



AGENDA

October 23, 2018

7:30 p.m.

Packet Page #

- | | | |
|-------|---|----|
| I. | Call to Order | |
| II. | Approval of Minutes: September 25, 2018 Meeting | 2 |
| III. | Approval of Payments: October 2018 | 4 |
| IV. | Authority Administration Reports | |
| | A. Clean Water, Inc. Monthly Report | 8 |
| | B. ARRO Consulting Monthly Report | 10 |
| | C. Authority Administrator's Report | 33 |
| | i. Modification to Township-Authority Operation and Management Agreement - Discussion | |
| | D. Public Works Department Report | 34 |
| V. | Lakeridge Sludge Tank Relocation – Bid Results | |
| VI. | Open Session | |
| VII. | Next Meeting Dates: November 27, 2018 7:30 PM
December 18, 2018 7:30 PM | |
| VIII. | Adjournment | |



MEETING MINUTES
September 25, 2018
7:30 PM
DRAFT

In Attendance: D. Carlson, Vice Chairman (by telephone), H. Harper, Member, R. Watts, Member, Katie Cirone P.E., ARRO Consulting, Inc.

Call to Order

In that the Chairman was not present and the Vice-Chairman was participating by telephone, the consensus of the members present was that B. Watts should act as Chair for the meeting. B. Watts called the meeting to order at 7:34 PM.

Approval of Minutes

D. Carlson moved to approve the draft minutes of the July 24, 2018 meeting and the August 28, 2018 meeting as submitted. H. Harper seconded. It was so moved.

Approval of Payments

Following questions and a brief discussion, a motion was made by D. Carlson to approve the payments. H. Harper seconded. It was so moved. Following a brief discussion, D. Carlson made a motion to accept in good faith the Balance Sheet and Revenue and Expenses Reports as prepared by the Township Treasurer. H. Harper seconded the motion. It was so moved.

Authority Administration Reports

K. Cirone noted that all treatment facilities were operating well and within their permit requirements. She noted the four reports and asked if there were any questions related to them. Several questions and a brief discussion followed.

K. Cirone noted the First Amendment to the Intermunicipal Sewer Service Agreement and the discussion that had been ongoing between the Authority Solicitor, C. Frantz, and the board members. She reminded the board that Zone 4 of the disposal fields in West Vincent Township is permitted for 10,800 gallons per day of treated wastewater effluent disposal which has not yet been constructed. D. Carlson advised the board to consider the addition of signage at the West Vincent Township disposal fields after the amended agreement is signed indicating a hazard for horseback riders and motor vehicles due to soft soils. D. Carlson made a motion for the Chairman to execute the amended agreement as revised. H. Harper seconded, and it was so moved.

K. Cirone noted that Authority Administrator, M. Brown, attended the Joint Boards and Commissions meeting and discussed the pending borrowing and the need for additional security, fencing, and signage at wastewater treatment and disposal facilities. These topics were well received.

K. Cirone noted that the pending borrowing is going to be for \$5.2 million dollars, budgeted as follows: \$2.5 million for the Route 100 wastewater treatment plant Phase III upgrade; \$1.1 million for the Byers Road Phase II collection system expansion; and, \$1 million for the purchase of land to be used for treated wastewater effluent disposal. She also noted that any remaining money would be put towards providing public sewer to Milford Farms.

K. Cirone noted that the project to move the sludge holding tank at the Lakeridge wastewater treatment plant outside of the building had gone out to bid, and that bids will be received in advance of the October board meeting.

K. Cirone noted that work is continuing on the fencing project undertaken at several wastewater facilities throughout the Township.

K. Cirone noted that Ebert Engineering, Inc. received comments from the Pennsylvania Department of Environmental Protection on the Route 100 wastewater treatment plant Phase III upgrade. Ebert is addressing these comments.

K. Cirone asked if the board members would be interested in scheduling a visit to the wastewater treatment plants in early November to see improvements that have been made. The board members expressed interest in this and asked K. Cirone to move forward scheduling.

H. Harper made a motion to approve the reports of the Authority Administrator. D. Carlson seconded. It was so moved.

Open Session

Ms. Melissa Kent of 201 Prescott Drive (in the Reserve at Eagle development) was present to discuss the pump station (Reserve at Eagle Pump Station 1) that is located directly behind her home. She noted that she has lived in the home for 14 years, and that there was initially an issue with odor from the pump station. She indicated that Authority Administrator, M. Brown, has visited the site to discuss many times, which resulted in the use of chemicals to fight the odor which have been somewhat helpful. Ms. Kent expressed concern that when the flows from the McKee development are added to the pump station, that the odor issue will get worse. The board members and K. Cirone assured Ms. Kent that the pump station will be updated as part of the project, and that more flow will decrease the pump cycle time which may help the problem.

Next Meeting Date: October 23, 2018 - 7:30 PM

R. Watts noted the date and time of the next meeting of the Authority.

Adjournment

There being no further business to be brought before the Authority, H. Harper moved, seconded by D. Carlson to adjourn the meeting at 8:10 PM.

Respectfully submitted,

Katherine E. Cirone, P.E.
ARRO Consulting, Inc.

October 18, 2018
02:29 PM

Upper Uwchlan Township
Check Register By Check Id

Page No: 1

Range of Checking Accts: MA MERIDIAN to MA MERIDIAN Range of Check Ids: 1669 to 1694
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
1669	10/23/18	21ST 21st CENTURY MEDIA PHILLY	516.56		1880
1670	10/23/18	ALSGROUP ALS GROUP USA, CORP	1,743.60		1880
1671	10/23/18	AQUAP010 AQUA PA	2,253.88		1880
1672	10/23/18	AQUAPA AQUA PA	75.00		1880
1673	10/23/18	ARROC010 ARRO CONSULTING, INC.	42,784.08		1880
1674	10/23/18	BUCKL010 BUCKLEY, BRION, MCGUIRE, MORRI	311.42		1880
1675	10/23/18	CHRISFRA FRANTZ, CHRISTOPHER	546.00		1880
1676	10/23/18	DECKM010 DECKMAN ELECTRIC, INC.	10,593.42		1880
1677	10/23/18	DELTRUST DELAWARE VALLEY PROP&LIA TRST	2,908.63		1880
1678	10/23/18	EAGLHARD EAGLE HARDWARE	290.09		1880
1679	10/23/18	HONEYBRO HONEY BROOK OUTDOOR POWER	118.88		1880
1680	10/23/18	INKS0010 INK'S DISPOSAL SERVICE, INC.	575.00		1880
1681	10/23/18	JCEHRLIC J. C. EHRLICH CO., INC.	698.00		1880
1682	10/23/18	LUDWIO60 LUDWIG'S CORNER SUPPLY CO.	248.57		1880
1683	10/23/18	MAPLEDIR MAPLE DIRECT INC	1,276.99		1880
1684	10/23/18	MCGOV020 MCGOVERN ENVIRONMENTAL, LLC	727.10		1880
1685	10/23/18	MJREIDER M. J. REIDER ASSOCIATES, INC.	1,120.00		1880
1686	10/23/18	MULLS010 MULL'S ELECTRIC, INC.	455.00		1880
1687	10/23/18	PECO0010 PECO	19,127.31		1880
1688	10/23/18	PENNS080 PENNSYLVANIA ONE CALL	206.93		1880
1689	10/23/18	UPPER035 UPPER UWCHLAN TOWNSHIP-SW	291.06		1880
1690	10/23/18	UPPER070 UPPER UWCHLAN TOWNSHIP	64,738.69		1880
1691	10/23/18	UUTSEWER UPPER UWCHLAN TWP SEWER FUND	269,607.96		1880
1692	10/23/18	VERIZ010 VERIZON	1,051.78		1880
1693	10/23/18	VERIZFIO VERIZON	132.40		1880
1694	10/23/18	WGMALDEN W. G. MALDEN	49.00		1880

Report Totals	<u>Paid</u>	<u>Void</u>	<u>Amount Paid</u>	<u>Amount Void</u>
Checks:	26	0	422,447.35	0.00
Direct Deposit:	0	0	0.00	0.00
Total:	<u>26</u>	<u>0</u>	<u>422,447.35</u>	<u>0.00</u>

Upper Uwchlan Township Municipal Authority
Balance Sheet
As of September 30, 2018

ASSETS

<u>Cash</u>		
06-100-000-010	General Checking - Fulton Bank	\$ 42,192.58
06-100-000-015	General Checking - Meridian Bank	542,288.21
06-100-000-020	General Checking - WIPP	453,260.02
06-106-000-002	Tap-in Fee Account	313,096.08
	Total Cash	1,350,836.89

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

<u>Accounts Receivable</u>		
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

<u>Other Current Assets</u>		
06-130-000-001	Due from MA Capital Fund	-
06-130-000-002	Due from UUT General Fund	-
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	795.01

<u>Fixed Assets</u>		
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

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

Total Assets	\$	4,321,240.84
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**Upper Uwchlan Township Municipal Authority
Statement of Revenues and Expenditures**

For the Period Ended September 30, 2018

	Actual 2018 YTD	Budget 2018	% of Budget	Actual 2017 (Audited)	Budget 2017
<u>REVENUES</u>					
06-340-000-000 Interest Income	11,886.09	7,300.00	162.8%	7,811.00	6,500.00
06-365-000-000 Usage Fees Residential	1,614,503.17	2,027,640.00	79.6%	1,924,864.00	1,757,532.00
06-365-000-001 Usage Fees Commercial	64,746.60	101,014.00	64.1%	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	-	1,000.00	0.0%	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	\$ 1,723,591.60	\$ 4,313,304.00	40.0%	\$ 2,745,322.00	\$ 2,684,744.00
<u>EXPENDITURES</u>					
<u>General:</u>					
06-400-000-001 Administration	152,728.48	234,219.00	65.2%	212,464.00	216,667.00
06-400-000-002 Authority Administrator	88,815.00	120,000.00	74.0%	123,249.00	120,000.00
06-400-000-003 Professional Fees	7,532.74	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	2,199.20	1,000.00	219.9%	-	1,000.00
06-400-000-352 Insurance - Liability	8,725.89	2,337.00	373.4%	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	11,209.77	20,800.00	53.9%	19,969.00	20,000.00
06-406-000-100 Utility Billing Costs	6,726.95	18,000.00	0.0%	18,530.00	6,000.00
06-408-000-000 Engineering Fees	305,103.53	150,000.00	203.4%	166,097.00	140,000.00
06-408-000-100 Reimbursable Engineering Fees	-	-	#DIV/0!	-	-
	588,651.00	565,206.00	104.1%	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	11,241.42	15,000.00	74.9%	13,228.00	15,000.00
06-409-000-035 Insurance	-	9,297.00	0.0%	-	7,500.00
06-409-000-036 Electric	171,869.25	250,000.00	68.7%	204,222.00	320,000.00
06-409-000-037 Water	8,306.44	25,000.00	33.2%	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!	-	-
	194,384.07	329,797.00	58.9%	236,958.00	388,500.00
<u>Operations:</u>					
06-420-000-020 Supplies	11,807.40	20,000.00	59.0%	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	69,062.82	120,000.00	57.6%	134,712.00	100,000.00
06-420-000-030 Testing	25,671.05	40,000.00	64.2%	35,664.00	40,000.00
06-420-000-031 Pump & Haul	35,107.36	50,000.00	70.2%	59,530.00	40,000.00
06-420-000-032 Vegetation Management	10,227.69	20,000.00	51.1%	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	1,095.20	2,500.00	43.8%	-	2,500.00
	305,492.54	420,025.00	72.7%	389,507.00	367,500.00

Upper Uwchlan Township Municipal Authority
Statement of Revenues and Expenditures

For the Period Ended September 30, 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 Transl		\$ 1,151,875.67	\$ 1,381,028.00	83.4%	\$ 1,242,401.00	\$ 1,351,667.00
Net Income before Operations Agreement and Transfers		\$ 571,715.93	\$ 2,932,276.00	19.5%	1,502,921.00	1,333,077.00
	<u>Other:</u>					
06-471-000-010	Operations Agreement Fee to UUT	94,731.25	364,463.00	26.0%	364,562.00	364,563.00
	Operations Agreement Fee to UUT-new debt		50,000.00		-	-
		94,731.25	414,463.00	22.9%	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		\$ 1,246,606.92	\$ 1,795,491.00	69.4%	\$ 1,606,963.00	\$ 1,716,230.00
OPERATING INCOME		\$ 476,984.68	\$ 2,517,813.00	18.9%	\$ 1,138,359.00	\$ 968,514.00

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

October 17, 2018

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

RE: Report for the October 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 August. Information items are current

Route 100

We continue to spray as able. I have the Ewing West Vincent lagoon low. I am transferring water from the rt 100 lagoon to this site. We had an issue at the Ewing influent pump station on Fellowship Road. One of the pumps is bad, a new one has been ordered. The old one will be sent to Deckmans to be rebuilt hopefully. During a routine test of the phone line it was discovered that the line from the pole was damaged. Mulls Electric was out to replace and install a protective cover. The line may have been damaged while mowing. I also had Inks out to clean that station. In addition, I have asked Mand S services to install the relays needed to have the auto dialer call out should a pump fail. There are unused alarms in dialer. This will be a nice addition. McGovern cleaned the stations at Reserve as well. The second aerator motor for the lagoon at rt 100 has been returned. It will be installed shortly. The company installing the fence at Reserve accidently damaged a cable for the return flow meter. MGK repaired the cable.

Eaglepoint

Plant is running well. All of the samples have been collected for Liberty and Car sense. Some of the results have not been completed. They will be complied when done. However, I can tell you the vast majority of the Liberty samples tested for BOD are well over limits. I am concerned a loadings issue for the plant will need addressed. Not to mention, the new restaurant Epicurians is now open. We will monitor this closely. The fence has been installed around the plant and looks great. There will be a chemical delivery of Delpac 2020 by Univar shortly.

St. Andrews Brae

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

Marsh Harbour

The plant is running fine. However, I did have McGovern's out to hi vac a large amount of pine needles that had matted up near the floats. I have asked Mike Heckman to consider having the pine trees bordering the plant removed. The lagoon level here is doing fine.

Saybrooke

Plant continues to operate well. I replaced one of the motors that went bad and ordered a new one for spare.

Lakeridge

Plant is running fine. The new pump for disposal has been delivered and will be installed shortly. The fence is complete and looks terrific. The DEP was out to inspect the beds as part of the renewal, the only item of note was a small break out on a trench line. We will have this repaired. Also, for September, I will be reporting a failed to sample violation for fecal coliform. I called DEP about it. They were not really concerned since it is sub surface and fecals will be removed from the permit at this renewal.

Greenridge

Drip has continued.

Additional Information

All of the generators will be serviced by Dynatech shortly.

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

Respectfully,


Brian Norris



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: September 19, 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.

Installation of the gravity house service line to each new townhouse began on September 13, 2018.

ARRO approved escrow release No. 1 in the amount of \$302,330.01 by letter dated September 6, 2018.

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 DL Howell, last revised August 13, 2018.

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.

Eaglepointe

Wastewater Treatment Plant and Sanitary Sewer System: ARRO prepared plans and specifications for a new chain-link fencing around the wastewater treatment plant. 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.

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.

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

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.

ARRO is 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 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 Non-Residential Waste Discharge 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.

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.

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.

Fred Ebert 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.

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.

Nothing new to report.

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.

Lakeridge

ARRO has prepared plans and specifications for fencing around the WWTP's sand mounds and absorption trenches.

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. ARRO is obtaining proposals for repairs to the wastewater treatment plant's Control Building siding. 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. ARRO obtained wastewater treatment plant Control Building siding repair proposals and submitted the costs to the Authority Administrator. The project was approved and ARRO directed the contractor to proceed. 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 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. 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 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.

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.

Fencing installation work around the disposal beds is completed.

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.

Nothing new to report.

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.

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 reroute 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.

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.

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 Sewage 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.

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.

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	
Sep-17		0.00600	0.00690	0.02510	0.03810	0.30340	0.00650	0.00170	3.74
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

Annual Avg Flow =

0.00670

0.00765

0.02644

0.03973

0.31872

0.00747

0.00231

Permitted Flow =

0.01500

0.01170

0.04000

0.07600

0.60000

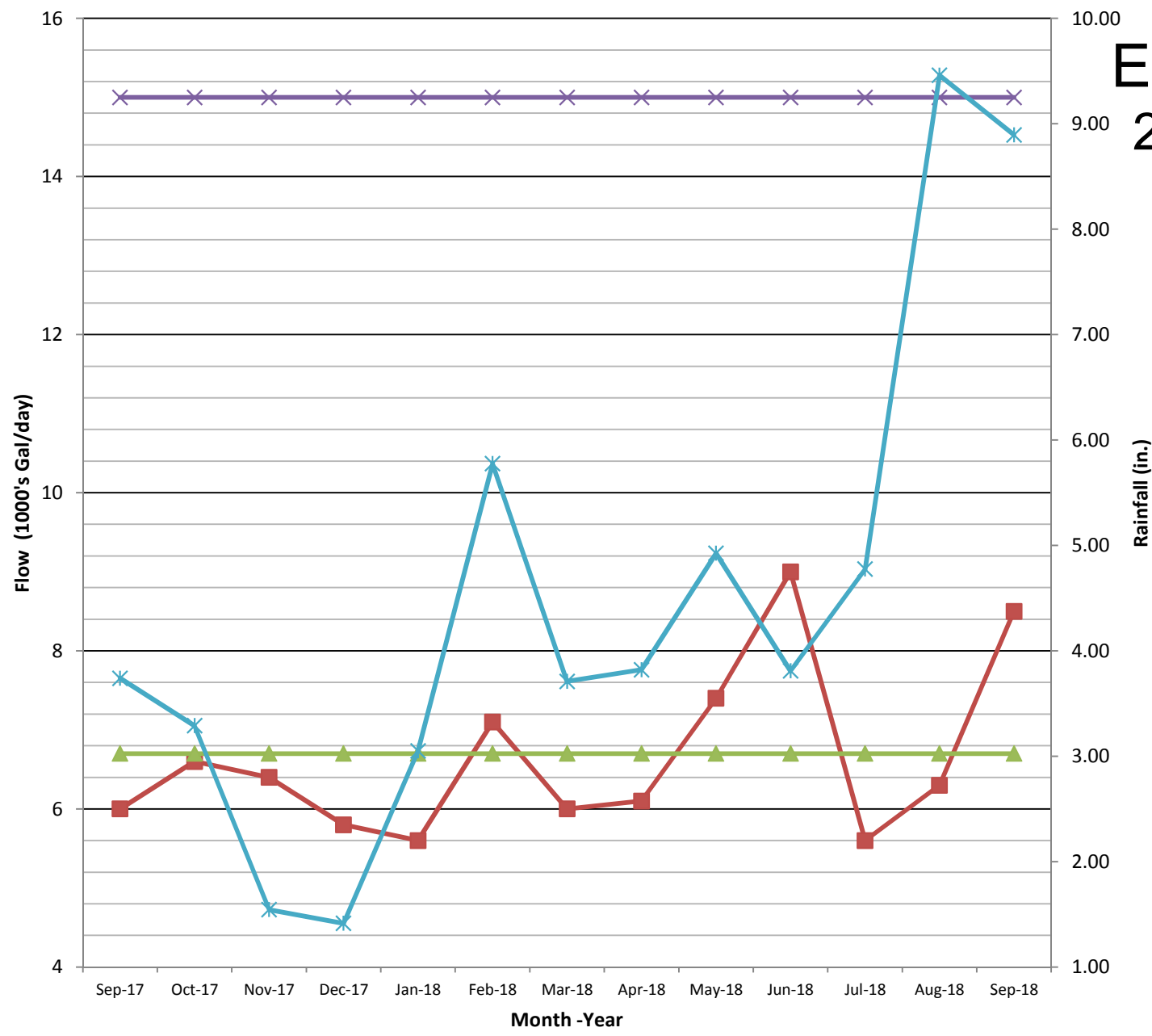
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0.00360

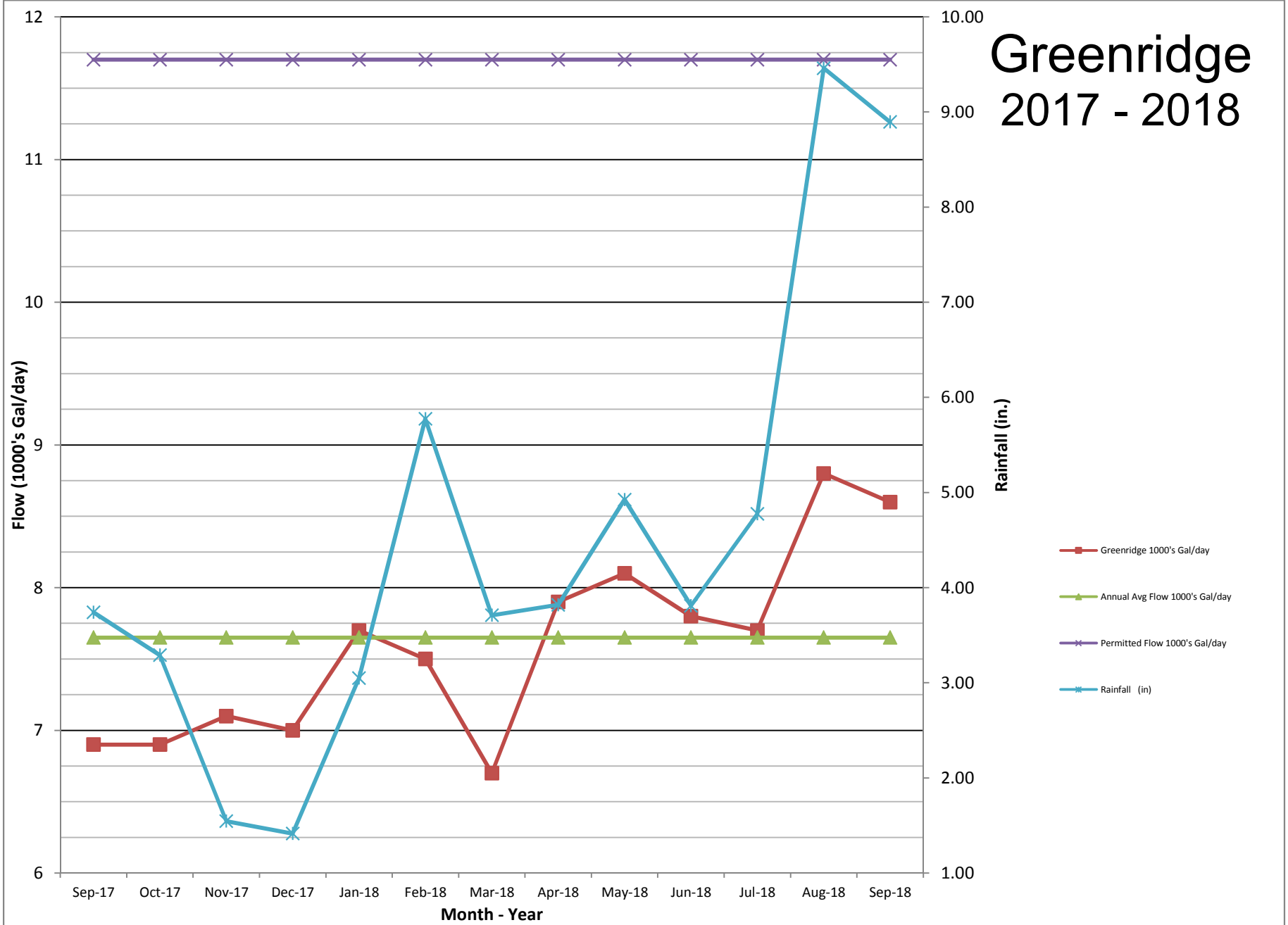
Permitted Flow as of October 2015 =

0.60000

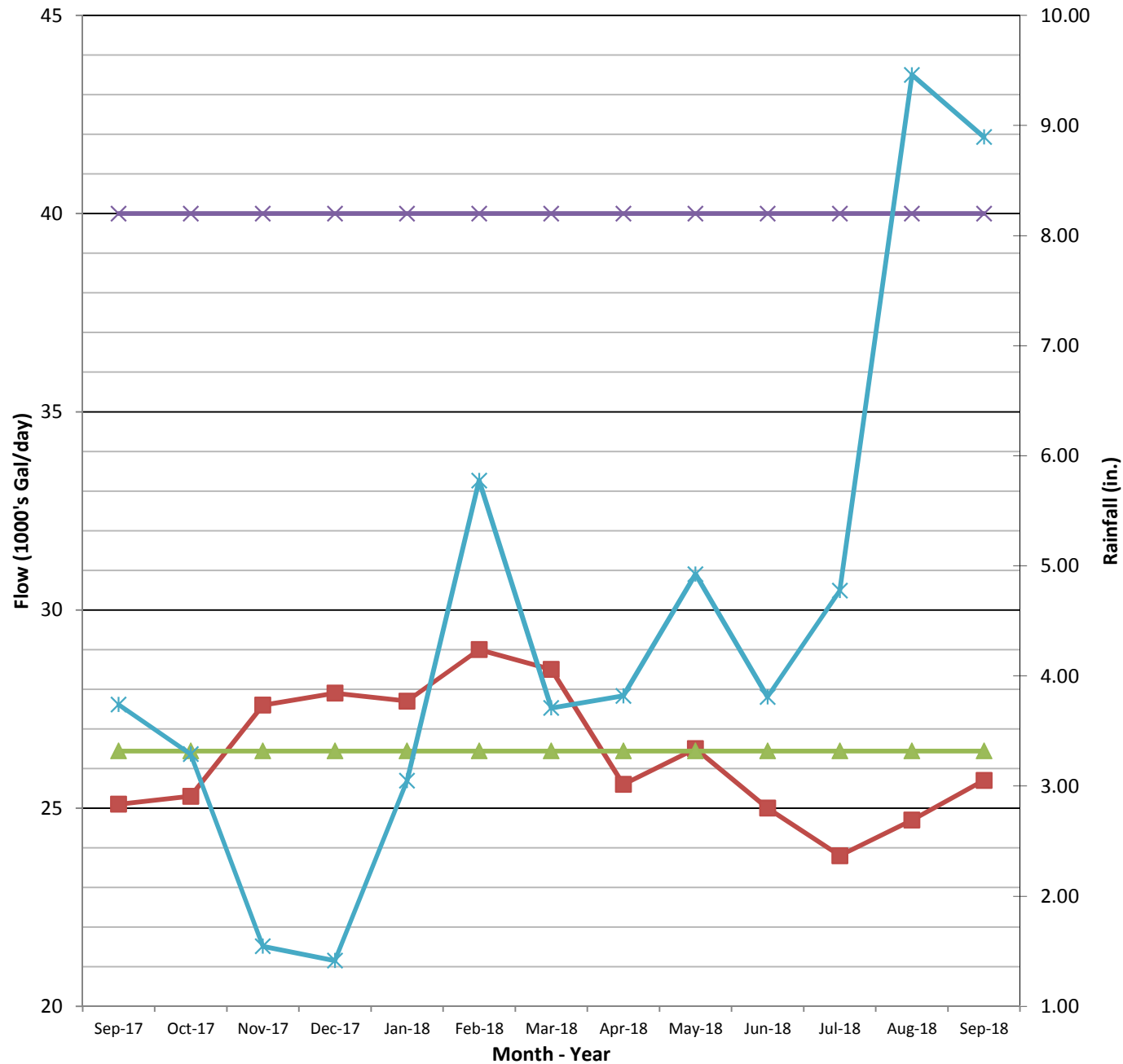
Eaglepointe 2017 - 2018



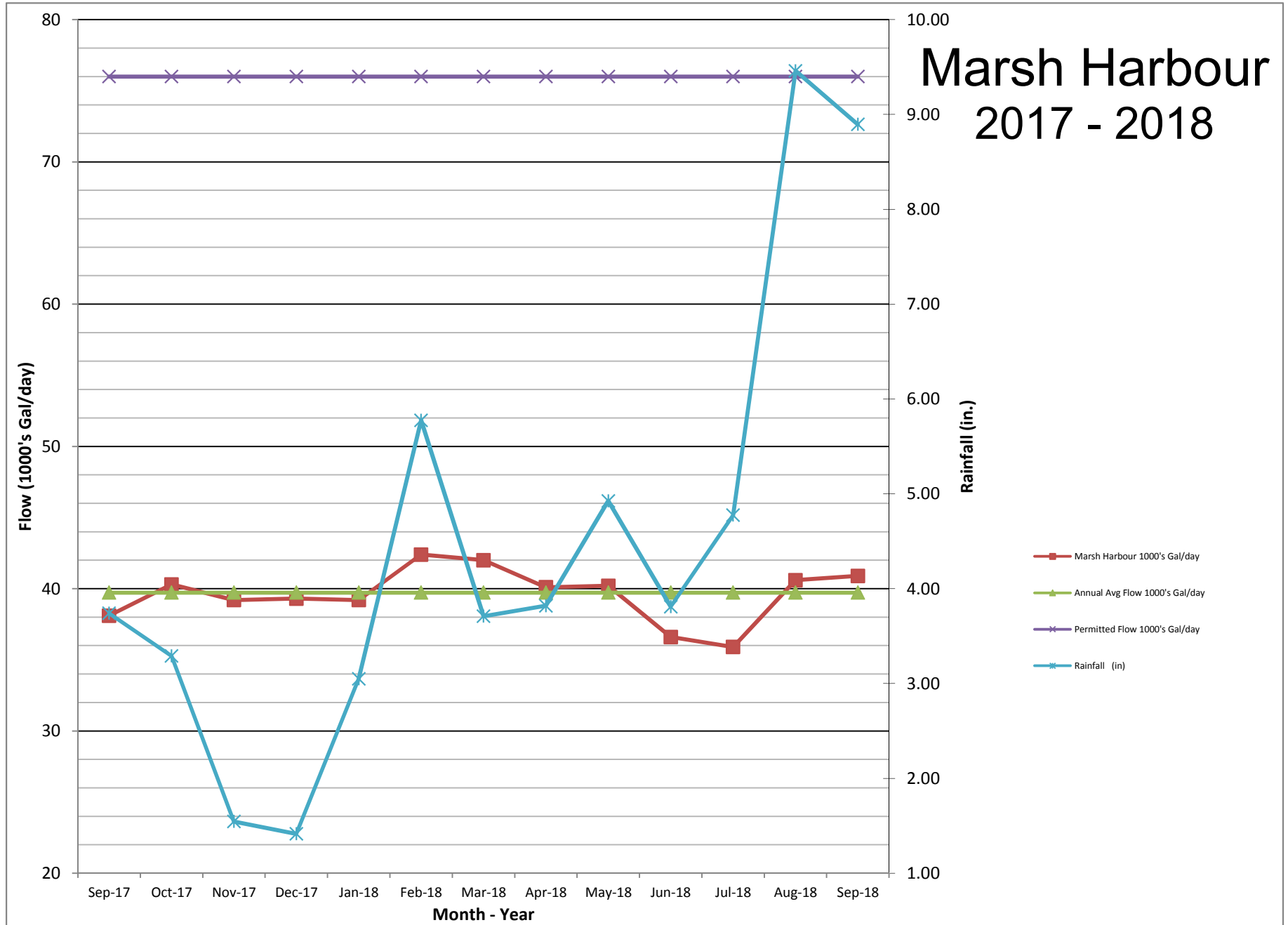
Greenridge 2017 - 2018



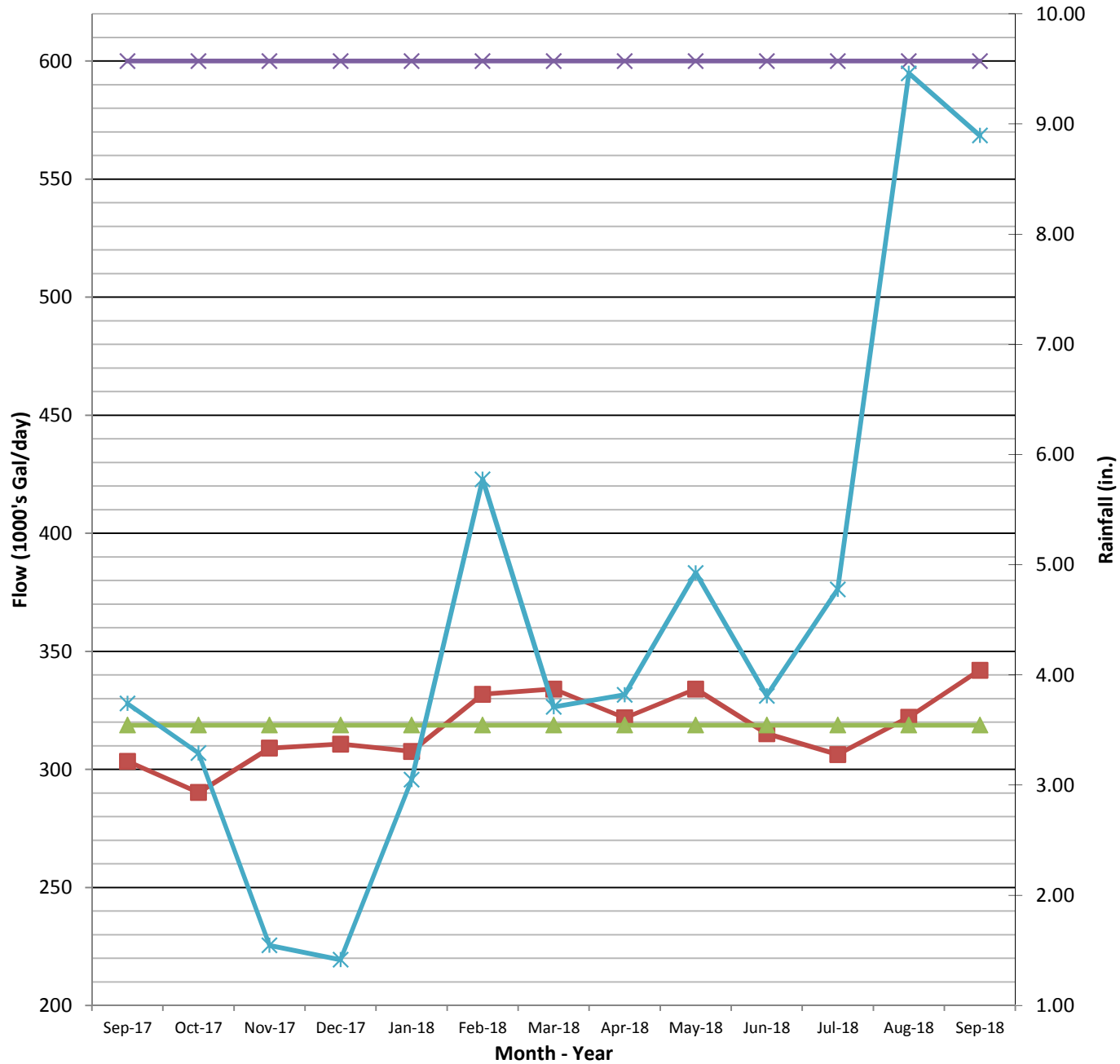
Lakeridge 2017 - 2018



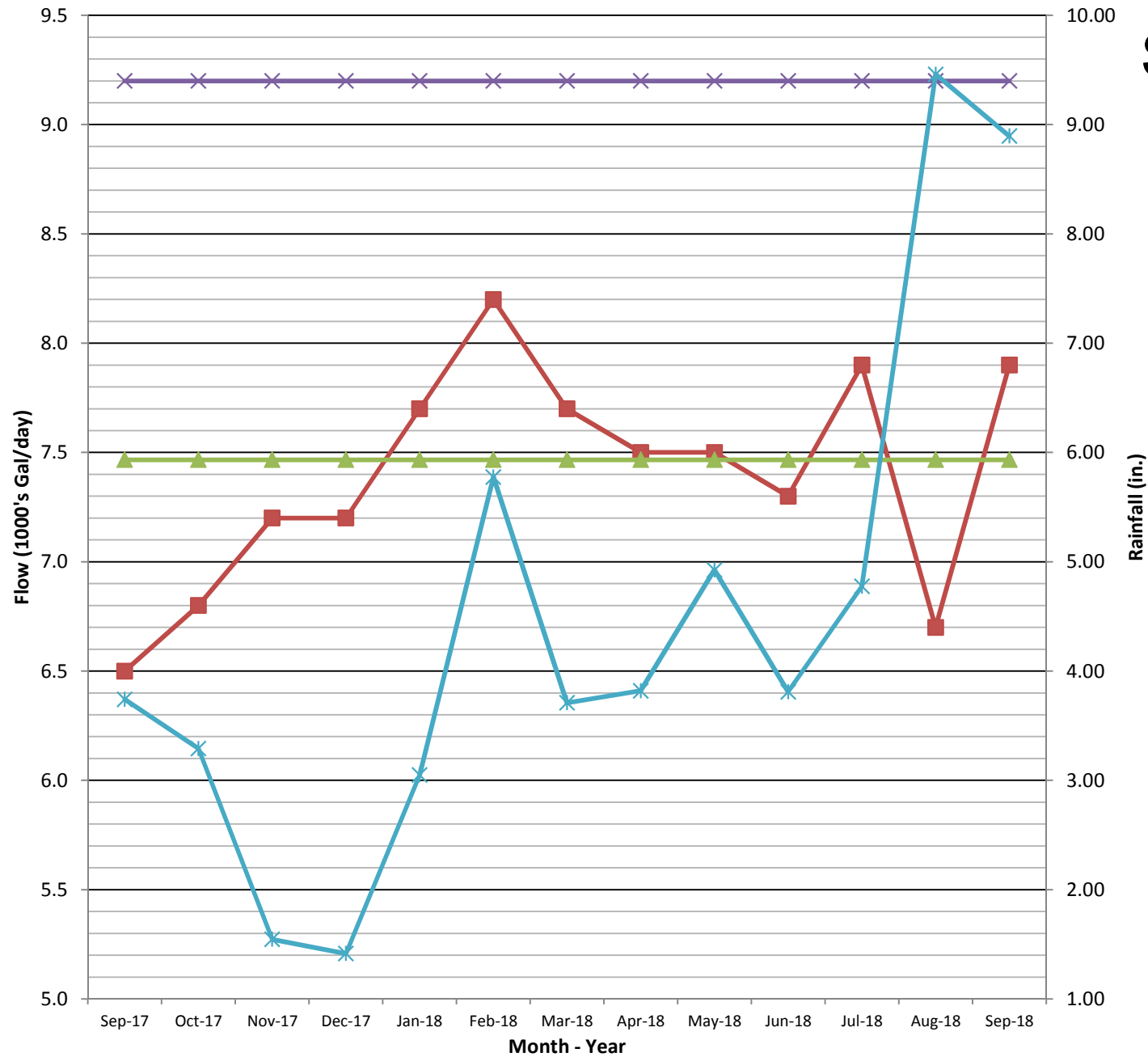
Marsh Harbour 2017 - 2018



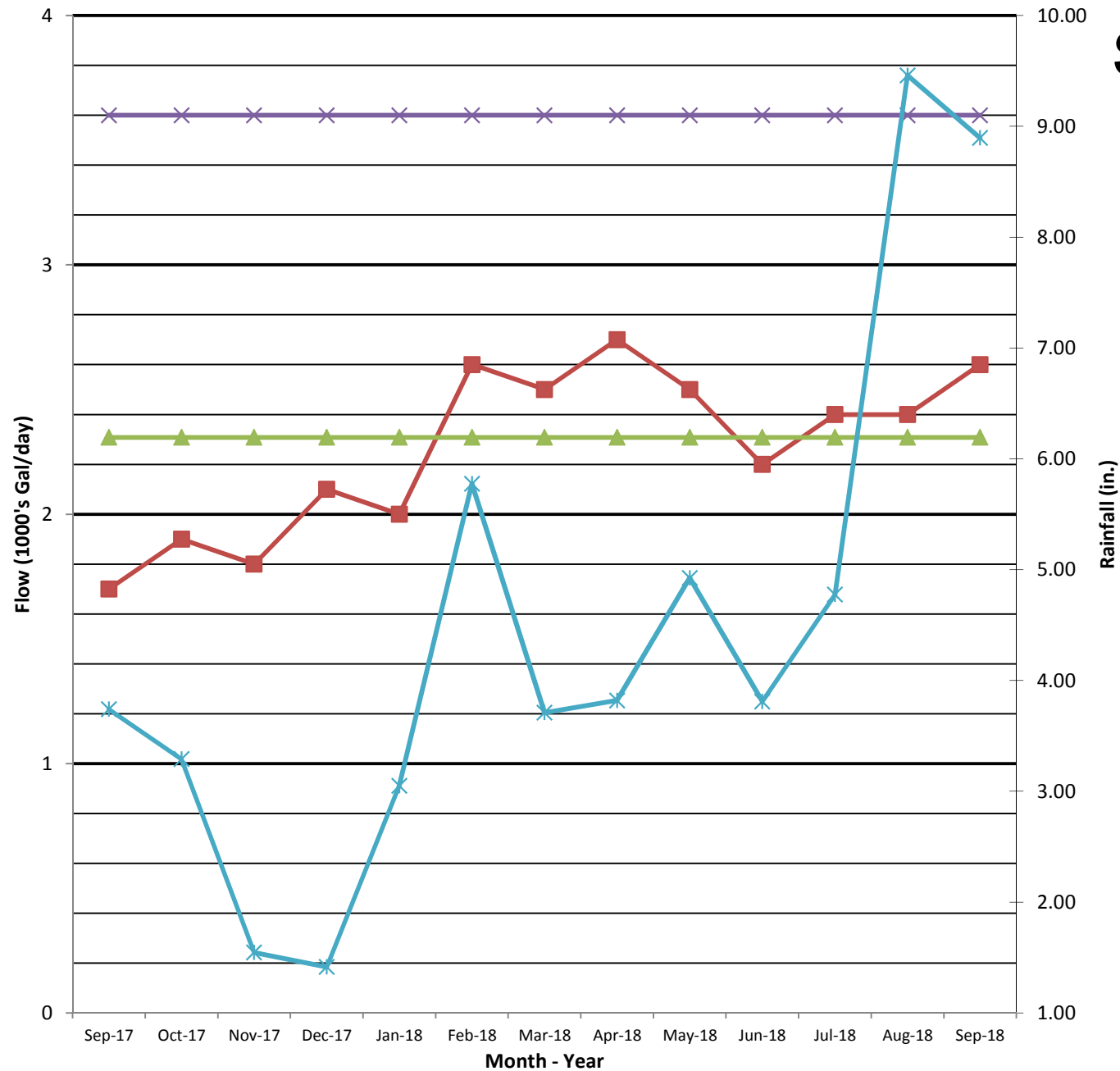
Route 100 2017 - 2018



Saybrooke 2017 - 2018



St. Andrews 2017 - 2018





To: Municipal Authority Members

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

Re: Authority Administrator's Report

Date: October 18, 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 bidding of the Lakeridge Sludge Holding Tank Project.
- I. Discussion with developer regarding project on Upattinas Property.

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



SEPTEMBER/OCTOBER 2018 REPORT UUT MUNICIPAL AUTHORITY PUBLIC WORKS DEPARTMENT

The following projects are underway:

Ongoing:

- Inspection was done on several plants and pump stations by DVIT Insurance. Linda Poole was very happy with Brian Owens' work since last year.
- 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 needs a roofing contractor to inspect and make some repairs
 3. Exterior cleanup and organization of materials and parts is complete. All castings and materials are palletized and in order.
 4. Water infiltration from groundwater in Building 2A has been plugged and will be monitored in the future.
 5. 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 has begun at this station.**
 - 3. **Power washed**
 - 4. **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 begun to install fence.**
- **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**
- **Stonehedge**
 - 1. **General cleaning of station**
- **Marsh Harbour WWTP .**
 - 1. **General cleaning and trash removal**

- **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 contractor has begun and is almost done with this station
- **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
 - 3. Fence work has been completed by contractors.
- **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
- **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 106 PA 1-Call tickets during the month of September.**

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