17, 2017 Subdivision and Amended Final PRD Plans for the Parcel 5C project. PADEP issued a June 9, 2017 Administrative Incompleteness review letter listing three items missing from the Sewage Facilities Planning Module submission. ARRO is assisting the Developer with responses to PADEP comments. PADEP issued a July 7, 2017 Administrative Incompleteness review letter for the Parcel 5C project listing one item regarding the sanitary sewer capacity. ARRO is assisting the Developer with a response to the PADEP comment. PADEP issued an August 3, 2017 letter approving the Official Plan revision for the 121 townhouses on Parcel 5C. ARRO reviewed the latest revision to the Land Development drawings and transmitted comments to Toll's engineer regarding showing the force main piping within the Station Boulevard sanitary easement. The Village at Byers Station (Parcel 5C) pre-construction meeting was held on October 18, 2017. Construction is expected to start within three weeks. The Village at Byers Station (Parcel 5C) site contractor, by email dated November 14, 2017, started submitting its sanitary sewer shop drawing submittals. ARRO reviewed and commented on the submittals. Brubacher Excavating started sanitary sewer installation work on January 4, 2018. The Village of Byers Station (5C) sanitary sewer installation work

continues through February 2018, approximately 40% of the sewer mains and laterals have been installed. Sanitary sewer installation work continues through March 2018. As of mid-April 2018 all sanitary sewer mains and laterals have been installed and air tested, while 75 percent of the sewer mains have also passed deflection testing. As of mid-May 2018 all sanitary sewer mains have passed pressure and deflection testing and only manhole vacuum testing remains to be done after base paving is completed. Vacuum testing of each sanitary sewer manhole on the site was completed on July 11, 2018. ARRO approved escrow release No. 1 in the amount of \$302,330.01 by letter dated September 6, 2018. Installation of the gravity house service line to each new townhouse began on September 13, 2018.

Installation of the gravity house service line to each new townhouse is continuing.

ARRO reviewed the sanitary sewer videos submitted by Toll Brothers on October 19, 2018. The pipe is in good condition with only minor debris in a few runs that need to be flushed and cleaned. ARRO emailed Toll Brothers on November 2, 2018 with a list of the runs that needed cleaned.

Village at Byers Station (5C), Lot #2 Commercial Parcel: ARRO reviewed the Village of Byers Station (5C) – Lot #2 Commercial Parcel's Sewage Facilities Planning Module (SFPM) package. The Developer's engineer submitted a 9,025 gpd sanitary sewer capacity request at the Route 100 WWTP facility. ARRO reviewed the Amended Final PRD Plans submitted by Bohler Engineering and prepared a February 27, 2018 letter to the Township with comments to the Plans. Sewage Facilities Planning Modules were sent to PADEP on April 18, 2018. ARRO reviewed Amended Final PRD Plans, last revised May 7, 2018, and submitted a May 30, 2018 letter to the Township containing comments to the Plans. Additional revised Plans were submitted on July 12, 2018 and are currently under review. The PADEP SFPM approval letter, dated June 27, 2018, was received by the Township. Vacuum testing of each sanitary sewer manhole on the site was completed on July 11, 2018. By email dated July 4, 2018, ARRO requested of Toll Brothers that they submit an agreement document between Toll and BPG Partners, Ltd. stipulating that after BPG has the binder course paving completed each manhole will again be vacuum tested and BPG will repair any manhole that fails its vacuum re-test. ARRO submitted a July 19, 2018 sanitary sewer comments letter to the Township regarding the additional revised Plans submitted by Bohler Engineering on July 12, 2018. Toll Brothers submitted a July 30, 2018 letter acknowledging it will be responsible to ensure that the sanitary manholes in 5C Commercial will be tested after construction of the commercial portion of the subdivision. Toll requests the Authority require the testing to be a component of the financial security agreement as it relates to the commercial site work. ARRO prepared an August 31, 2018 letter to the Township with comments to the latest Final PRD Plans, last revised August 30, 2018. Eight buildings with various uses are proposed with a sewer capacity of 9,025 gallons per day.

Nothing new to report.

Byers Station (6C), Vantage Point–Chester Springs: The Developer's engineer submitted a request for 43 EDUs (9,500 gpd) of sanitary sewer capacity at the Route 100 WWTP facility. The Authority Administrator sent a February 20, 2018 letter to D. L. Howell stating there is sufficient capacity at the Route 100 WWTP facility for the proposed 9500 gpd from the project. ARRO reviewed the project's Sewage Facilities Planning Module (SFPM). The module shows a request for 45 EDUs (10,000 gpd) of sanitary sewer capacity. SFPM Component 3 Section G and J were signed. The Pennsylvania Historical and Museum Commission clearance letter and Aqua water service letter have been received for the Sewage Facilities Planning Module (SFPM). On April 18, 2018, the Township forwarded SFPM Components 4B and 4C to the Chester County Planning Commission and Health Department. ARRO reviewed Land Development Plans, plotted April 6, 2018, and submitted an April 30, 2018 letter to the Township containing comments to the Plans. The SFPM is complete and a resolution to

accept the document was placed on the Board of Supervisors' August 20, 2018 agenda. The SFPM application package was submitted to PADEP. ARRO prepared a September 6, 2018 sanitary sewer review letter to the latest Land Development Plans submitted by D.L. Howell, last revised August 13, 2018.

Nothing new to report.

Eagle Hunt

ARRO has started preparing contract documents for recommended repairs to the Eagle Hunt effluent storage tank as contained in the August 2016 tank inspection report. ARRO conducted a site visit with Dutchland to review and discuss proposed tank repairs. ARRO is in the process of generating contract drawings and specifications for the proposed tank repairs. ARRO is completing Effluent Storage Tank Repair bid documents for bidding by the end of October 2018.

ARRO completed the Effluent Storage Tank Repair bid documents. The project will be put out to bid the week of November 26, 2018.

Eaglepointe

Wastewater Treatment Plant and Sanitary Sewer System: ARRO prepared plans and specifications for a new chain-link fencing around the wastewater treatment plant. Bids for new fencing at the Eaglepointe WWTP were received on June 22, 2018. ARRO prepared a June 25, 2018 recommendation to award letter to the Township. A notice to proceed has been issued to ProMax Fencing and ARRO is waiting for ProMax to submit its contract documents. The fencing pre-construction meeting was held on August 3, 2018. Chain-link privacy fencing installation work is to begin after the completion of fencing at the Lakeridge WWTP. Trees and brush have been removed and the chain-link fence and gate were installed as of October 12, 2018.

Eaglepointe sanitary sewer easement survey was authorized to proceed on December 15, 2017. The surveyor will prepare plot plans and legal descriptions for all easements encompassing gravity sanitary sewer at the subdivision. ARRO received and returned comments to the surveyor's preliminary easement plans on April 23, 2018.

ARRO is working on a plan for the decommissioning of the Eaglepointe WWTP.

Chain-link fencing installation work is complete. Project closeout paperwork is in progress.

On November 7, 2018, ARRO received and reviewed the final plot plans and legal descriptions for all the easements encompassing the gravity sewer. The plans and description have been found to be acceptable.

ARRO continues working on a plan for the decommissioning of the Eaglepointe WWTP.

CarSense: ARRO received a telephone call from CarSense's engineer regarding a request to include additional flow to the sanitary sewer system from a proposed carwash facility. ARRO is awaiting a formal written request of the proposal. ARRO received a written request from CarSense's engineer to introduce additional flow from a proposed carwash facility into the Eaglepointe sanitary sewer system. ARRO responded that the estimated 2,208 gallon flow from CarSense would be acceptable provided an oil/water separator and a sampling facility be installed. CarSense's engineer expects to have sewer plans and planning module application materials for submission to the Township within two weeks. ARRO reviewed the CarSense sewer plans and planning module application materials and transmitted comments to each to CarSense's engineer by letter dated September 20, 2017. ARRO reviewed the CarSense engineer's latest revised sewer plans. ARRO prepared a November 28, 2017 letter accepting the latest revised sewer plans. CarSense has secured a general contractor for the sanitary

sewer work. ARRO is assisting the contractor regarding the contractor's submission of shop drawings for the project. ARRO reviewed and approved the sanitary sewer shop drawings. The project preconstruction meeting was held on April 10, 2018. Onsite sanitary sewer installation began in mid-April 2018. Onsite sanitary sewer installation is complete and tested. Wastewater flow from CarSense to the Eaglepointe WWTP started June 1, 2018.

Clean Water had a July 25, 2018 sample of CarSense effluent analyzed. Some individual chemistry substances exceeded the Non-Residential Waste Resolution limits. The Authority Administrator, Clean Water and ARRO will meet with CarSense on August 28, 2018 to discuss ways to lower the substances exceedances.

Nothing new to report.

Liberty Union Bar & Grille: Liberty Union effluent was tested and BOD, fat & oil and nitrogen results were found to be higher than the Non-Residential Waste Discharge (NRWD) resolution limits. A November 13, 2017 letter was sent to Liberty Union advising them of their discharge overages and the need to meet with the Authority Administrator, Clean Water and ARRO to discuss how Liberty Union could lower the three elevated discharges. The meeting will take place on November 30, 2017. The Authority Administrator, Clean Water and ARRO met with Liberty Union on November 30, 2017 to discuss how to lower the three elevated discharges. Liberty Union stated they will institute existing grease trap cleaning reforms and update their dish cleaning policy. Clean Water will take additional samples periodically to check the reforms. Clean Water conducted a grab sampling of Liberty Union discharges on January 31, 2018. Sampling test results for Phosphorus, BOD and Oil/Grease continue to be above the Authority's NRWD resolution limits. ARRO had a telephone discussion with Liberty Union on February 23, 2018 about high sampling results. Liberty Union requested a third sampling as a composite sample like the first sampling. The Authority Administrator authorized Clean Water to set up the new composite sampling, which was done over February 19 and 20. A lab error occurred with the sample collected on March 29, 2018. The lab scheduled another sampler collection for April 5 into April 6, 2018. ARRO has not received the latest sampling test results. ARRO transmitted the April 6, 2018 test results to Liberty Union. ARRO is preparing comments to Liberty Union questions on the test results. ARRO prepared comments to Liberty Union questions on the test results. Ten random grab samples for analysis will be taken from the Liberty Union pump station wetwell. Two grab samples have been analyzed and BOD exceeds 1000 mg/L in both samples. The results of two grab samples (collected September 25 and 27) were received and the BOD is below 500 mg/L in both.

The results of seven grab samples collected between September 5 and October 10, 2018 all had BOD above the NRWD maximum 250 mg/L threshold, the highest result was 1,700 mg/L.

Dilibero - Go-Wireless, Eagle Car Wash and Enterprise Rent-A-Car Sanitary Sewer Connection: ARRO is conducting an evaluation of the wastewater treatment capacity and feasibility for connecting these three businesses to the Eaglepointe WWTP sanitary sewer system. ARRO completed the evaluation, including a piping layout and cost estimate, and it is now under internal review. ARRO transmitted its sanitary sewer evaluation to Dilibero on April 20, 2018. ARRO has been responding to sanitary sewer related questions from Dilibero's sewer contractor.

Nothing new to report.

Ewing Tract

Toll Brothers and Lennar started installing house service lines to new homes in Ewing Tract – West Vincent Township February 2016. ARRO is observing installation and testing of the house service lines. All sanitary sewer house service lines at Toll Brothers' Ewing Tract - West

Vincent Carriage Home South subdivision are complete and tested as of June 22, 2017. Toll Brothers submitted to ARRO for review the preliminary maintenance bond amounts for the Ewing Tract – West Vincent Phase 1/2A, Ewing Tract – West Vincent Phase 2A, and Ewing Tract - West Vincent Phase 2 – Carriage Home South projects. ARRO prepared a February 22, 2018 letter to the Township approving the maintenance bond amounts submitted by Toll Brothers for the Ewing Tract – West Vincent Phase 1/2A, Ewing Tract – West Vincent Phase 2A, and Ewing Tract - West Vincent Phase 2 – Carriage Home South projects. The Authority Administrator prepared and sent a March 16, 2018 letter to the Home Owners Associations at Byers Station, Ewing-WVT and Reserve at Eagle warning residents not to ice skate on the frozen water surface of each effluent storage lagoon. ARRO prepared a June 13, 2018 memo to the Authority Administrator with findings regarding proposed residential recreational trails near existing Ewing Tract – West Vincent spray field sites. On June 20, 2018 ARRO requested Toll Brothers submit Descriptions of Property for all Ewing Tract – West Vincent sanitary sewer easements, spray fields and the spray pump station and lagoon. Toll Brothers submitted easement documents by email on July 9, 2018. ARRO reviewed the documents and sent Toll Brothers comments to the documents by email dated July 13, 2018. Descriptions of Property for all Ewing Tract – West Vincent sanitary sewer easements, spray fields and the spray pump station and lagoon were submitted by Toll Brothers and reviewed by ARRO. ARRO sent an August 23, 2018 email to Toll that all descriptions are acceptable.

Toll Brothers and Lennar are continuing to install house service lines to new homes in Ewing Tract – West Vincent Township with ARRO observing the completed installations and the testing of the house service lines. ARRO testing reports are being sent to West Vincent Township's engineer, Cedarville Engineering Group, LLC.

ARRO had its surveyor prepare plans and legal descriptions for the paved walking trail easements through Ewing Tract – West Vincent Spray Fields #2, #3 and #5. The plans and descriptions were transmitted to Toll Brothers on October 23, 2018.

On November 13, 2018 Toll Brothers submitted the Maintenance Security Agreement and Maintenance Bond for Ewing Tract – West Vincent Phase 2A Sanitary Sewer Improvements. ARRO reviewed the documents and sent comments to Toll Brothers on November 14, 2018.

Toll Brothers started construction of the Sunderland Avenue East roadway connecting Eagle Farms Road to Rainer Road in Ewing Tract – West Vincent. On November 8, 2018 ARRO made a request to Toll Brothers to install the 3" PVC Spray Distribution force main beneath the roadway as shown on the original land development plans.

Fetter Farm Tract (McKee)

ARRO received a request from a developer engineer for information on available treatment capacity to serve the Tract and met with the Township Manager and developer engineer on September 18, 2012, to discuss treatment capacity and conveyance to the Route 100 WWTP. On August 5, 2014 a meeting with held at the Township Building with The McKee Group to discuss the active adult community proposed by the Developer for the property. A subsequent meeting was held at the Township Building on August 14, 2014 with the Township, Developer and Authority Administrator to discuss sewage flows and disposal. ARRO reviewed a Conditional Use Plan for Fetter's Property prepared for McKee-Millford Associates, LP, dated October 12, 2016. ARRO prepared a review letter to the Township, dated November 8, 2016. The Developer is proposing 375 Housing Units, which will produce 62,675 gallons per day of sanitary sewer flow. The Developer is proposing participation in upgrades to the Route 100 Regional WWTP facility that will trigger the Phase 3 expansion of the WWTP. A review of the capacity within the downstream collection and conveyance system is required to determine the extent of improvements necessary to accept the proposed sewage flow. Preliminary Subdivision/Land Development Plans were submitted to ARRO and are currently under review. The Plans call for 375 mixed Single Family, Twin and Triple units and a Community Center to

be built in the subdivision. The subdivision will connect to the Reserve at Eagle by way of Prescott Drive and to the Reserve at Chester Springs by way of Radek Court. The sanitary sewer disposal requirements are calculated to be 62,675 gpd. On-site drip disposal capacity is calculated to be 42,643 gpd, and the off-site sewage disposal requirement is 20,032 gpd. The combination gravity and low pressure sanitary sewer systems will be directed to the Reserve at Eagle Pump Station No. 1 off Prescott Drive. Preliminary Subdivision/Land Development Plans were submitted and reviewed by ARRO. ARRO comments were submitted in an April 10, 2017 letter to the Township. ARRO is in the process of reviewing the June 15, 2017 resubmission of the Preliminary Subdivision/Land Development Application. ARRO reviewed the June 15, 2017 resubmission of the Preliminary Subdivision/Land Development Plan and submitted comments to the plan in a July 10, 2017 letter to the Township. ARRO also reviewed the subdivision's low pressure sewer system design calculations and submitted comments to the design in a July 12, 2017 letter to the Township. ARRO reviewed an August 1, 2017 revision to the low pressure sewer system design calculations and drawings and submitted an August 16, 2017 letter to the Township with comments to the revision materials. ARRO has started an evaluation of the Reserve at Eagle Pump Station No. 1 to ascertain its capability to accept the Fetter Tract design sanitary sewer disposal requirements. ARRO received revised Preliminary Subdivision/Land Development Plans on September 14, 2017. ARRO reviewed the Plans and sent an October 3, 2017 review comments letter to the Township. ARRO continues an evaluation of the Reserve at Eagle Pump Station No. 1 to ascertain its capability to accept the Fetter Tract design sanitary sewer disposal requirements. The evaluation is substantially complete with the exception of emergency generator assessment. ARRO continues an evaluation of Upland Farms drip disposal to ascertain the facility's capability to store and dispose the Fetter Tract effluent. ARRO reviewed the Sewage Facilities Planning Module (SFPM) and is working on the sanitary sewer review. The Authority Administrator signed the SFPM Component 3 Sections G and J. The Board of Supervisors approved the SFPM resolution at the April 16, 2018 meeting. The developer's engineer stated in an April 17 email to the Authority Administrator that the SFMP is close to being submitted to PADEP for review. The Sewage Facilities Planning Module was sent to PADEP on April 18, 2018. Ebert Engineering requested Authority assistance in preparation of a response to comments received from PADEP on the Sewage Facilities Planning Module. ARRO is working on a response.

ARRO assisted Ebert Engineering in preparation of letter responses to comments received from PADEP to the Sewage Facilities Planning Module. ARRO transmitted its responses to Ebert Engineering on November 1, 2018.

Frame Property (Reserve at Chester Springs)

ARRO reviewed the sanitary sewer portion of the latest Final Subdivision/Land Development Plan and sent a January 14, 2016 letter to the Township stating all previous comments were addressed and recommending approval of the Plan. PADEP sent a March 18, 2016 letter to the Township with the approval of the Official Plan revision for the 61-unit Frame Property. ARRO reviewed the sanitary sewer escrow quantities prepared by Toll Brothers for Frame Property and found it acceptable. ARRO prepared a May 11, 2016 recommendation letter that was sent to the Township. Toll Brothers informed ARRO that they were hoping to settle on the property shortly and start construction in July. ARRO is preparing the Little Conestoga Road HOP for Toll. ARRO prepared and submitted to PennDOT the Little Conestoga Road HOP for Toll Brothers. Toll said PennDOT must issue the HOP before settlement on the property can take place. The pre-construction meeting for the Reserve at Chester Springs (Frame Property) subdivision was held on August 4, 2016. ARRO reviewed shop drawings of sanitary sewer items. The site work is underway. ARRO has been informed by the contractor that sanitary sewer installation is expected to start at the beginning of October 2016. ARRO was informed by Toll Brothers that the sanitary sewer installation will start on Monday, October 24, 2016. Sanitary sewer installation started in Little Conestoga Road on Monday, October 24, 2016 with

the tie-in to a manhole immediately upstream of the Little Conestoga Pump Station. Sewer installation in Little Conestoga Road is complete and is now proceeding within the subdivision. ARRO reviewed Toll Brothers' Reserve at Chester Springs Escrow Release #2 request and prepared a recommendation letter to release \$135,160.56. All sanitary sewer piping is installed and testing is underway. The first house service line is being installed the week of February 13, 2017. ARRO is working with Toll Brothers to obtain an easement within the subdivision for ARRO –designed sanitary sewer to serve three (3) Phase II Collection System properties. ARRO is having survey completed of the easement and for design of sewer for the three properties. The easement survey was completed and the Authority solicitor is preparing a Deed of Dedication for Sewer Easement. ARRO reviewed Toll Brothers' Reserve at Chester Springs Escrow Release #3 request and prepared a recommendation letter to release \$91,727.23. The Authority solicitor prepared a Deed of Dedication for the sewer easement to connect Phase II Collection System properties to the Reserve at Chester Springs. The Deed was transmitted to Toll Brothers for review. ARRO prepared a change order to the contractor, MG Property Management, to install 6-inch sanitary sewer and a manhole within the Reserve at Chester Springs Tot Lot for the future connection of Phase II Collection System properties. All sanitary sewer pipe testing is complete and manhole testing is underway. All sanitary sewer manhole testing is complete. MG Property Management installed the 6-inch sanitary sewer and a manhole within the Reserve at Chester Springs Tot Lot for the future connection of Phase II Collection System properties, but cannot complete its work until the Developer's contractor restores an open utility trench near the work area. ARRO prepared closeout documents for the MG Property Management project. MG Property Management completed its sanitary sewer work within the Tot Lot and will submit closeout documents for the project during the week of August 20, 2017.

Installation of the gravity house service line to each new home is continuing.

Greenridge

On August 1, 2017 a meeting with the Developer was held at the Township to discuss the sanitary sewer options for the redevelopment of the former Upattinas School parcel (Open Community Adaptive Reuse Development). ARRO is reviewing a revised Section H of the Sewage Facilities Planning Module submitted by the Developer on August 8, 2017. ARRO reviewed a revised Sewage Facilities Planning Module Section H submitted by the Open Community Developer. The Sewage Facilities Planning Module (SFPM) now includes the revised Section H, and the Component 4 submissions have been forwarded to Chester County's Planning Commission and Heath Department. ARRO conducted a site visit to a property which utilizes an Ecoflow unit similar to that proposed for on-site wastewater pre-treatment at the Open Community project. Chester County Planning Commission and Heath Department returned the Open Community Components 4A, 4B and 4C. Component 3 Sections G and J were completed. The Township authorized sending the SFPM package to PADEP for review. The Authority Administrator prepared a March 14, 2018 letter to Warwick Land Development stating the Authority continues to lack sufficient information from Warwick before the Authority could agree to operate the pretreatment facility proposed for the Open Community Adaptive Reuse Development.

ARRO met with the 403 Greenridge Road property owner and his contractor on April 30, 2018 regarding the proposed installation of a sanitary sewer grinder pump to connect to the Stonehedge force main that runs to the Greenridge WWTP sanitary sewer system. ARRO reviewed the 403 Greenridge Road Public Sewer Connection Plan prepared by Evans Mill Environmental for a sanitary sewer grinder pump to connect to the Stonehedge force main. The Plan was approved on June 20, 2018.

ARRO is working on a capacity analysis of the wastewater treatment plant.

On behalf of the Open Community Developer, on November 13, 2018 Boucher & James submitted sewer connection plans for review. ARRO is in the process of reviewing the plans and will issue comments in a separate letter.

Jankowski

The Preliminary Plan/Conditional Use Application was submitted to the Township and ARRO provided comments on the sanitary sewer system. ARRO met with The Cutler Group on December 10, 2008 to discuss ARRO's Preliminary Plan/Conditional Use Application review comments. The Cutler Group advised that it was able to locate suitable soils to provide sufficient disposal capacity for both its development needs and the Township's required disposal capacity. ARRO reviewed the soils report and issued a letter to the Township agreeing that sufficient capacity appears to exist, although actual capacity will need to be verified through an as-built survey. ARRO provided comments on a draft preliminary subdivision plan addressing the Township Engineer's June 2008 review letter. The Cutler Group subsequently requested an informal review of the revised plans and ARRO provided unofficial comments so that The Cutler Group may further refine the draft preliminary plan in anticipation of its official submission to the Township. ARRO studied the feasibility of connecting the 60 Jankowski homes to the Saybrooke WWTP system. ARRO found that the Saybrooke WWTP does not have the capacity to treat the additional 14,000 gpd and Pump Station No. 2 does not have sufficient capacity. Also, the land parcel does not have sufficient footprint to support an upgrade to the WWTP. ARRO studied expanding the Saybrooke seepage beds and adding drip facilities. ARRO intends to review PADEP records regarding original Saybrooke seepage bed and soil design parameters. On July 22, 2014, ARRO reviewed PADEP records regarding the original Saybrooke seepage bed and soil design parameters, which confirmed ARRO's initial assumptions, and it appears that all effluent can be disposed on the existing lot if four absorption beds and a drip irrigation system are utilized. ARRO is creating an opinion of probable construction cost for expanding the absorption beds. ARRO has prepared its initial opinion of probable construction cost for expanding the absorption beds. ARRO was in the process of creating an opinion of probable construction cost for the drip irrigation system, but can't obtain final design parameters from PADEP unless onsite soil testing is done to determine soil percolation rates. ARRO issued a May 5, 2017 review letter to the Township with comments to the September 13, 2016 Conditional Use Plan for the Jankowski Tract. On February 2, 2018, the Developer's engineer submitted for review subdivision plans of a 55 Single Family Housing unit community. ARRO is working on a review of the sanitary sewer portion of the subdivision plans. ARRO completed its review of the Preliminary/Final Subdivision-Land Development Plan submitted by E. B. Walsh and prepared a February 26, 2018 letter to the Township with comments to the Plans. ARRO responded to Toll Brothers regarding the Windsor Ridge Pump Station capacity to receive Jankowski estimated sanitary flow. ARRO reviewed the Preliminary/Final Subdivision-Land Development Plan, last revised May 18, 2018, and prepared June 11, 2018 comments to the Township. Sewage Facilities Planning Module Components 4A, 4B and 4C were received. Presently the project is in the 30-day Public Notice periods, which upon completion the Township can submit the components to PADEP. The Authority Administrator sent an August 14, 2018 letter to Chester County Health Department (CCHD) regarding CCHD's Component 4C comment about malfunctions along Surrey Lane, Font Road and Carriage Drive. The Administrator stated the Authority will be evaluating future extensions in these areas. Subsequently, ARRO conducted a small conceptual planning study to sewer these areas. ARRO presented three sewer extension options and cost opinions to the Authority Administrator for review and comment. The first gravity and low pressure sewer concept sends all flow through the Jankowski tract, the second all gravity sewer concept sends some flow through Jankowski and the remainder to Reserve at Eagle, while the third all gravity sewer concept sends all flow to the Reserve at Eagle. ARRO is reviewing the latest Preliminary/Final Subdivision-Land Development Plan transmitted by E.B.

Walsh letter, dated August 10, 2018. SFPM Components 4A, 4B and 4C were received, but the bog turtle clearance letter from PA Fish & Wildlife is still outstanding. The UUT Board of Supervisors authorized the resolution needed for the Sewage Facilities Planning Module at their October 15, 2018 meeting but are holding it until the clearance letter is issued. ARRO prepared an August 30, 2018 sanitary sewer review letter to the latest Preliminary/Final Subdivision-Land Development Plan transmitted by E.B. Walsh letter, dated August 10, 2018.

Nothing new to report.

Lakeridge

ARRO has prepared plans and specifications for fencing around the WWTP's sand mounds. Bids for new fencing around the Lakeridge WWTP disposal fields were received on June 22, 2018. ARRO prepared a June 25, 2018 recommendation to award letter to the Township. A notice to proceed has been issued to ProMax Fencing and ARRO is waiting for ProMax to submit its contract drawings. The fencing pre-construction meeting was held on August 3, 2018. Submittals for vinyl fencing were approved and ordered. Fencing installation work is to begin on August 27, 2018.

ARRO is preparing plans and specifications for construction of a sludge tank exterior to the WWTP Control Building. ARRO conducted an inspection of the Lakeridge WWTP Control Building in order to prepare maintenance and repair items for inclusion in the sludge tank construction contract. ARRO is continuing to prepare the sludge tank and building repairs plans and specifications. ARRO has both the sludge tank plans and specifications and the PADEP Part 2 permit application approximately 80 percent complete. ARRO has completed the sludge tank plans and specifications. The Part 2 permit application is expected to be submitted to PADEP by the end of May 2018. Changes to sludge tank design plans were necessary due to updated Columbia Gas easement information. ARRO submitted the Part 2 permit application to PADEP on July 17, 2018. PADEP sent an August 14, 2018 Water Quality Management permit for the sludge tank project. The bidding phase of the work is now in progress. The Sludge Tank Relocation project was put out to bid on September 4, 2018. A pre-bid meeting for the project is scheduled for September 20, 2018. Bids are due October 18, 2018. ARRO plans to have a bid award recommendation prepared for the October 23, 2018 Authority meeting.

ARRO prepared and sent to Clean Water on June 12, 2018 the 5-Year Groundwater Monitoring Geotechnical Comprehensive Report for inclusion in Clean Water's Lakeridge WWTP WQM permit renewal package submission to PADEP.

Bids for the Sludge Tank Relocation project were received on October 18, 2018 and reviewed by ARRO. ARRO recommended award of the General Contract to Blooming Glen Contractors and the Electrical Contract to Eastern Environmental Contractors. Agreements were delivered to the Township on November 19, 2018 for execution by the Authority at its November Board meeting.

Fencing installation work around the disposal beds is complete. Project closeout paperwork is in progress.

Marsh Harbour

ARRO prepared plans and specifications for miscellaneous repairs to the Marsh Harbour WWTP control building.

ARRO is continuing its evaluation of the Marsh Harbour WWTP access road and its stormwater requirements. ARRO completed its evaluation of the access road and stormwater requirements and submitted the evaluation to the Authority Administrator. ARRO has completed specifications and an opinion of probable cost for the wastewater treatment plant's Control Building exterior repairs and the project is ready to be put out to bid.

A proposal of \$16,840 was received from Pikeland Construction for replacing the Control Building roofing, soffit, fascia, gutters and siding, and also repairing a deteriorated Chlorine Room exterior door frame.

Reserve at Eagle

ARRO prepared plans and specifications for lagoon and spray field fencing. Bids for new fencing at the Reserve at Eagle storage lagoon were received on June 22, 2018. ARRO prepared a June 25, 2018 recommendation to award letter to the Township. A notice to proceed has been issued to ProMax Fencing and ARRO is waiting for ProMax to submit its contract drawings. The fencing pre-construction meeting was held on August 3, 2018. Submittals for vinyl fencing were approved and ordered. Fencing installation work is 30% complete.

Fencing installation work is complete. Project closeout paperwork is in progress.

Route 100 WWTP

ARRO conducted a study to search for new disposal sites within and near the Township. Mapping was developed for the study and ARRO conducted a preliminary assessment of a potential stream discharge for the WWTP. ARRO presented its findings regarding potential disposal sites at the December 2016 Board meeting. ARRO has prepared a draft of the Route 100 Regional WWTP disposal fields study for the potential to rerate the fields for additional capacity. ARRO engaged a sub-consultant to review the existing disposal field design records, the Route 100 WWTP SBR discharge limits and ARRO study findings. ARRO received the sub-consultant's report and is reviewing the findings. ARRO prepared a revised Route 100 Regional WWTP allocated treatment and disposal capacity summary. Based on an ARRO search and mapping study conducted in late 2016 for new disposal sites within and near the Township ARRO is evaluating a parcel on South Chester Springs Road to propose how the land could be subdivided and will be preparing an estimate of disposal capacity that would be available in the subdivided areas. ARRO evaluated a parcel on South Chester Springs Road to propose how the land could be subdivided and prepared an estimate of disposal capacity that would be available in the subdivided areas. ARRO found two potential 18-acre drip field areas on the parcel each with an average estimated capacity of 100,000 gallons per day.

ARRO prepared a draft of the Route 100 Regional WWTP aerated lagoon nutrient removal study for the potential of rerating of the lagoon to obtain an additional 100,000 gallons of capacity. The draft is under internal review prior to submission to the Authority.

ARRO continues updating the Route 100 Regional wastewater system treatment facility manual and the manuals for the other treatment facilities in the Township.

ARRO prepared the DRBC permit renewal application. ARRO submitted the DRBC permit renewal application on August 3, 2017. ARRO received a March 12, 2018 email from DRBC stating the Route 100 WWTP renewal Docket should be presented and acted upon at the next Commission hearing. ARRO received and responded to a DRBC March 30, 2018 email question. DRBC stated the draft Docket is being prepared. On May 1, 2018, ARRO received a draft of the DRBC Docket. On June 14, 2018, ARRO received the DRBC renewal Docket for the Route 100 WWTP.

ARRO is working on setting the entire Route 100 Regional WWTP disposal system into a geographical information system (GIS). ARRO has digitized the record drawings from each disposal system and has completed much of the field work gathering data from each spray and drip field and their associated pump stations. ARRO finished data collection of all Route 100 Regional WWTP disposal fields and is currently analyzing the data and integrated it into the sanitary GIS. ARRO finished integrating into sanitary GIS the data collected from all Route 100 Regional WWTP disposal fields and the Route 100 Regional WWTP.

ARRO prepared the annual Route 100 Regional WWTP groundwater monitoring report and transmitted it to PADEP by letter dated June 19, 2018. PADEP approved the June 19, 2018 annual groundwater monitoring report by letter dated August 14, 2018.

ARRO is working on an alternate energy assessment project for the Route 100 WWTP. Wind and solar energy sources are being evaluated. The final evaluation will be presented to the Board at the July 2018 meeting.

ARRO is continuing to work on digitizing features from all the satellite WWTPs.

ARRO is reevaluating Route 100 WWTP wind energy sources utilizing very small turbines.

ARRO is reevaluating the Route 100 WWTP sanitary sewer system treatment and disposal capacity summary taking into account Toll's sold capacity for Byers 5C Commercial and the treatment and disposal requirements for Byers 6C sold by Toll to Vantage Point.

Route 100 WWTP – Phase III

ARRO is reviewing the Route 100 Regional WWTP pad-mounted transformer's capacity in planning for the Phase III of the WWTP expansion. On February 12, 2018, ARRO met with a PECO representative at the WWTP to inspect the capacity of the WWTP's existing transformer and review the Phase III project. After ARRO reviewed the transformer data provided by PECO along with additional anticipated Phase III loadings ARRO concluded that the existing transformer will need to be upgraded. On May 3, 2018 ARRO completed a preliminary cost opinion for the Phase III construction.

Nothing new to report.

Saybrooke

ARRO prepared plans for a gravity and grinder pump system for 55 Yarmouth Lane and is getting a price from a contractor for the project. ARRO prepared revised plans for a gravity and grinder pump system at 55 Yarmouth Lane. Columbia Gas has approved the portion of the plans that crosses its easement area. ARRO awaits approval of the plans by the property owners. ARRO received approval from the 55 Yarmouth Lane property owners for the proposed gravity and grinder pump system. ARRO is obtaining costs from contractors for the work. ARRO completed the 5-Year Comprehensive Groundwater Evaluation for inclusion with the WQM permit renewal application being prepared by Clean Water. ARRO is attempting to contact the 55 Yarmouth Lane property owner to determine if and when the sewer connection needs to be completed. The meeting with the 55 Yarmouth Lane property owners to determine if and when the sewer connection needs to be completed was conducted on December 8, 2016. ARRO is preparing plans and specifications for miscellaneous repairs to the Saybrooke WWTP control building. ARRO prepared specifications for repairs to the Saybrooke WWTP control building roof. A contractor quote of \$5,800.00 was received for the specified work. ARRO met with the 55 Yarmouth Lane property owners to discuss the proposed grinder pump system and also emailed to the property owners two contractor quotes for the work. ARRO is obtaining proposals for repairs to the wastewater treatment plant's Control Building roof. ARRO obtained wastewater treatment plant Control Building roof replacement proposals and submitted the costs to the Authority Administrator. The project was approved and ARRO directed the contractor to proceed. ARRO prepared the annual Saybrooke WWTP groundwater monitoring report and transmitted it to PADEP by letter dated June 19, 2018. PADEP approved the June 19, 2018 annual groundwater monitoring report by letter dated August 10, 2018. New roofing was installed on the Control Building on August 24, 2018.

ARRO is working on a plan for the decommissioning of the Saybrooke WWTP.

St. Andrews Brae

Nothing to report.

Upland Farms

ARRO has started preparing contract documents for recommended repairs to the Upland Farms effluent storage tank as contained in the August 2016 tank inspection report. ARRO conducted a site visit with Dutchland to review and discuss proposed tank repairs. ARRO is in the process of generating contract drawings and specifications for the proposed tank repairs. ARRO is completing Effluent Storage Tank Repair bid documents for bidding by the end of October 2018.

ARRO completed the Effluent Storage Tank Repair bid documents. The project will be put out to bid the week of November 26, 2018.

Waynebrook

The last house service line in the development was tested on October 20, 2015. ARRO received Waynebrook Open Space parcel legal descriptions and drip field record plans for review. ARRO reviewed three Waynebrook Open Space parcel legal descriptions and had no comments to them. ARRO reviewed the drip field record plans and transmitted comments to Cutler. Subsequently, revised drip field record plans were submitted, reviewed and approved by ARRO. ARRO requested Cutler submit Waynebrook record drawings as part of dedication. Drawings were received from Cutler, but they were not record drawings. ARRO informed Cutler again to provide record drawings. ARRO received an October 12, 2016 email from Cutler stating submission of record drawings will be in the near future and asking if all legal descriptions and easements were provided for the project. ARRO will review the email's questions and respond to Cutler. ARRO and Authority counsel have reviewed documentation prepared by Cutler for dedication of the Waynebrook sanitary sewer facilities. ARRO is preparing a letter recommending acceptance of sanitary sewer dedication. ARRO prepared a letter recommending acceptance of the sanitary sewer to be dedicated. ARRO has reminded Cutler to submit the approved sanitary sewer and disposal fields record drawings in the forms required by the Authority's Specifications.

Nothing new to report.

Windsor Ridge

ARRO has started preparing contract documents for recommended repairs to the Windsor Ridge effluent storage tank as contained in the August 2016 tank inspection report. ARRO conducted a site visit with Dutchland to review and discuss proposed tank repairs. ARRO is in the process of generating contract drawings and specifications for the proposed tank repairs. ARRO is completing Effluent Storage Tank Repair bid documents for bidding by the end of October 2018.

ARRO completed the Effluent Storage Tank Repair bid documents. The project will be put out to bid the week of November 26, 2018.

Miscellaneous

Eagleview Wastewater Treatment Plant – Per PADEP, Upper Uwchlan Township is expected to participate in Uwchlan Township's Act 537 planning study for the Eagleview Wastewater Treatment Plant. ARRO provided a Scope of Work and Cost Estimate for the Township's participation in the Act 537 planning study to Uwchlan Township. ARRO is proceeding with the Township's portion of the Act 537 planning study. ARRO completed drafting its portion of the Act 537 Eagleview Special Study and submitted the draft to Uwchlan Township for review and comment. On May 13, 2015 ARRO conducted an audit of the

existing Eagleview WWTP. ARRO evaluated the plant capacity and prepared a report of findings in June 2015. ARRO has Gannett Fleming's Act 537 Plan Revision under review with comments forthcoming in September 2016. ARRO completed its review of the Gannett Fleming Act 537 Plan Revision and sent a September 19, 2016 letter to the Township with eight comments to the Plan Revision. PADEP issued a March 17, 2017 letter requesting additional information before reviewing and acting upon the Eagleview Wastewater Treatment Plant Act 537 Plan Update Revision.

Nothing new to report.

270 – 290 Park Road (The Townes at Chester Springs) – ARRO is reviewing the sanitary sewer portion of the Final Land Development Plan resubmission for the 44 unit townhouse project. ARRO reviewed the sanitary sewer portion of the second Final Land Development Plan submission, dated December 28, 2015, and sent a comment letter to the Township dated January 26, 2016. ARRO is currently reviewing the third submission of the Plan received February 12, 2016. ARRO reviewed the third submission, dated February 12, 2016, and sent a comment letter to the Township dated February 23, 2016. A revised Sewerage Facilities Planning Module for 33 EDUs was submitted by D. L. Howell & Associates, Inc., which ARRO reviewed and the Authority Administrator signed. The signed Module was returned to D. L. Howell. ARRO reviewed another submission of the Final Land Development Plan and in a July 5, 2016 letter transmitted its comments to the Township. Sanitary sewer from the property was redesigned to connect to the new sanitary sewer in Cambridge Road in Windsor Place. ARRO reviewed another submission of the Final Land Development Plan and in a July 5, 2016 letter transmitted its comments to the Township. Sanitary sewer from the property was redesigned to connect to the new sanitary sewer in Cambridge Road in Windsor Place. ARRO transmitted review comments to the Developer's engineer regarding the planned sanitary sewer connection to the new sanitary sewer in Cambridge Road in Windsor Place. ARRO is reviewing the Sewerage Facilities Planning Modules for the project. SFPM Component 4A was completed by the Township. Components 4B and 4C were completed by Chester County and sent to the Township. Sections G1, G2 and J were completed. The Township returned all of the SFPM completed information to the Developer's Engineer to prepare the appropriate copies for submission to PADEP. Additional SFPM information was provided to PADEP in response to their April 5, 2017 requests. PADEP issued a May 10, 2017 letter approving the proposed 40 townhouses development that will generate 7,400 gallons of sewage per day to be treated at the Route 100 Regional WWTP. ARRO is reviewing the June 20, 2017 resubmission of Land Development Plans for the project. Toll Brothers will be purchasing the approved plans and will develop and build the project. ARRO reviewed and commented on the draft sanitary sewer escrow spreadsheet submitted by Toll Brothers on June 14, 2017. ARRO reviewed the June 20, 2017 resubmission of Land Development Plans for the project and sent a June 23, 2017 letter to the Township with comments. The project preconstruction meeting was held on July 27, 2017. ARRO reviewed the contractor's sanitary sewer shop drawings. Sanitary sewer installation is tentatively scheduled to start the first week of October 2017. Sanitary sewer installation started on October 9, 2017. Sanitary sewer installation was completed on November 7, 2017. All sanitary sewer testing was completed on December 18, 2017. On February 14, 2018, Toll Brothers informed ARRO that the house service line installations would begin in the later part of February 2018. House service line installations began on February 28, 2018.

House service line installations are still proceeding.

McHugh Minor Subdivision Plan – ARRO reviewed a proposed 3-lot subdivision plan with individual on-lot disposal systems. ARRO prepared a September 6, 2016 review comments letter and transmitted it to the Township. ARRO reviewed the subdivision Sewerage Facilities Planning Modules (SFPM) and the Township sent them on to Chester County for completion

of Components 4B and 4C. The Township provided the completed Components 4A, 4B and 4C to the applicant's consultant to assemble the complete SFPMS for the Board of Supervisors to adopt a Resolution for submission to PADEP. PADEP issued a July 7, 2017 Administrative Incompleteness review letter for the subdivision plan listing two items. ARRO is assisting the Developer with a response to the PADEP comment. ARRO sent a September 19, 2017 email to PADEP with responses to PADEP's recent Administrative Incompleteness letter. Regarding the SFPM, an Authority letter, dated October 11, 2017, was sent to PADEP informing them that the Township is not involved in the ownership of private on-lot septic system. ARRO responded to a subsequent email from PADEP on October 30, 2017 with a draft Septage Management Ordinance that is currently under Township review. ARRO is endeavoring to obtain a status from PADEP to its last correspondence to PADEP. ARRO contacted PADEP and the Department wants either an executed O&M agreement with the property owner and Township OR a Township enacted Septage Management Ordinance. The SFPM will not be acted on until one or the other is submitted to the Department.

Nothing new to report.

Marsh Lea Subdivision – ARRO reviewed a proposed 27-lot subdivision plan with individual on-lot disposal systems. ARRO prepared a September 13, 2016 review comments letter and transmitted it to the Township. ARRO reviewed the Sewage Facilities Planning Modules and they were sent to Chester County by the Township. Component 4 B was completed by the Planning Commission, but Component 4C hasn't been returned. SFPM Component 4A was completed by the Township. Component 4B was completed by Chester County Planning Commission and Component 4C was completed by Chester County Health Board and both components were sent to the Township. The Township returned all of the SFPM completed information to the Developer's Engineer to prepare the appropriate copies for submission to PADEP. ARRO transmitted comments to the Township regarding the developer's March 8, 2017 Marsh Lea Subdivision Plans. PADEP sent an Administrative Incompleteness Review Letter, dated August 9, 2017 to the Township. ARRO is assisting with responses to the PADEP letter. Evans Mill on its own transmitted a September 5, 2017 letter to PADEP with responses to PADEP's August 9, 2017 Administrative Incompleteness review letter. After review of the September 5, 2017 letter, PADEP sent a September 28, 2017 email to Evans Mill and the Township requesting additional information for the SFPM. Evans Mill transmitted a September 29, 2017 response email back to PADEP. PADEP issued a November 17, 2017 letter approving the 27-lot residential subdivision SFPM. Evans Mill provided a response to PADEP regarding the SFPM in early October 2018.

PADEP issued its SFPM approval letter, dated October 31, 2018, for the 27-lot residential subdivision.

Village of Eagle

Gordon's Sports Supply - Gordon's Sports Supply expressed an interest in connecting to the Route 100 Regional WWTP sewage collection system. ARRO reviewed one year of water usage records supplied by Gordon's for analysis to estimate sewage flow and to establish a connection fee. On September 8 and September 19, 2017, ARRO sent to the Gordon's building owner the Authority's sanitary sewer requirements and a drawing of the Little Conestoga Road sanitary sewer to which the building will be connected.

Nothing new to report.

160/180 Park Road (Gunner Properties) - ARRO reviewed and commented on the sanitary sewer plans submitted to the Township on June 14, 2017 for the connection of 160/180 Park Road to the Route 100 Regional WWTP sanitary sewer system. ARRO reviewed revised sanitary sewer plans submitted to the Township on August 3, 2017. ARRO sent a letter to the

Authority approving the revised plans. ARRO received updated Preliminary/Final Land Development Plans on October 17, 2017 for review. ARRO issued an October 31, 2017 comments letter to the updated Preliminary/Final Land Development Plans, received on October 17, 2017, requesting additional information on proposed bathroom facilities to determine the sanitary sewer capacity that will need to be purchased. ARRO reviewed a request to allow installation of an 8" saddle on the existing 12" sewer main in lieu of 8" x 12" cut-in wye as shown on the Developer's approved design drawings. The request was denied unless further information is supplied supporting the request's feasibility. ARRO reviewed and accepted installation of an 8" saddle on the existing 12" sewer main in lieu of 8" x 12" cut-in wye. A preconstruction meeting for the project was held on January 11, 2018. On February 20, 2018, the Developer's contractor installed an 8" saddle on the existing 12" sewer main in Park Road. The contractor also started installing sewer within the site. ARRO is preparing a letter to the Authority in response to the capacity request from the Developer

Nothing new to report.

Montesano Brothers Italian Market and Catering - ARRO reviewed a Conditional Use application for expansion of the Market to provide outdoor seating. ARRO sent an October 10, 2017 review letter to the Township with comments that included a review of current sewage flows and an estimate of two (2) EDUs in additional sanitary sewer flow would be generated with the expansion. ARRO attended an October 16, 2017 Conditional Use Hearing on the application. ARRO will be attending the continued Conditional Use Hearing scheduled for December 18, 2017.

Nothing new to report.

Byers Road Sanitary Sewer Extension - ARRO preliminary planning for sanitary sewer along Byers Road between Pottstown Pike and Senn Drive was submitted to the Authority Administrator for review and comment. ARRO is preparing the Sewage Facilities Planning Module Component 3M for the sanitary sewer along Byers Road between Pottstown Pike and Senn Drive. ARRO received a completed Component 4A from the Township on October 19, 2017. At the request of the Chester County Health Department, on January 9, 2018, ARRO sent another Sewage Facilities Planning Module Component 3M letter to CCHD for the sanitary sewer extension along Byers Road between Pottstown Pike and Senn Drive. In February 2018 letters were sent to the property owners who will be connected to the new Byers Road sanitary sewer informing them that the project's survey will be commencing. ARRO is continuing to prepare drawings and construction specifications for the sanitary sewer extension. The project's survey work was completed in early March 2018. ARRO has the survey information for inclusion in the plans. ARRO has the design plans and specifications in the final stage of completion. ARRO submitted the highway occupancy permit to PennDOT on April 16, 2018. There were no public comments to the sewage facilities planning module (SFPM) and the Board of Supervisors passed a resolution approving the submission of the SFPM to PADEP. ARRO submitted the Sewage Facilities Planning Module to PADEP on April 27, 2018. Comments from PADEP are expected within sixty (60) days. PennDOT has approved the highway occupancy permit plans and requires payment of \$810 for inspection observation prior to release of the permit. PADEP transmitted its comments to the Sewage Facilities Planning Module by letter dated June 21, 2018. ARRO is in the process of addressing each of the PADEP comments. The PennDOT Highway Occupancy Permit for the project has been received. ARRO submitted an August 6, 2018 letter to PADEP addressing each PADEP comment from its Sewage Facilities Planning Module review letter, dated June 21, 2018. PADEP transmitted a September 5, 2018 letter with additional comments to Sewage Facilities Planning Module. ARRO submitted a response letter addressing each concern on October 17, 2018.

PADEP transmitted a November 14, 2018 letter with additional comments to the Sewage Facilities Planning Module. ARRO is reviewing the letter and will address each comment in a future letter.

Profound Technologies (125 Little Conestoga Road) - On November 12, 2018 Profound Technologies submitted a building expansion land development plan. Profound Technologies already paid a Capacity Fee for 222 gallons per day (gpd) for its original building. The expansion project SFPM mailer shows an increase in the sewage flows to 350 gpd.

Township Wastewater Treatment Plant's Monthly Average Flow Charts – Please see the attached.

UPPER UWCHLAN MUNICIPAL AUTHORITY

WASTEWATER TREATMENT PLANTS

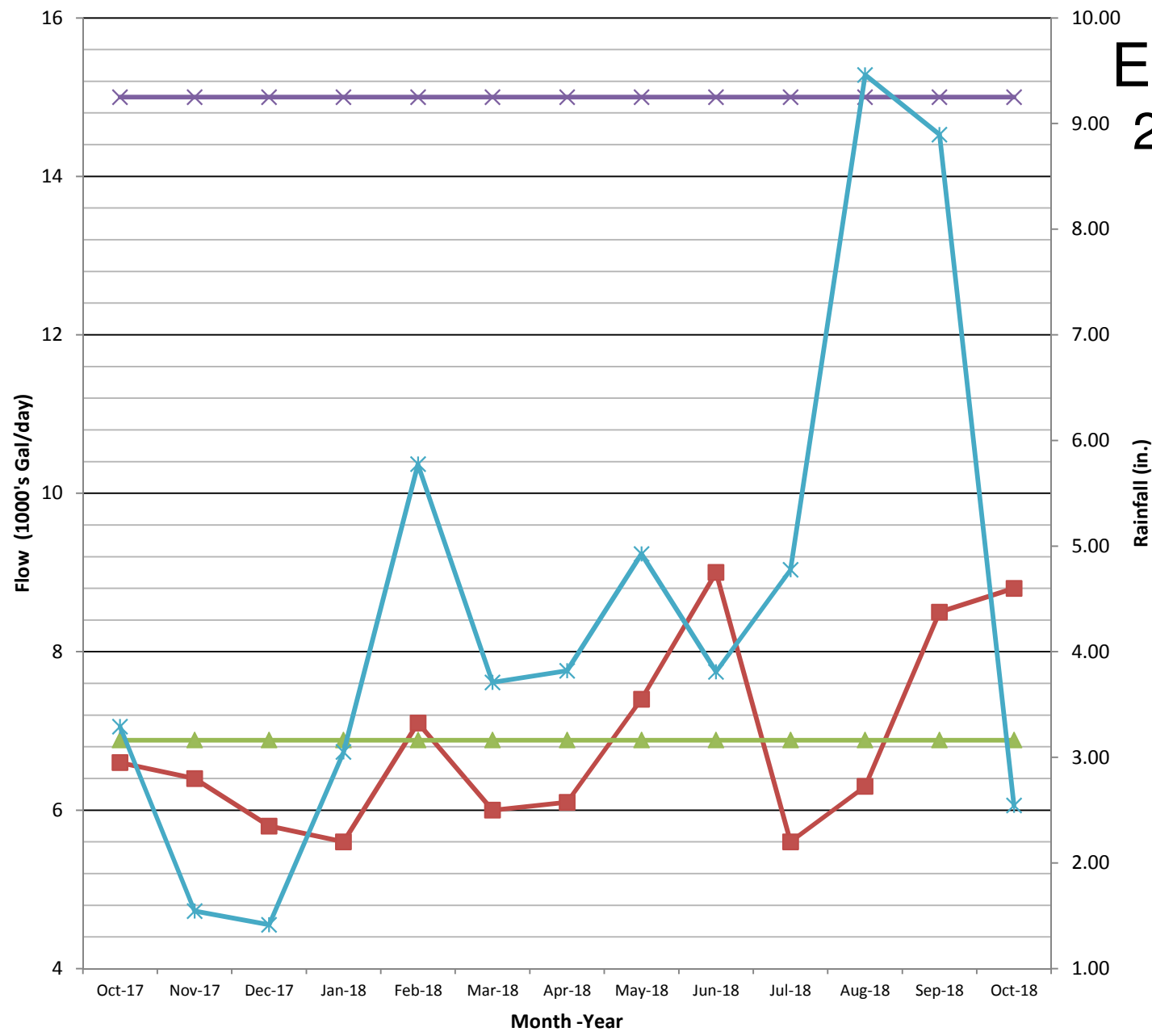
MONTHLY AVERAGE DAILY FLOWS

Month - Year		Average Daily Flow (MGD)							Rainfall (in)
		Eaglepointe	Greenridge	Lakeridge	Marsh Harbour	Route 100	Saybrooke	St. Andrews	
Oct-17		0.00660	0.00690	0.02530	0.04030	0.29020	0.00680	0.00190	3.29
Nov-17		0.00640	0.00710	0.02760	0.03920	0.30900	0.00720	0.00180	1.55
Dec-17		0.00580	0.00700	0.02790	0.03930	0.31070	0.00720	0.00210	1.42
Jan-18		0.00560	0.00770	0.02770	0.03920	0.30760	0.00770	0.00200	3.05
Feb-18		0.00710	0.00750	0.02900	0.04240	0.33180	0.00820	0.00260	5.78
Mar-18		0.00600	0.00670	0.02850	0.04200	0.33400	0.00770	0.00250	3.71
Apr-18		0.00610	0.00790	0.02560	0.04010	0.32180	0.00750	0.00270	3.82
May-18		0.00740	0.00810	0.02650	0.04020	0.33400	0.00750	0.00250	4.93
Jun-18		0.00900	0.00780	0.02500	0.03660	0.31510	0.00730	0.00220	3.81
Jul-18		0.00560	0.00770	0.02380	0.03590	0.30630	0.00790	0.00240	4.78
Aug-18		0.00630	0.00880	0.02470	0.04060	0.32210	0.00670	0.00240	9.46
Sep-18		0.00850	0.00860	0.02570	0.04090	0.34200	0.00790	0.00260	8.90
Oct-18		0.00880	0.00760	0.02420	0.03920	0.32610	0.00790	0.00260	2.55

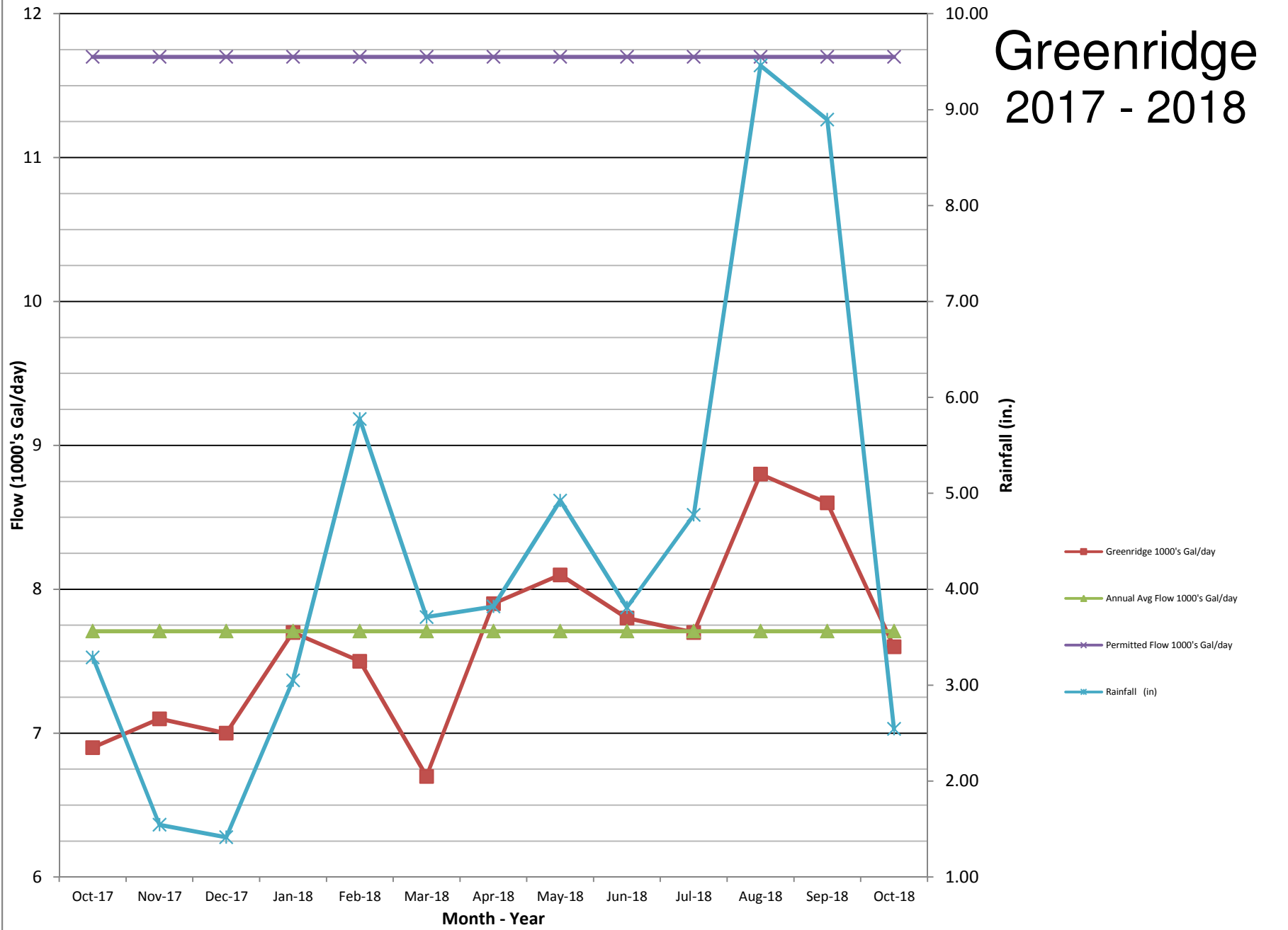
Annual Avg Flow =	0.00688	0.00771	0.02635	0.03963	0.32171	0.00756	0.00237
Permitted Flow =	0.01500	0.01170	0.04000	0.07600	0.60000	0.00920	0.00360

Permitted Flow as of October 2015 = 0.60000

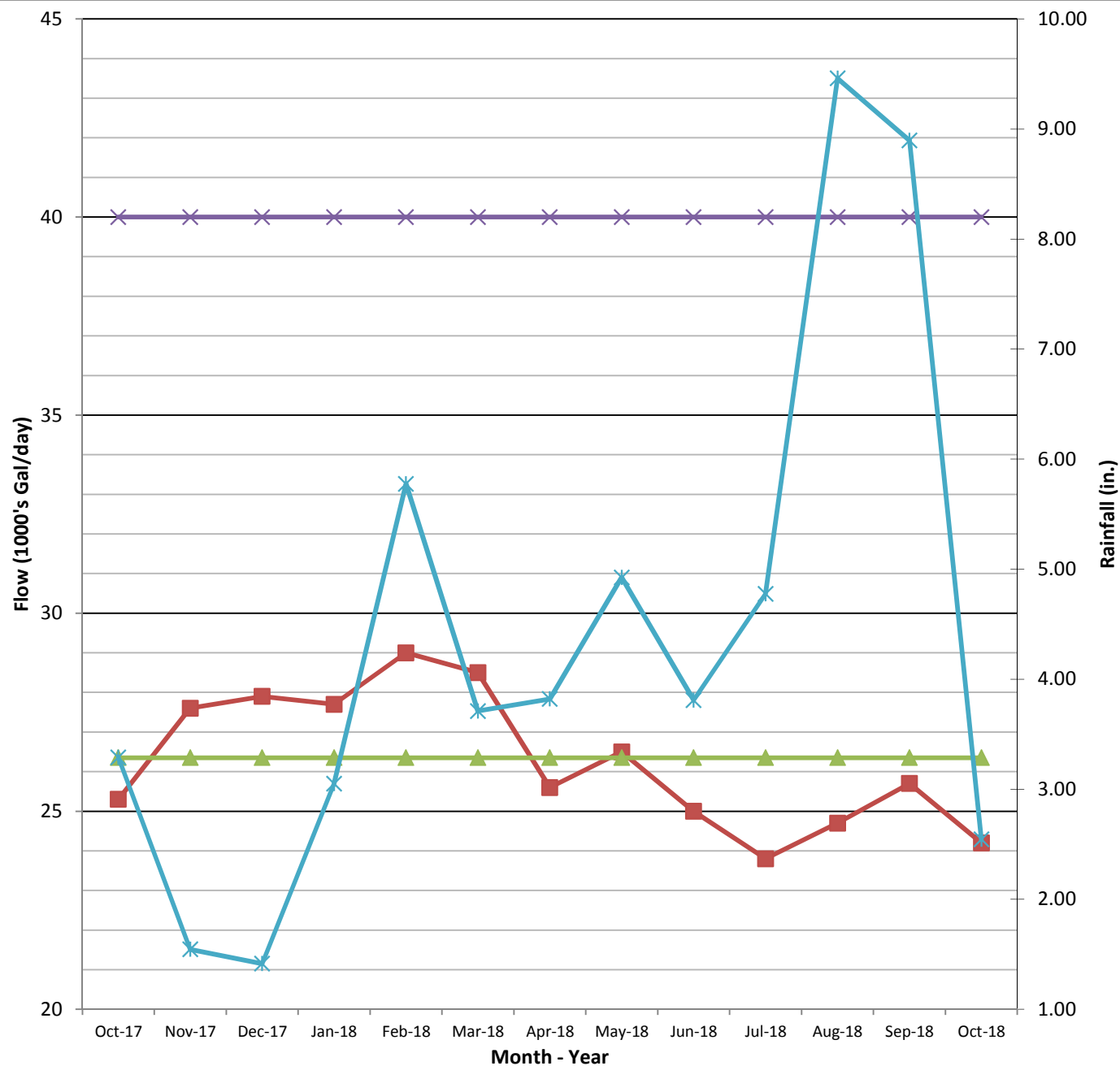
Eaglepointe 2017 - 2018



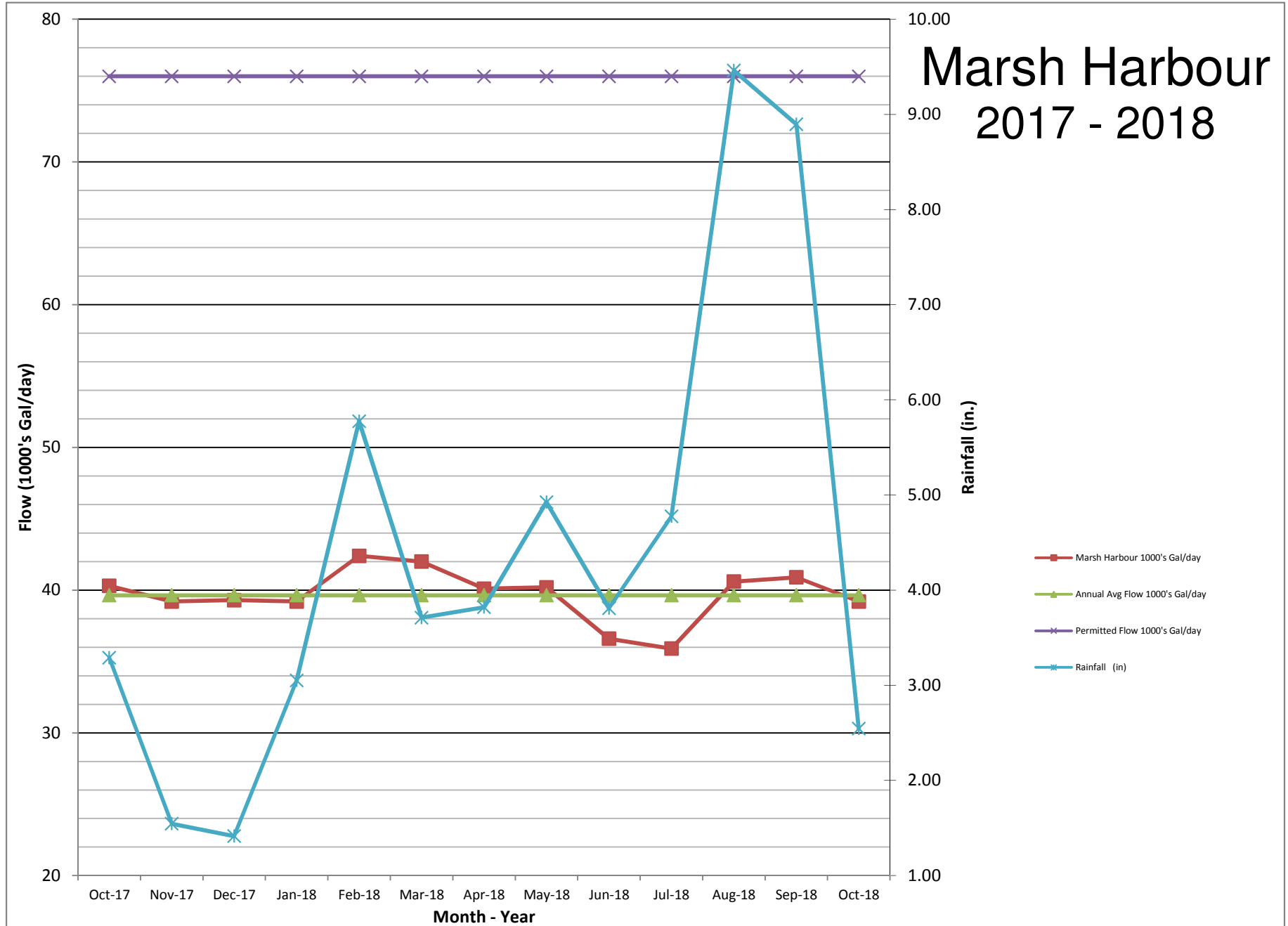
Greenridge 2017 - 2018



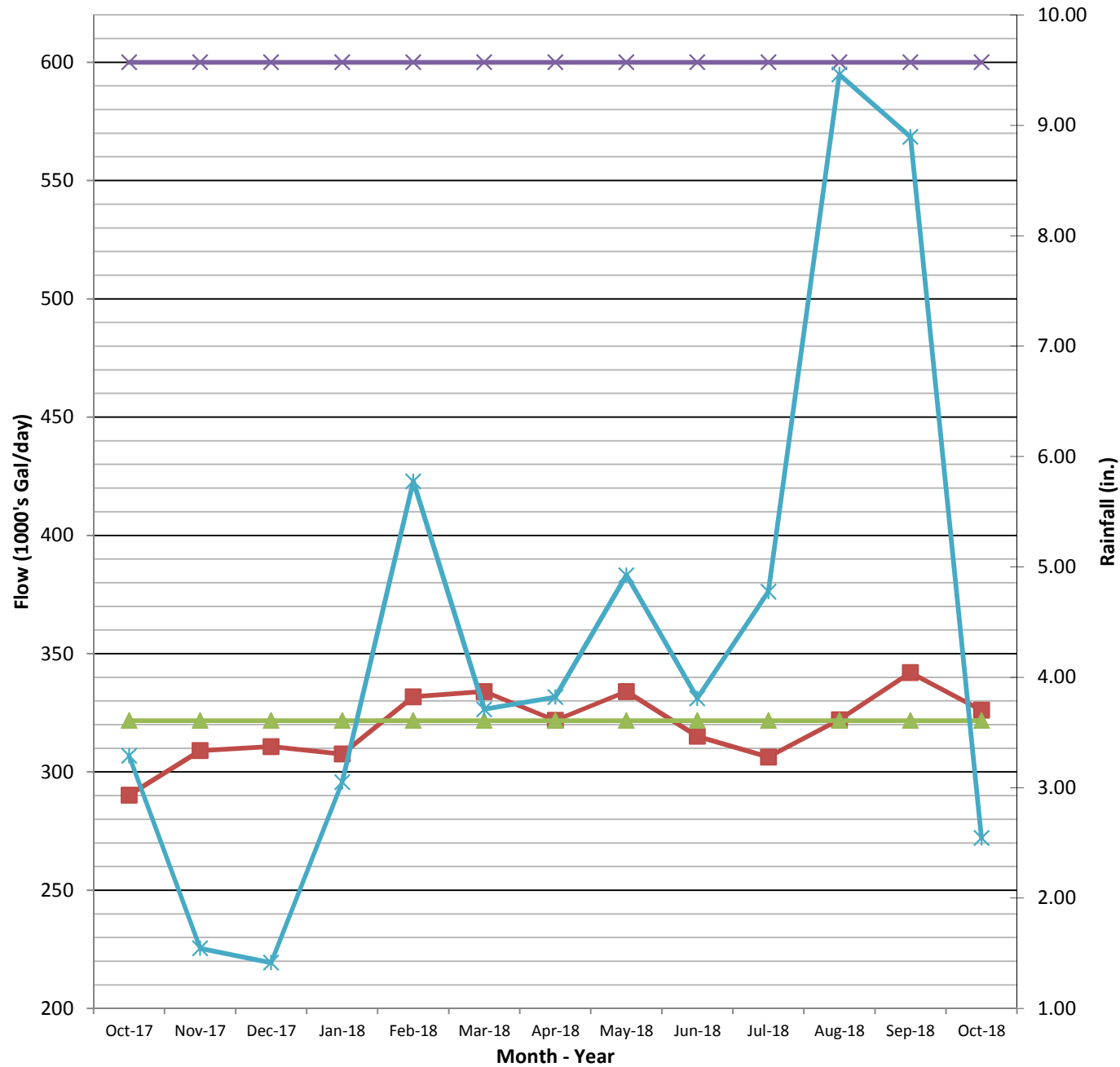
Lakeridge 2017 - 2018



Marsh Harbour 2017 - 2018



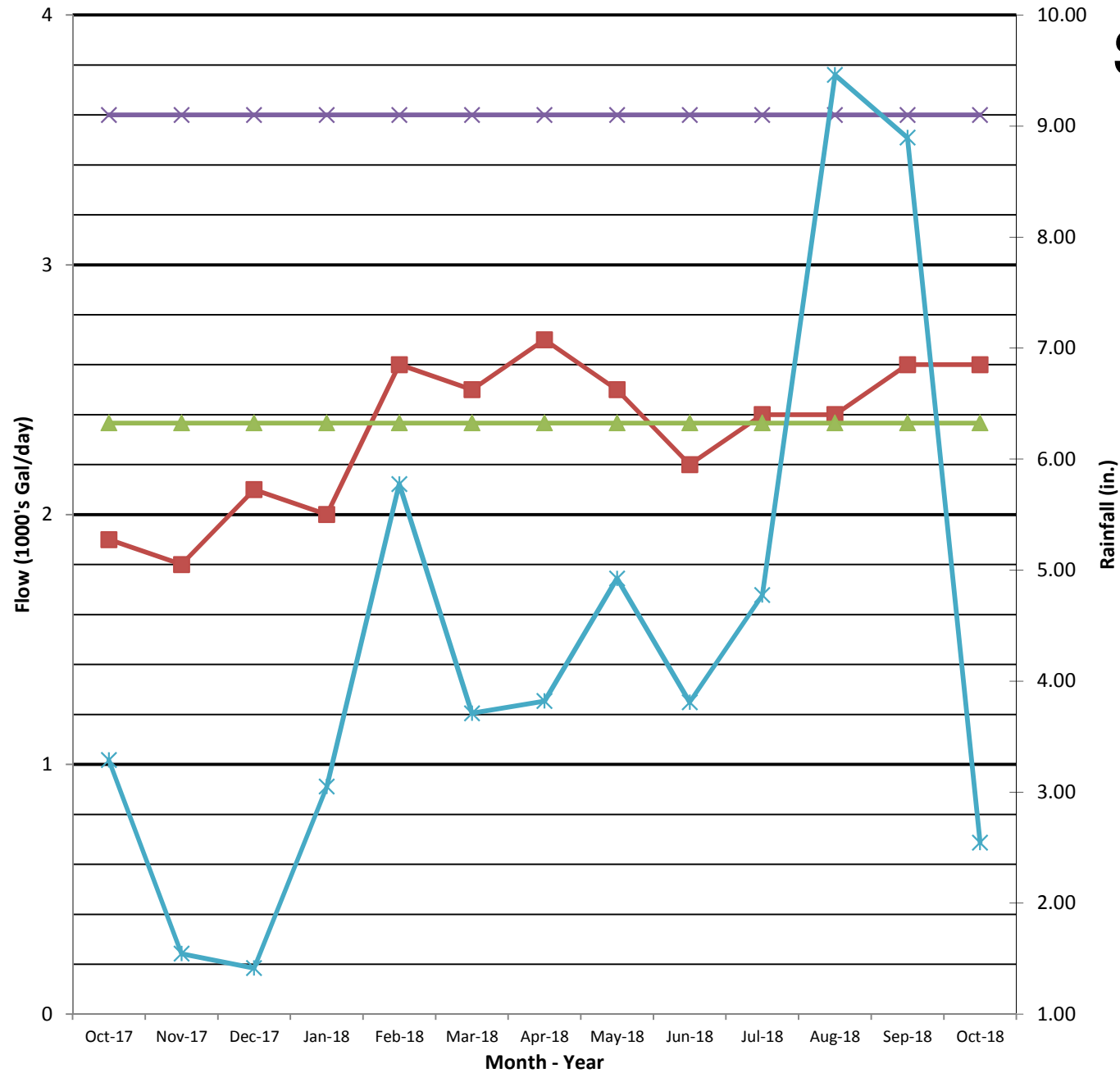
Route 100 2017 - 2018



Saybrooke 2017 - 2018



St. Andrews 2017 - 2018





To: Municipal Authority Members

From: G. Matthew Brown, P.E., DEE

Re: Authority Administrator's Report

Date: November 21, 2018

Activities for the month include:

- A. Communication with WWTF Operator and Township Staff regarding operational and maintenance issues.
- B. Responded to resident, developer and real estate agent sewer service inquiries and septic tank issues.
- C. Preparation of administrative documents for the Authority meeting packet and for the Authority files.
- D. Communication with PADEP regarding Phase III of the Route 100 WWTF.
- E. Communication with Township and Solicitors regarding revisions to the intermunicipal agreement and dedication of the Ewing West Vincent Project.
- F. Communication with Liberty Union, Car Sense, Clean Water and ARRO regarding discharge to the Eaglepointe WWTF.
- G. Communication with the Contractor and ARRO regarding the disposal field fencing project.
- H. Communication with ARRO and contractors regarding the award of the Lakeridge Sludge Holding Tank Project.
- I. Communication with Township, Bond Underwriter and Bond Counsel regarding borrowing for the Phase III project.
- J. Preparation of Draft 2019 Operating and Capital Budgets.

Please advise if you have any questions or would like further details.



OCTOBER/NOVEMBER 2018 REPORT UUT MUNICIPAL AUTHORITY PUBLIC WORKS DEPARTMENT

The following projects are underway:

Ongoing:

- **Snow removal was done at all facilities.**
- **Locks were spot checked at all pump stations. All have been secure.**
- **Spot checks continue and all visitors are still using the sign-in sheets at all properties.**

Brian Owens continues on the properties as follows:

Complete:

- **Rte. 100 WWTP**
 - 1. **General cleaning of station and office**
 - 2. **Roof of Building 2C still needs a roofing contractor to inspect and make some repairs (We will get a quote)**
 - 3. **Water infiltration from groundwater in Building 2A has been plugged and is being monitored. A small amount of water is present. We will continue to watch this area.**
 - 4. **Painting continues**
- **Byers Station Effluent PS**
 - 1. **General cleaning of station**
- **Byers Station Influent PS**
 - 1. **General cleaning of station**
- **Ewing PS**
 - 1. **General cleaning of station**
- **Ewing West Vincent PS**
 - 1. **General cleaning of station**
- **Ewing Tract Effluent Disposal System**
 - 1. **No work orders for this location**
- **Eagle Hunt**
 - 1. **Cleaning of this location**

- **Windsor Ridge**
 - 1. **General cleaning**
- **Saybrooke WWTP**
 - 1. **General cleaning of station**
 - 2. **Rehabilitation still under way at this station.**
 - 3. **Floors have been sealed in motor room and painting has begun**
- **Seabury**
 - 1. **There are currently no work orders for this facility.**
- **Yarmouth PS1**
 - 1. **There are currently no work orders for this facility.**
- **Yarmouth PS2**
 - 1. **There are currently no work orders for this facility.**
- **St Andrews Brae**
 - 1. **General cleaning of station**
- **St Andrews Brae PS (at St Andrews intersection)**
 - 1. **There are currently no work orders for this facility.**
- **Reserve Lagoon**
 - 1. **General cleaning of station**
 - 2. **Fencing contractor has completed the fence installation.**
- **Reserve at Eagle PS1**
 - 1. **Trash removal and general cleaning**
- **Reserve at Eagle PS 2**
 - 1. **General cleaning of station**
- **Upland Farms PS/ Reserve at Waynebrook**
 - 1. **There are currently no work orders for this facility.**
- **Greenridge**
 - 1. **Completed cleanup**
 - 2. **Repaired gate**
- **Stonehedge**
 - 1. **General cleaning of station**
- **Marsh Harbour WWTP**
 - 1. **General cleaning and trash removal**
 - 2. **Interior rehab is complete - waiting on contractor for exterior**

- **Marsh Harbour PS**
 - 1. There are currently no work orders for this facility.
- **Meadowcreek**
 - 1. There are currently no work orders for this facility.
- **Eaglepointe**
 - 1. Trash collection and cleaning
 - 2. Fencing is complete
- **Heron Hill PS**
 - 1. There are currently no work orders for this facility.
- **Lakeridge WWTP**
 - 1. General cleaning and trash removal
 - 2. Working with Clean Water and Pikeland to find out where excess water is coming from on station floor.
- **Lakeridge Pump Station**
 - 1. The station has been cleaned and painted.
 - 2. Floors are sealed
- **Eagle Farms Rd PS (WV)**
 - 1. General cleaning of station
- **Little Conestoga Rd PS**
 - 1. There are currently no work orders for this facility.
 - 2. Mowed grass for last time this season
- **Eagle Manor PS (Dorothy Ln)**
 - 1. There are currently no work orders for this facility.
- **Garrison Dr. (spray field pump station #1)**
 - 1. There are currently no work orders for this facility.
- **Garrison Dr. (spray field pump station #2)**
 - 1. There are currently no work orders for this facility.
- **Public Works continues to respond to Pa 1-calls. UUT responded to 94 PA 1-Call tickets during the month of October.**

Respectfully submitted,
Michael G. Heckman
 Director of Public Works
 Upper Uwchlan Township