



NORTH RED DEER RIVER WATER SERVICES COMMISSION

Regular Meeting

June 25, 2018 @ 9:00 AM

LACOMBE CITY HALL

AGENDA

1. Call to Order
2. Adoption of Agenda
3. Adoption of Minutes
 - a. April 9 - Annual Meeting (*attached*)
4. Reports
 - a. Operations (*attached*)
 - b. Administrator (*attached*)
 - i) Monthly Report
 - ii) Financial - May 2018
 - c. Chair
5. Correspondence
 - a. City of Red Deer – 2018 Water Rate and Projection
6. Old Business
7. New Business
8. In Camera
9. Next Meeting Date: September 17, 2018 (proposed)
10. Adjournment

NORTH RED DEER RIVER WATER SERVICES COMMISSION
ANNUAL MEETING MINUTES
April 9, 2018

In Attendance: Chair Ken Wigmore, Lacombe County Councillor
Mayor Grant Creasey, City of Lacombe
Mayor Rick Bonnett, Town of Ponoka
Councillor Mark Matejka, Ponoka County
Mayor Richard Poole, Town of Blackfalds
Justin de Bresser, NRDRWSC Administrator
Jennifer Peterson, Administrator Assistant

Others Present: Albert Frootman, CAO, Town of Ponoka
Michael Minchin, Manager of Corporate Services, Lacombe County
Myron Thompson, CAO, Town of Blackfalds
Preston Weran, Director of Infrastructure, Town of Blackfalds
Chris Huston, Utilities Manager, City of Lacombe
Jordan Thompson, Acting Operation & Planning Director, City of Lacombe

Guest: Ryan Wachter, BDO Canada LLP

1. Call to Order:

Chair Wigmore called the meeting to order at 9:00 am.

2. Adoption of the Agenda:

MOVED by Mayor Poole that the agenda for April 9, 2018, be adopted as presented.

CARRIED

3. Adoption of the Minutes:

MOVED by Mayor Creasey that the minutes for December 11, 2017, be adopted as presented.

CARRIED

4. Presentation

A. 2017 Audit Financial Statement

Mr. Wachter of BDO Canada LLP, reviewed the Auditor's Report of the 2017 Audited Financial Statements.

In summary:

- Reported a "clean audit"
- Water sales to Commission Members was greater than budgeted.
- Expenses were less than budgeted.
- The Statement of Cash Flow showed over 6 million in cash at year end. This includes \$71,000 in interest revenue. Discussion occurred on ways to maximize the growth, rather than leaving the funds in the current state.

MOVED by Mayor Creasey that the Board directs Administration to look at investment options and invest any unallocated funds less 12 months operating expenses, at Mr. de Bresser discretion.

CARRIED

MOVED by Councillor Matejka to accept the Audited Statements as presented.

CARRIED

2018 Appointment of Auditors

Mr. de Bresser recommended that the Commission appoint BDO Canada LLP as the Commission's external financial auditors for the fifth and final fiscal year in 2018. He also advised the Board that it is the Commission's practice that in the fifth year of the current contact the audit service contact goes out for tender.

MOVED by Mayor Poole to appoint BDO Canada LLP as the external financial auditors for the 2018 fiscal year.

CARRIED

At 9:25 am Ryan Wachter of BDO Canada, left the meeting.

5. Reports

Operations Report

Mr. Huston discussed the recent operation activities.

In summary:

- The Alberta One-Call locate are up from February.
- Operations replaced an elbow at Railway in Blackfalds due to a leak. As well, as a leaking air release valve in a field adjacent to Central Alberta Greenhouse's property.
- In January operations had to reset two modems due to communication loss.
- Continuing to work with various contractors that are working in the vicinity of the waterline.
- Operations will be completing and submitting a *Request for Proposal* for the upgrade of software and hardware based on Stantec's SCADA assessment review and recommendations.

MOVED by Mayor Poole that Operations bring the RFP submissions and a recommendation to the June meeting for the Commission Members to review and approve.

CARRIED

MOVED by Councillor Matejka to Operational Report as information.

CARRIED

Administrator Report

Mr. de Bresser presented the Administrator's report.

In summary:

- Administration continues to work with Red Deer regarding the sale of a portion of the waterline. The Province has given preliminary approval for the sale. The grant funds received for construction of that portion of the line will not have to be returned. The Commission has been ask to take that amount into consideration when negotiating the sale price of the line.
- The year end was completed mid March.
- Administration was reminded to request the 5-year projects from Red Deer and provided the information to the Board at the next meeting.

MOVED by Mayor Creasey to accept reports as information.

CARRIED

Mr. de Bresser presented the financial report.

In summary:

- There is no true-up for 2017. The variance did not exceed the 10% of budget.
- 2018 Water sales are on budget. The summer months are normally where the bulk of the water is sold.
- An expense adjustment was made to the telephone GL.

MOVED by Mayor Bonnett to Operational Report as information.

• *CARRIED*

Chairperson's Report

Chair Wigmore share with the Commission that he had a discussion with Minister Richard Feehan regarding the suppling of water to the First Nation boundaries. The Board was in agreement that they would be open to discussion with the Bands should they be interested in coming to the Commission for discussion on the sale of water.

MOVED by Councillor Matejka to accept reports as information.

CARRIED

6. Correspondence/Information

The letter from the City of Red Deer regarding the 2017 True-up per the Water Sale Agreement was provided to the Board as information.

MOVED by Mayor Creasey to accept the letter as information.

CARRIED

7. Old Business:

8. New Business:

Bylaw 3.2– Amend Water Rate Bylaw #3

Mr. de Bresser presented Bylaw #3.2, a bylaw to amend the current Water Rate Bylaw #3 to include the increase rate of \$2.09 per cubic meter to members of the Commission. As well as an adjustment to the rate for the sale of water to Red Deer at a rate of \$1.960 per cubic meter.

MOVED by Mayor Creasey for first reading of Bylaw #3.2 – Water Rate as presented.

CARRIED

MOVED by Mayor Poole for second reading of Bylaw #3.2 – Water Rate as presented.

CARRIED

MOVED by Councillor Matejka for third and final reading of Bylaw #3.2 – Water Rate as presented.

CARRIED

Recognition Presentation

Chair Wigmore presented Steve Christie and Melodie Stol with a plaque and gift card to thank them for the years of commitment and service to the North Red Deer Water Services Commission.

Allocation of 2017 Surplus

There was a surplus of in 2017. Mr. de Bresser recommended that the surplus is allocated as presented

MOVED by Mayor Poole that the Board approves the following transfers to reserve:

- 1. That an amount equal to the annual amortization for 2017 be allocated to the Capital Reserves; and*
- 2. That an amount equal to \$18,149 be transferred to the Operating Reserves.*

CARRIED

9. IN Camera

Nothing to report at this time.

10. Next Meeting:

Monday, June 25, 2018 at 9:00 am, City of Lacombe Council Chambers.

11. Adjournment:

MOVED by Mayor Bonnett to adjourn this Meeting at 10:05 am.

CARRIED

Chairperson

Administrator

DRAFT

M E M O R A N D U M



North Red Deer River Water Services Commission

5432 56th Avenue
Lacombe, Alberta T4L 1E9

Phone: (403) 782-6666
Direct Line: (403) 782-1256
Fax: (403) 782-2234

chuston@lacombe.ca

June 25th, 2018

Attn: NRDRWSC

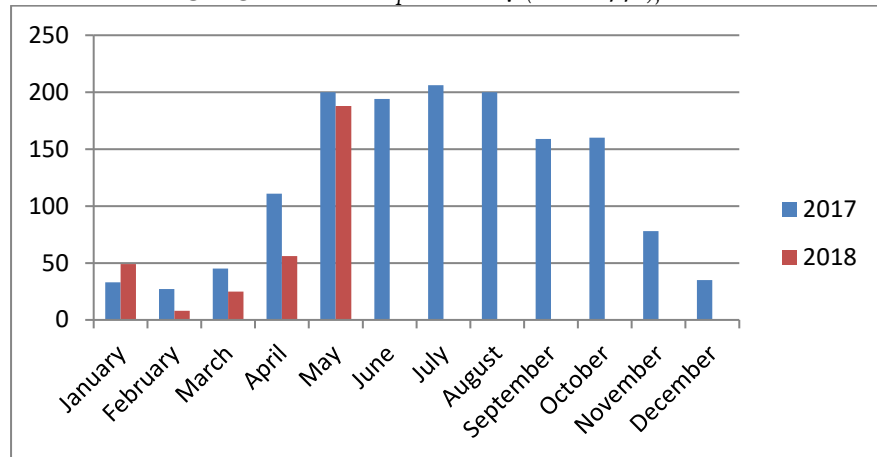
Re: Operational Report since April 09th, 2017.

Since the last update provided to members of the Commission, the City of Lacombe has:

GENERAL INFORMATION

- Alberta One-Call Locate Requests:
 - April - 56 locates
 - May - 188 locates

Alberta One-Call Locate Requests 2017 (total 1448); 2018 to date 326



Repair response charges:

- January 8 - Operator and LRL performed spring maintenance on heating & dehumidifiers on the regional line. Dehumidifier at main vault was inoperable - replaced unit.

Call-Out:

- April 22 - Operator called by Alberta One Call for an emergency locate request in Ponoka after hours.
- April 28 - Operator called by RDWTP - no communication on the entire line, Operator attempted to reset modems and was unable to restore communication - all communication restored itself the next morning
- May 20 - Operator called by Alberta One Call for an emergency locate request in Ponoka after hours.
- May 25 - Operator called by RDWTP - pumphouse 'B' outflow high and the Regional water line was unable to keep-up with demand. Operator found PHB running 2 pumps, shut one pump down and restored the station to normal operation.

General Information:

SCADA Upgrades – RFP has closed with 4 interested parties providing proposals, below is a summary of proponents and costing for the upgrade:

- RFP outlined the upgrades, provided the 2017-Stantec Assessment Report (minus costing), asked for schedule to complete, references, similar projects and methodology.
- Scoring Matrix:

Cost	40
Customer Service & Technical Support	30
Experience	20
References & Schedule	10
Total	100

- Cost ranged from \$131,000 to \$274,000;
- Customer Service referenced availability of staff, response time, response methodology, remote access, technical expertise, dedicated team.
- Experience referenced key staff, similar projects, schedule to complete

Overall Scoring:

Vendor	Cost (40)	Customer/Technical (30)	Experience (20)	References/Schedule (10)	Total (100)
Eramosa	40	20	18	9	87
Stantec	25	25	18	6	74
MPE	34	17	10	4	65
Celco	22	15	18	4	59

Cost:

Vendor	Cost	Rank
Eramosa	\$131,212	Lowest
Stantec	\$251,800	Third
MPE	\$181,100	Second
Celco	\$274,376	Highest

As shown above Eramosa ranked the highest and has the lowest cost. Stantec came in considerably higher (plus \$120,000).

Recommendation:

Operations recommends awarding **Eramosa with the SCADA upgrade project for \$178,212 (including a \$47,000 contingency).** Eramosa's proposal shows competent knowledge in SCADA systems, they are a Gold certified installer with Inductive Automation's Ignition software; they have relevant experience in similar projects completed in Alberta (including Red Deer, Calgary, Cochrane, Grande Prairie); have one outlying item that they were unable to provide costing on the SCADARR (Supervisory Control and Data Acquisition Records and Reporting) web-based platform.

Due to this missing cost, Operations recommends carrying a \$47,000 contingency that would also still maintain a lowest cost proposal for the Commission.

Stantec's proposal came in the third highest in cost, there proposal was the only one that identified \$60,000 allocated for project management and included a caveat that there would be additional costs for electricians/installation/commissioning. Other proponents included these costs within their bids.

Eramosa would start the upgrades on August 1st for the duration of 12 weeks with completion mid-October.

If you have any questions or comments regarding the operations described above please don't hesitate to call or email me.

Regards,

A handwritten signature in blue ink, appearing to read "L-H", is positioned above the printed name.

Chris Huston
Operations Supervisor



**North Red Deer
Regional Water
Services
Commission**

5432 56th Avenue
Lacombe, Alberta
T4L 1E9

Memorandum

TO: Commission Board Members
FROM: Justin de Bresser, Acting Administrator
DATE: June 25, 2018

RE: Administrator's Report – 2nd Qtr 2018

REF: 47/117
(2018)

The following is a summary of items Administration has been working on since the Board's last meeting:

1. Administration has invested \$5,000,000 in long term investments. Consisting of 80% bonds in Schedule 1 banks and 20% principle protected notes. Current yield on the bonds is 3.45% with estimated yearly income of \$128,689 (2018 Budgeted interest is \$50,000) Principle protected notes returns are based on the 100% upside of the TSX Low Volatility Index at maturity.
2. City of Red Deer provided the water rate model for 2018. This document provided the calculation on the water rate for 2018. The City also mentioned that they do not provide a 5 year projection as per section 5(4) of the agreement to supply water. (See Correspondence)
3. Administration is still working with Red Deer to formalize the sale of the portion of water line. City of Red Deer should have a package to the commission later this month.
4. Financial statements and Financial Information Returns were filed with the Province.



5432 56th Avenue
Lacombe, Alberta T4L 1E9

Memorandum

TO: Commission Board Members
FROM: Justin de Bresser, Acting Administrator
DATE: June 13, 2018

RE: May 2018 Variance Report

REF: 13/860
2018

Attached is the 2018 variance report as of May 31st for the regional water commission.

Water sales are slightly over budget so far this year with peak summer months just beginning. Volumes for May were up over historic averages for all members due to the drier weather.

SCADA Maintenance over budget due to ongoing maintenance to keep system operational.

Expenses remain in line with expectations. No extraordinary expenses have been incurred. As expected the largest purchase to date is the purchase of water from the City of Red Deer.

CITY OF LACOMBE

GL Department Report



GL5330

Page : 1

Date : Jun 13, 2018

Time : 11:44 am

Year : 2018

Period : 5

Budget : FINAL BUDGET

Group by: Default

Account No.	Description	CC1	CC2	CC3	Current	Year to Date	Budget	Variance	% Used
REGIONAL WATER REPORTING									
REVENUES									
06-1-47-35110	Water Sales - City of La				-266,034	-1,117,899	-2,660,343	-1,542,444	42
06-1-47-35120	Water Sales - Town of P				-140,917	-595,871	-1,469,568	-873,697	41
06-1-47-35130	Water Sales - Town of B				-170,796	-667,569	-1,600,139	-932,569	42
06-1-47-35140	Water Sales - Ponoka C				-2,683	-6,901	-24,923	-18,022	28
06-1-47-35150	Water Sales - City of Re				-173	-757	-7,550	-6,793	10
06-1-47-42200	Line Crossing Agreeeme				0	0	-1,500	-1,500	
06-1-47-55100	Interest Revenue				-3,299	-39,127	-50,000	-10,873	78
06-1-47-55500	Rebates & Dividends				0	0	-30	-30	
06-1-47-85140	Lacombe County Contri				0	0	-70,195	-70,195	
06-1-47-85150	Ponoka County Contribu				0	0	-70,195	-70,195	
06-1-47-92100	Transfer from Reserves				0	0	-215,000	-215,000	
REVENUES					-583,903	-2,428,125	-6,169,442	-3,741,318	39
EXPENSES									
06-2-47-11110	Board Wages-City of La				0	150	1,400	1,250	11
06-2-47-11120	Board Wages-Town of P				0	150	600	450	25
06-2-47-11130	Board Wages-Town of B				0	150	600	450	25
06-2-47-11140	Board Wages-Lacombe				0	350	600	250	58
06-2-47-11150	Board Wages-Ponoka C				0	150	600	450	25
06-2-47-21110	Board Travel-City of Lac				0	0	250	250	
06-2-47-21120	Board Travel -Town of P				0	30	250	220	12
06-2-47-21130	Board Travel-Town of Bl				0	15	250	235	6
06-2-47-21140	Board Travel-Lacombe (0	8	250	242	3
06-2-47-21150	Board Travel-Ponoka Cc				0	30	250	220	12
06-2-47-21170	Travel-Administration				0	0	100	100	
06-2-47-21400	Membership Fees				0	114	300	186	38
06-2-47-21500	Postage & Freight				0	0	50	50	
06-2-47-21600	Staff & Volunteer Appre				0	185	300	115	62
06-2-47-21700	Telephone - Office				695	2,135	1,080	-1,055	198
06-2-47-21701	Telephone - Operations				0	1,336	8,072	6,737	17
06-2-47-23000	Management Fees				4,737	23,685	56,844	33,159	42
06-2-47-23100	Accounting and Auditor				0	1,001	8,000	6,999	13
06-2-47-23200	Legal Fees				0	2,067	500	-1,567	413
06-2-47-23900	Other Professional Serv				0	1,197	16,800	15,603	7
06-2-47-25300	Equipment Repair & Ma				2,243	2,872	9,500	6,628	30
06-2-47-25301	SCADA Maintenance				722	19,001	9,025	-9,976	211
06-2-47-27400	Insurance & Bond Prem				0	3,396	3,889	493	87
06-2-47-34200	Administration				883	4,415	10,596	6,181	42
06-2-47-35100	Purchase of Water				430,173	1,676,391	4,096,061	2,419,670	41
06-2-47-35200	Operations				10,765	42,486	123,637	81,151	34
06-2-47-51000	Miscellaneous Expense:				489	738	250	-488	295
06-2-47-51100	Meeting Supplies				0	0	50	50	
06-2-47-51400	Office Supplies				0	0	150	150	
06-2-47-52400	General Materials & Sup				0	223	750	527	30
06-2-47-54400	Utilities-Electricity				358	1,274	3,500	2,226	36
06-2-47-56400	Valves				0	2,975	5,000	2,025	60
06-2-47-81400	Bank Charges & Interes				0	20	25	5	80
06-2-47-83100	Debenture Interest				0	30,759	570,359	539,600	5
06-2-47-83200	Debenture Principal				0	36,003	704,542	668,539	5
06-2-47-99000	Amortization				0	0	465,610	465,610	

CITY OF LACOMBE
GL Department Report



GL5330

Page : 2

Date : Jun 13, 2018

Time : 11:44 am

Year : 2018

Period : 5

Budget : FINAL BUDGET

Account No.	Description	CC1	CC2	CC3	Current	Year To Date	Budget	Variance	% Used
REGIONAL WATER REPORTING									
				EXPENSES	451,066	1,853,306	6,100,040	4,246,734	30
	REGIONAL WATER REPORTING Total				-132,837	-574,819	-69,402	505,417	828



ENVIRONMENTAL SERVICES

May 16, 2018

Justin de Bresser CPA, CMA
Administrator
North Red Deer River Water Services Commission
c/o City of Lacombe
5432 – 56 AVE
Lacombe AB T4L 1E9

Dear Mr. de Bresser,

**Re: North Red Deer River Water Services Commission
2018 Water Rate Model and Projection Rates**

In response to your letter of May 7, 2018 attached is a PDF copy of the 2018 Water rate model which was used to calculate North Red Deer River Water Services Commission's 2018 rate. The City of Red Deer also requests a copy of the NRDRWSC 2018 price model outlining how the \$1.96 portable water rate was calculated.

Currently The City of Red Deer only calculates rates for the upcoming year and does not prepare a 5-year projection model. Under section 5(4) of the agreement the City is required to supply the rate for the next year by November 30 subject to Council approval.

Should you have any questions or concerns, please contact me.

Sincerely,



Tim Ainscough, P. Eng.
Environmental Services Manager

jf/

c. Water Superintendent
Development Services Director
Environmental Services Administrative & Accounting Supervisor

Schedule 1														
Rate Design (2018)														
Current Rate (excluding MCAF)	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	
Usage Charge (per m3)	1.295	1.295	1.295	1.295	1.295	1.295	1.295	1.295	1.295	0.000	1.420	1.380	0.000	
Fixed Monthly Charge	14.14	18.94	25.73	51.10	116.30	212.34	484.60	925.14	1,674.06	0.00	0.00	0.00	0.00	
MCAF (prior year)	13.50 %	13.50 %	13.50 %	13.50 %	13.50 %	13.50 %	13.50 %	13.50 %	13.50 %	13.50 %	0.00 %	0.00 %	13.50 %	
Billing Determinants	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Volume - Total Sales	5,836,792	218,826	352,288	801,197	1,141,127	585,607	989,423	941,917	0	0	397,000	2,812,263	54,336	14,130,776
Sites - Total Bills	365,592	7,476	6,216	6,900	4,404	1,116	276	120	0	0	12	12	12	392,136
Current Percent Revenues on Fixed Charge	41 %	33 %	26 %	25 %	26 %	24 %	9 %	8 %	0 %	0 %	0 %	0 %	0 %	27 %
Revenue Adjustment	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Allocated Revenue Requirement	13,055,734	411,430	588,485	1,243,083	1,699,722	872,755	1,484,921	1,327,800	0	0	591,469	4,142,839	674,471	26,092,710
Adjustment (\$)	(556,813)	11,931	27,070	150,413	294,902	123,931	(66,821)	15,386	0	0	0	0	0	0
Adjustment (%)	-4.3%	2.9%	4.6%	12.1%	17.4%	14.2%	-4.5%	1.2%	0 %	0 %	0 %	0 %	0 %	0 %
Revenue Target	12,498,921	423,362	615,555	1,393,496	1,994,624	996,686	1,418,100	1,343,187	0	0	591,469	4,142,839	674,471	26,092,710
Fixed Monthly Charge Options	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	
Current Charge	14.14	18.94	25.73	51.10	116.30	212.34	484.60	925.14	1,674.06	0.00	0.00	0.00	0.00	
Unit Cost	12.56	12.63	12.73	12.99	14.18	15.00	16.05	17.09	0.00	0.00	4.25	4.25	17,048.77	
Revenue Stability	13.88	18.87	25.70	51.22	116.56	212.61	485.57	933.45	0.00	0.00	0.00	0.00	0.00	
Recommended	12.56	12.63	25.70	51.22	116.56	212.61	485.57	933.45	0.00	0.00	0.00	0.00	0.00	
Usage Charge Options	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	
Current Charge	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	0.00	1.42	1.38	0.00	
Unit Cost	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.00	0.00	0.88	0.88	8.65	
Unit Cost, All-in	2.24	1.88	1.67	1.55	1.49	1.49	1.50	1.41	0.00	0.00	1.49	1.47	12.41	
Unit Cost, Utility Average (non-fixed costs only)	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	
Revenue Stability	1.27	1.29	1.29	1.30	1.30	1.30	1.30	1.31	0.00	0.00	1.49	1.47	12.41	
Recommended (excluding MCAF)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.490	1.473	12.41	
Recommended Rate	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	
Usage Charge (per m3)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.49	1.47	12.41	
Fixed Monthly Charge	12.79	17.40	23.06	46.32	105.60	189.73	332.90	670.56	0.00	0.00	0.00	0.00	0.00	
Revenues	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Total Revenue	12,498,921	423,362	615,555	1,393,496	1,994,624	996,686	1,418,100	1,343,187	0	0	591,469	4,142,839	674,471	26,092,710
Revenue to Cost Ratio	96 %	103 %	105 %	112 %	117 %	114 %	96 %	101 %	0 %	0 %	100 %	100 %	100 %	100 %
Rate Increase	(2)%	(0)%	(0)%	0 %	0 %	0 %	0 %	1 %	0 %	0 %	5 %	7 %	0 %	2.98%
Rate Including MCAF	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	
Usage Charge (per m3)	1.520	1.520	1.520	1.520	1.520	1.520	1.520	1.520	1.520	1.520	1.490	1.473	14.088	
Fixed Monthly Charge	14.50	19.73	26.15	52.52	119.75	215.15	377.51	760.42	0.00	0.00	0.00	0.00	0.00	

Schedule 1														
Reconciliation check														
	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Total revenue	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Bylaw March 1, 2017 (MCAF Included)														
2017 MCAF Rate	13.50%													
Usage Charge (per m3)	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47					
Fixed Monthly Charge	16.05	21.50	29.20	58.00	132.00	241.00	550.00	1,050.00	1,900.00					
2018 Water Rate Calculation														
South Region	1.49	4.9% increase												
North Region	1.47	6.7% increase												
MCAF (from overview page Financial Model)	13.40%	updated October 23, 2017												
Current Rates	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	City Total	South Hill	North Region	Total
Current Usage Charge	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47		1.42	1.38	
Current Fixed Charge	16.05	21.50	29.20	58.00	132.00	241.00	550.00	1,050.00	1,900.00	0.00		0.00	0.00	
Revenue - Current Rates and Projected Load	14,447,836	482,408	699,371	1,577,960	2,258,785	1,129,798	1,606,252	1,510,895	0	0	23,713,304	563,740	3,880,923	28,157,967
Portion of Revenue from Rate Class	61%	2%	3%	7%	10%	5%	7%	6%						
Proposed Rates	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	City Total	South Hill	North Region	Total
Revenue Requirement	13,055,734	411,430	588,485	1,243,083	1,699,722	872,755	1,484,921	1,327,800			20,683,930	591,469	4,142,839	25,418,239
MCAF	1,749,377	55,129	78,853	166,564	227,751	116,943	198,969	177,916			2,771,502	0	0	2,771,502
Revenue Requirement including MCAF	14,805,111	466,559	667,338	1,409,647	1,927,473	989,698	1,683,890	1,505,716			23,455,432	591,469	4,142,839	28,189,740
Fire Protection Recovery (see below)	425,728	13,416	19,190	40,535	55,425	28,459	48,421	43,298			674,471	0	0	674,471
Total Revenue Requirement	15,230,839	479,975	686,527	1,450,182	1,982,898	1,018,157	1,732,311	1,549,014			24,129,904	591,469	4,142,839	28,864,212
Adjustment (\$)	(623,008)	13,530	30,698	170,567	334,417	140,537	(75,775)	9,034			(0)	0	0	0
Adjustment (%)	-4.26%	2.9%	4.6%	12.1%	17.4%	14.2%	-4.5%	0.6%						
Revenue Target	14,607,831	493,505	717,225	1,620,750	2,317,315	1,158,694	1,656,536	1,558,048			24,129,904	591,469	4,142,839	28,864,212
Usage Charge	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52		1.49	1.47	
Revenue from Usage Charge	8,871,924	332,616	535,478	1,217,819	1,734,513	890,123	1,503,923	1,431,714			16,518,109			
Revenue from Fixed Charge	5,735,907	160,890	181,747	402,930	582,801	268,572	152,613	126,334			7,611,795			
Fixed Rate Required	15.69	21.52	29.24	58.40	132.33	240.66	552.95	1,050.48						
Rounded Fixed Rate	15.70	21.50	29.20	58.00	132.00	241.00	550.00	1,050.00	1,900.00					
Total Revenue	14,611,718	493,350	716,985	1,618,019	2,315,841	1,159,079	1,655,723	1,557,991			24,128,706	(1,198)		
Fixed Rate Change	-2%	0%	0%	1%	0%	0%	1%	0%						
Revenue from Usage Charge	60%	71%	80%	86%	90%	90%	89%	95%			68%			
Change from Current Rates	163,882	10,941	17,614	40,060	57,056	29,280	49,471	47,096			415,402			
Change from Current Rates (percent)	1.1%	2.3%	2.5%	2.5%	2.5%	2.6%	3.1%	3.1%			1.8%			
Rate Change Analysis														
Typical Volume	16.0	29.3	56.7	116.1	259.1	524.7	3,584.9	7,832.1						
Change for typical bill	1.1%	2.3%	2.5%	2.5%	2.5%	2.6%	3.1%	3.1%						
5th Percentile Volume	5	5	5	7	7	7	11	640						
Change for 5th Percentile	-0.4%	0.9%	0.7%	0.5%	0.2%	0.1%	0.1%	1.6%						
95th Percentile Volume	35	115	175	440	800	1,700	22,500	54,900						
Change for 95th Percentile	2.1%	3.0%	3.1%	3.1%	3.1%	3.1%	3.3%	3.4%						
Difference between Fixed Rates	-	0.4	0.9	2.7	7	14	34	66	120					
Difference between equivalent meters	-	0.4	1.4	4.6	9	21	38	87	155					
Equivalent ratios based on investment (AWWA)	1.0	1.1	1.4	1.8	2.9	11	14	21	29					
Revenue per m3	2.50	2.25	2.04	2.02	2.03	1.98	1.67	1.65						
Rate Transition Objectives:														
Eliminate rate class adjustments, but keep annual cost change for 90% of customers (i.e. between the 5th and 95th percentiles) below ~15%.														
Increase revenue from usage charges for residential customers to at least 50%.														
Usage charge should move toward the volume and demand unit cost (plus MCAF) from sheet 2.						1.64								
Use a uniform usage rate for all classes and a rational fixed rate progression between classes (i.e. larger meters should have higher fixed rates).														

Schedule 1														
Fire Protection Recovery from ES					City customer rate change is different from Financial model because:									
Transfer from BU 222.8820		0			MCAF rate change									
2018 FAR		0			Change in allocation to Regional and Fire									
Total recovery from Emergency Services		0			Surplus/Deficit generated by actual rates in past year									
Amount to be recovered from City Customers		674,471			Surplus/Deficit generated by actual rates in current year									
Reconciliation Rate Model to Bylaw														
Revenue Requirement		26,092,710												
Less:														
Regional	4,734,308													
Fire Protection	674,471													
	5,408,780	(5,408,780)												
Bylaw Revenue Req'd		20,683,930												
Test		0												

Schedule 2													
Allocated Revenue Requirement Summary and Unit Cost (2018)													
Billing Determinants	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Volume - Total Sales	5,836,792	218,826	352,288	801,197	1,141,127	585,607	989,423	941,917	0	0	397,000	2,812,263	54,336
Sites - Total Bills	365,592	7,476	6,216	6,900	4,404	1,116	276	120	0	0	12	12	12
Revenue Requirement	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Revenues on Current Rates	12,729,783	425,043	616,205	1,390,318	1,990,183	995,449	1,415,246	1,331,228	0	0	563,740	3,880,923	0
Allocated Revenue Requirement	13,055,734	411,430	588,485	1,243,083	1,699,722	872,755	1,484,921	1,327,800	0	0	591,469	4,142,839	674,471
Revenue to Cost Ratio	98 %	103 %	105 %	112 %	117 %	114 %	95 %	100 %	0 %	0 %	95 %	94 %	0 %
Rate Increase to 100% of Cost	3 %	(3)%	(4)%	(11)%	(15)%	(12)%	5 %	(0)%	0 %	0 %	4.92 %	6.75 %	0 %
Revenue Requirement by Classification	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Demand	3,574,975	133,794	214,340	482,577	681,739	365,644	651,983	537,017	0	0	240,806	1,678,577	0
Volume	4,887,524	183,237	294,994	670,894	955,540	490,367	828,508	788,728	0	0	350,612	2,464,211	469,886
Site	4,593,235	94,399	79,151	89,611	62,444	16,744	4,431	2,055	0	0	51	51	204,585
Total	13,055,734	411,430	588,485	1,243,083	1,699,722	872,755	1,484,921	1,327,800	0	0	591,469	4,142,839	674,471
Unit Cost	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Demand per m3	0.61	0.61	0.61	0.60	0.60	0.62	0.66	0.57	0.00	0.00	0.61	0.60	0.00
Volume per m3	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.00	0.00	0.88	0.88	8.65
Site per bill	12.56	12.63	12.73	12.99	14.18	15.00	16.05	17.09	0.00	0.00	4.25	4.25	17,048.77
Total per m3	2.24	1.88	1.67	1.55	1.49	1.49	1.50	1.41	0.00	0.00	1.49	1.47	12.41
Unit Cost - Site related cost detail	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pump Stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
North Region Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Distribution Mains & Valves	4.29	4.27	4.27	4.28	4.32	4.26	4.38	4.36	0.00	0.00	4.25	4.25	9,487.88
Distribution Services	3.35	3.42	3.51	3.64	4.74	4.97	5.80	6.38	0.00	0.00	0.00	0.00	7,560.89
Meters	0.09	0.10	0.12	0.23	0.29	0.93	1.04	1.52	0.00	0.00	0.00	0.00	0.00
Hydrants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Regional Care	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Customer Care	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	0.00	0.00	0.00	0.00	0.00
Rate Adjustments	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	12.56	12.63	12.73	12.99	14.18	15.00	16.05	17.09	0.00	0.00	4.25	4.25	17,048.77

Schedule 2	
Allocated Revenue Requirement Summary and Un	
Billing Determinants	Total
Volume - Total Sales	14,130,776
Sites - Total Bills	392,136
Revenue Requirement	Total
Revenues on Current Rates	25,338,118
Allocated Revenue Requirement	26,092,710
Revenue to Cost Ratio	97 %
Rate Increase to 100% of Cost	3 %
Revenue Requirement by Classification	Total
Demand	8,561,452
Volume	12,384,500
Site	5,146,758
Total	26,092,710
Unit Cost	Total
Demand per m3	0.61
Volume per m3	0.88
Site per bill	13.12
Total per m3	1.85
Unit Cost - Site related cost detail	Total
Treatment	0.00
Pump Stations	0.00
North Region Line	0.00
Distribution Mains & Valves	4.58
Distribution Services	3.61
Meters	0.10
Hydrants	0.00
Regional Care	0.00
Customer Care	4.83
Rate Adjustments	0.00
Total	13.12

Schedule 3													
Allocated Revenue Requirement by Classification (2018)													
Net Revenue Requirement - Demand Related													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	761,596	28,865	45,252	103,723	148,059	78,429	134,527	104,017	0	0	50,985	361,800	0
Pump Stations	173,469	6,575	10,307	23,625	33,724	17,864	30,641	23,692	0	0	11,613	82,407	0
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	2,639,910	98,354	158,781	355,229	499,956	269,352	486,815	409,308	0	0	178,208	1,234,369	0
Distribution Services	0	0	0	0	0	0	0	0	0	0	0	0	0
Meters	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Care	0	0	0	0	0	0	0	0	0	0	0	0	0
Rate Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3,574,975	133,794	214,340	482,577	681,739	365,644	651,983	537,017	0	0	240,806	1,678,577	0
Net Revenue Requirement - Volume Related													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	4,160,209	155,970	251,095	571,058	813,345	417,395	705,217	671,357	0	0	282,964	2,004,458	38,728
Pump Stations	947,572	35,525	57,192	130,070	185,256	95,070	160,628	152,915	0	0	64,451	456,556	8,821
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Services	0	0	0	0	0	0	0	0	0	0	0	0	0
Meters	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	424,387
Regional Care	0	0	0	0	0	0	0	0	0	0	3,197	3,197	0
Customer Care	0	0	0	0	0	0	0	0	0	0	0	0	0
Rate Adjustments	(220,257)	(8,258)	(13,294)	(30,234)	(43,062)	(22,098)	(37,337)	(35,544)	0	0	0	0	(2,050)
Total	4,887,524	183,237	294,994	670,894	955,540	490,367	828,508	788,728	0	0	350,612	2,464,211	469,886
Net Revenue Requirement - Site Related													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	1,567,338	31,944	26,527	29,563	19,012	4,758	1,210	525	0	0	51	51	113,855
Distribution Services	1,224,799	25,540	21,839	25,102	20,868	5,547	1,600	767	0	0	0	0	90,731
Meters	33,348	766	729	1,582	1,269	1,043	287	182	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Care	1,767,750	36,149	30,056	33,364	21,295	5,396	1,335	582	0	0	0	0	0
Rate Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	4,593,235	94,399	79,151	89,611	62,444	16,744	4,431	2,055	0	0	51	51	204,585
Net Revenue Requirement by Classification													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Demand	3,574,975	133,794	214,340	482,577	681,739	365,644	651,983	537,017	0	0	240,806	1,678,577	0
Volume	4,887,524	183,237	294,994	670,894	955,540	490,367	828,508	788,728	0	0	350,612	2,464,211	469,886
Site	4,593,235	94,399	79,151	89,611	62,444	16,744	4,431	2,055	0	0	51	51	204,585
Total	13,055,734	411,430	588,485	1,243,083	1,699,722	872,755	1,484,921	1,327,800	0	0	591,469	4,142,839	674,471

Schedule 3	
Allocated Revenue Requirement by Classification (2)	
Net Revenue Requirement - Demand Related	
Function	Total
Treatment	1,817,254
Pump Stations	413,916
North Region Line	0
Distribution Mains & Valves	6,330,282
Distribution Services	0
Meters	0
Hydrants	0
Regional Care	0
Customer Care	0
Rate Adjustments	0
Total	8,561,452
Net Revenue Requirement - Volume Related	
Function	Total
Treatment	10,071,797
Pump Stations	2,294,056
North Region Line	0
Distribution Mains & Valves	0
Distribution Services	0
Meters	0
Hydrants	424,387
Regional Care	6,394
Customer Care	0
Rate Adjustments	(412,134)
Total	12,384,500
Net Revenue Requirement - Site Related	
Function	Total
Treatment	0
Pump Stations	0
North Region Line	0
Distribution Mains & Valves	1,794,833
Distribution Services	1,416,793
Meters	39,207
Hydrants	0
Regional Care	0
Customer Care	1,895,926
Rate Adjustments	0
Total	5,146,758
Net Revenue Requirement by Classification	
Function	Total
Demand	8,561,452
Volume	12,384,500
Site	5,146,758
Total	26,092,710

Schedule 4													
Allocated Revenue Requirement Detail (2018)													
Total Utility Expenses													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	4,921,806	184,835	296,348	674,781	961,405	495,824	839,744	775,374	0	0	333,949	2,366,258	38,728
Pump Stations	1,121,041	42,100	67,499	153,695	218,979	112,934	191,269	176,607	0	0	76,064	538,963	8,821
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	4,207,247	130,298	185,308	384,792	518,968	274,110	488,025	409,832	0	0	178,259	1,234,421	113,855
Distribution Services	1,224,799	25,540	21,839	25,102	20,868	5,547	1,600	767	0	0	0	0	90,731
Meters	33,348	766	729	1,582	1,269	1,043	287	182	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	424,387
Regional Care	0	0	0	0	0	0	0	0	0	0	3,197	3,197	0
Customer Care	2,477,165	50,656	42,118	46,753	29,840	7,562	1,870	815	0	0	0	0	0
Rate Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	13,985,406	434,195	613,841	1,286,706	1,751,329	897,019	1,522,794	1,363,578	0	0	591,469	4,142,839	676,522
Misc Revenues													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Services	0	0	0	0	0	0	0	0	0	0	0	0	0
Meters	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Care	(709,415)	(14,507)	(12,062)	(13,389)	(8,546)	(2,166)	(536)	(233)	0	0	0	0	0
Rate Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	(709,415)	(14,507)	(12,062)	(13,389)	(8,546)	(2,166)	(536)	(233)	0	0	0	0	0
Other													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Services	0	0	0	0	0	0	0	0	0	0	0	0	0
Meters	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Care	0	0	0	0	0	0	0	0	0	0	0	0	0
Rate Adjustments	(220,257)	(8,258)	(13,294)	(30,234)	(43,062)	(22,098)	(37,337)	(35,544)	0	0	0	0	(2,050)
Total	(220,257)	(8,258)	(13,294)	(30,234)	(43,062)	(22,098)	(37,337)	(35,544)	0	0	0	0	(2,050)

Schedule 4	
Allocated Revenue Requirement Detail (2018)	
Total Utility Expenses	
Function	Total
Treatment	11,889,051
Pump Stations	2,707,972
North Region Line	0
Distribution Mains & Valves	8,125,115
Distribution Services	1,416,793
Meters	39,207
Hydrants	424,387
Regional Care	6,394
Customer Care	2,656,779
Rate Adjustments	0
Total	27,265,697
Misc Revenues	
Function	Total
Treatment	0
Pump Stations	0
North Region Line	0
Distribution Mains & Valves	0
Distribution Services	0
Meters	0
Hydrants	0
Regional Care	0
Customer Care	(760,853)
Rate Adjustments	0
Total	(760,853)
Other	
Function	Total
Treatment	0
Pump Stations	0
North Region Line	0
Distribution Mains & Valves	0
Distribution Services	0
Meters	0
Hydrants	0
Regional Care	0
Customer Care	0
Rate Adjustments	(412,134)
Total	(412,134)

Schedule 4													
Net Revenue Requirement													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	4,921,806	184,835	296,348	674,781	961,405	495,824	839,744	775,374	0	0	333,949	2,366,258	38,728
Pump Stations	1,121,041	42,100	67,499	153,695	218,979	112,934	191,269	176,607	0	0	76,064	538,963	8,821
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	4,207,247	130,298	185,308	384,792	518,968	274,110	488,025	409,832	0	0	178,259	1,234,421	113,855
Distribution Services	1,224,799	25,540	21,839	25,102	20,868	5,547	1,600	767	0	0	0	0	90,731
Meters	33,348	766	729	1,582	1,269	1,043	287	182	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	424,387
Regional Care	0	0	0	0	0	0	0	0	0	0	3,197	3,197	0
Customer Care	1,767,750	36,149	30,056	33,364	21,295	5,396	1,335	582	0	0	0	0	0
Rate Adjustments	(220,257)	(8,258)	(13,294)	(30,234)	(43,062)	(22,098)	(37,337)	(35,544)	0	0	0	0	(2,050)
Total	13,055,734	411,430	588,485	1,243,083	1,699,722	872,755	1,484,921	1,327,800	0	0	591,469	4,142,839	674,471
Net Revenue Requirement - Percent													
Function	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Treatment	38 %	45 %	50 %	54 %	57 %	57 %	57 %	58 %	0 %	0 %	56 %	57 %	6 %
Pump Stations	9 %	10 %	11 %	12 %	13 %	13 %	13 %	13 %	0 %	0 %	13 %	13 %	1 %
North Region Line	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Distribution Mains & Valves	32 %	32 %	31 %	31 %	31 %	31 %	33 %	31 %	0 %	0 %	30 %	30 %	17 %
Distribution Services	9 %	6 %	4 %	2 %	1 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	13 %
Meters	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Hydrants	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	63 %
Regional Care	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	1 %	0 %	0 %
Customer Care	14 %	9 %	5 %	3 %	1 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Rate Adjustments	(2)%	(2)%	(2)%	(2)%	(3)%	(3)%	(3)%	(3)%	0 %	0 %	0 %	0 %	(0)%
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	0 %	0 %	100 %	100 %	100 %
Reconciliation check													
	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection
Sum of parts equals whole	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Reconciles to prefuctionalized revenue requirement													

Schedule 4	
Net Revenue Requirement	
Function	Total
Treatment	11,889,051
Pump Stations	2,707,972
North Region Line	0
Distribution Mains & Valves	8,125,115
Distribution Services	1,416,793
Meters	39,207
Hydrants	424,387
Regional Care	6,394
Customer Care	1,895,926
Rate Adjustments	(412,134)
Total	26,092,710
Net Revenue Requirement - Percent	
Function	Total
Treatment	46 %
Pump Stations	10 %
North Region Line	0 %
Distribution Mains & Valves	31 %
Distribution Services	5 %
Meters	0 %
Hydrants	2 %
Regional Care	0 %
Customer Care	7 %
Rate Adjustments	(2)%
Total	100 %
Reconciliation check	
	Total
Sum of parts equals whole	TRUE
Reconciles to prefunctionalized revenue requirem	TRUE

Schedule 5																
Revenue Requirement by Classification and Allocator (2018)																
Allocator Weighting	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Demand	100 %	100 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	15 %	78 %	33 %
Volume	0 %	0 %	100 %	100 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %	100 %	100 %	85 %	0 %	47 %
Site	0 %	0 %	0 %	0 %	100 %	100 %	100 %	100 %	100 %	100 %	0 %	0 %	0 %	0 %	22 %	20 %
Net Revenue Requirement - Demand Related																
Function	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	1,817,254	0	1,817,254
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	413,916	0	413,916
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,330,282	6,330,282
Distribution Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Care	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rate Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2,231,170	6,330,282	8,561,452
Net Revenue Requirement - Volume Related																
Function	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	10,071,797	0	10,071,797
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	2,294,056	0	2,294,056
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	424,387	0	0	424,387
Regional Care	0	0	0	0	0	0	0	0	0	0	0	6,394	0	0	0	6,394
Customer Care	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rate Adjustments	0	0	(412,134)	0	0	0	0	0	0	0	0	0	0	0	0	(412,134)
Total	0	0	(412,134)	0	0	0	0	0	0	0	0	6,394	424,387	12,365,852	0	12,384,500
Net Revenue Requirement - Site Related																
Function	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,794,833	1,794,833
Distribution Services	0	0	0	0	0	0	1,416,793	0	0	0	0	0	0	0	0	1,416,793
Meters	0	0	0	0	0	0	0	39,207	0	0	0	0	0	0	0	39,207
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Care	0	0	0	0	1,895,926	0	0	0	0	0	0	0	0	0	0	1,895,926
Rate Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1,895,926	0	1,416,793	39,207	0	0	0	0	0	0	1,794,833	5,146,758
Net Revenue Requirement by Classification																
Function	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Demand	0	0	0	0	0	0	0	0	0	0	0	0	0	2,231,170	6,330,282	8,561,452
Volume	0	0	(412,134)	0	0	0	0	0	0	0	0	6,394	424,387	12,365,852	0	12,384,500
Site	0	0	0	0	1,895,926	0	1,416,793	39,207	0	0	0	0	0	0	1,794,833	5,146,758
Total	0	0	(412,134)	0	1,895,926	0	1,416,793	39,207	0	0	0	6,394	424,387	14,597,022	8,125,115	26,092,710

Schedule 6																
Revenue Requirement by Allocator (2018)																
Total Utility Expenses																
Function	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	11,889,051	0	11,889,051
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	2,707,972	0	2,707,972
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,125,115	8,125,115
Distribution Services	0	0	0	0	0	0	1,416,793	0	0	0	0	0	0	0	0	1,416,793
Meters	0	0	0	0	0	0	0	39,207	0	0	0	0	0	0	0	39,207
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	424,387	0	0	424,387
Regional Care	0	0	0	0	0	0	0	0	0	0	0	6,394	0	0	0	6,394
Customer Care	0	0	0	0	2,656,779	0	0	0	0	0	0	0	0	0	0	2,656,779
Rate Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2,656,779	0	1,416,793	39,207	0	0	0	6,394	424,387	14,597,022	8,125,115	27,265,697
Misc Revenues																
Function	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Care	0	0	0	0	(760,853)	0	0	0	0	0	0	0	0	0	0	(760,853)
Rate Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	(760,853)	0	0	0	0	0	0	0	0	0	0	(760,853)
Other																
Function	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Care	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rate Adjustments	0	0	(412,134)	0	0	0	0	0	0	0	0	0	0	0	0	(412,134)
Total	0	0	(412,134)	0	0	0	0	0	0	0	0	0	0	0	0	(412,134)
Net Revenue Requirement																
Function	Demand - CP	Demand - NCP	Volume - City Sales	Volume - Total Sales	Sites - City Bills	Sites - Total Bills	Sites - Service Weighted	Sites - Meter Weighted	Sites - City	Sites - Total	Direct to North Region	Direct to Regionals	Direct to Hydrants	Treatment Allocator	Mains Allocator	Total
Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	11,889,051	0	11,889,051
Pump Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	2,707,972	0	2,707,972
North Region Line	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Mains & Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,125,115	8,125,115
Distribution Services	0	0	0	0	0	0	1,416,793	0	0	0	0	0	0	0	0	1,416,793
Meters	0	0	0	0	0	0	0	39,207	0	0	0	0	0	0	0	39,207
Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	424,387	0	0	424,387
Regional Care	0	0	0	0	0	0	0	0	0	0	0	6,394	0	0	0	6,394
Customer Care	0	0	0	0	1,895,926	0	0	0	0	0	0	0	0	0	0	1,895,926
Rate Adjustments	0	0	(412,134)	0	0	0	0	0	0	0	0	0	0	0	0	(412,134)
Total	0	0	(412,134)	0	1,895,926	0	1,416,793	39,207	0	0	0	6,394	424,387	14,597,022	8,125,115	26,092,710

Schedule 7														
Rate Class Allocator Development (2018)														
Assumptions														
Allocators	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Deemed Hydrant Volume (% of City sales)													0.5 %	
Ratio of CP to Annual Sales	9.6 %	9.7 %	9.4 %	9.5 %	9.5 %	9.8 %	10.0 %	8.1 %	0.0 %	0.0 %	9.4 %	9.4 %	0.0 %	
Ratio of NCP to Annual Sales	10.3 %	10.3 %	10.3 %	10.1 %	10.0 %	10.5 %	11.2 %	9.9 %	0.0 %	0.0 %	10.2 %	10.0 %	0.0 %	
Service Line Costing (one size greater than meter)	8,650	8,850	9,113	9,399	12,150	12,903	14,635	16,184	18,157	8,650	0	0	8,821	
Meter Costing	227	256	293	571	712	2,339	2,531	3,709	4,145	5,100	0	0	0	
Sites - Equivalent Meter	1.00	1.41	2.44	5.64	9.77	21.97	39.06	87.89	156.25	244.14	39.06	244.14		852.78
Basis for Allocation														
Allocators	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Demand - CP	559,307	21,198	33,233	76,173	108,733	57,597	98,795	76,389	0	0	37,443	265,701	0	1,334,568
Demand - NCP	602,086	22,432	36,213	81,017	114,025	61,431	111,028	93,351	0	0	40,644	281,524	0	1,443,753
Volume - City Sales	5,836,792	218,826	352,288	801,197	1,141,127	585,607	989,423	941,917	0	0			54,336	10,921,513
Volume - Total Sales	5,836,792	218,826	352,288	801,197	1,141,127	585,607	989,423	941,917	0	0	397,000	2,812,263	54,336	14,130,776
Sites - City Bills	365,592	7,476	6,216	6,900	4,404	1,116	276	120	0	0				392,100
Sites - Total Bills	365,592	7,476	6,216	6,900	4,404	1,116	276	120	0	0	12	12	12	392,136
Sites - Service Weighted	30,698	640	547	629	523	139	40	19	0	0	0	0	2,274	35,511
Sites - Meter Weighted	30,698	706	671	1,457	1,168	960	264	168	0	0	0	0	0	36,092
Sites - City	30,698	626	520	579	372	93	24	10	0	0			2,230	35,152
Sites - Total	30,698	626	520	579	372	93	24	10	0	0	1	1	2,230	35,154
Direct to North Region	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Direct to Regionals	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Direct to Hydrants	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Treatment Allocator														
Mains Allocator														
Allocators (%)	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Demand - CP	42 %	2 %	2 %	6 %	8 %	4 %	7 %	6 %	0 %	0 %	3 %	20 %	0 %	100 %
Demand - NCP	42 %	2 %	3 %	6 %	8 %	4 %	8 %	6 %	0 %	0 %	3 %	19 %	0 %	100 %
Volume - City Sales	53 %	2 %	3 %	7 %	10 %	5 %	9 %	9 %	0 %	0 %	0 %	0 %	0 %	100 %
Volume - Total Sales	41 %	2 %	2 %	6 %	8 %	4 %	7 %	7 %	0 %	0 %	3 %	20 %	0 %	100 %
Sites - City Bills	93 %	2 %	2 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %
Sites - Total Bills	93 %	2 %	2 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %
Sites - Service Weighted	86 %	2 %	2 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	6 %	100 %
Sites - Meter Weighted	85 %	2 %	2 %	4 %	3 %	3 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %
Sites - City	87 %	2 %	1 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	6 %	100 %
Sites - Total	87 %	2 %	1 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	6 %	100 %
Direct to North Region	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %	0 %	100 %
Direct to Regionals	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	50 %	50 %	0 %	100 %
Direct to Hydrants	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %	100 %
Treatment Allocator	41 %	2 %	2 %	6 %	8 %	4 %	7 %	7 %	0 %	0 %	3 %	20 %	0 %	100 %
Mains Allocator	52 %	2 %	2 %	5 %	6 %	3 %	6 %	5 %	0 %	0 %	2 %	15 %	1 %	100 %
Demand Allocators (%)	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Demand - CP	42 %	2 %	2 %	6 %	8 %	4 %	7 %	6 %	0 %	0 %	3 %	20 %	0 %	100 %
Demand - NCP	42 %	2 %	3 %	6 %	8 %	4 %	8 %	6 %	0 %	0 %	3 %	19 %	0 %	100 %
Volume - City Sales	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Volume - Total Sales	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - City Bills	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %

Schedule 7	
Rate Class Allocator Development (2018)	
Assumptions	
Allocators	
Deemed Hydrant Volume (% of City sales)	
Ratio of CP to Annual Sales	
Ratio of NCP to Annual Sales	
Service Line Costing (one size greater than meter)	
Meter Costing	
Sites - Equivalent Meter	
Basis for Allocation	
Allocators	
Demand - CP	
Demand - NCP	
Volume - City Sales	
Volume - Total Sales	
Sites - City Bills	
Sites - Total Bills	
Sites - Service Weighted	
Sites - Meter Weighted	
Sites - City	
Sites - Total	
Direct to North Region	
Direct to Regionals	
Direct to Hydrants	
Treatment Allocator	
Mains Allocator	
Allocators (%)	
Demand - CP	
Demand - NCP	
Volume - City Sales	
Volume - Total Sales	
Sites - City Bills	
Sites - Total Bills	
Sites - Service Weighted	
Sites - Meter Weighted	
Sites - City	
Sites - Total	
Direct to North Region	
Direct to Regionals	
Direct to Hydrants	
Treatment Allocator	
Mains Allocator	
Demand Allocators (%)	Weight
Demand - CP	
Demand - NCP	
Volume - City Sales	
Volume - Total Sales	
Sites - City Bills	

Schedule 7														
Sites - Total Bills	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - Service Weighted	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - Meter Weighted	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - City	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - Total	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Direct to North Region	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Direct to Regionals	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Direct to Hydrants	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Treatment Allocator	42 %	2 %	2 %	6 %	8 %	4 %	7 %	6 %	0 %	0 %	3 %	20 %	0 %	100 %
Mains Allocator	42 %	2 %	3 %	6 %	8 %	4 %	8 %	6 %	0 %	0 %	3 %	19 %	0 %	100 %

Schedule 7	
Sites - Total Bills	
Sites - Service Weighted	
Sites - Meter Weighted	
Sites - City	
Sites - Total	
Direct to North Region	
Direct to Regionals	
Direct to Hydrants	
Treatment Allocator	15 %
Mains Allocator	78 %

Schedule 7														
Volume Allocators (%)	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Demand - CP	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Demand - NCP	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Volume - City Sales	53 %	2 %	3 %	7 %	10 %	5 %	9 %	9 %	0 %	0 %	0 %	0 %	0 %	100 %
Volume - Total Sales	41 %	2 %	2 %	6 %	8 %	4 %	7 %	7 %	0 %	0 %	3 %	20 %	0 %	100 %
Sites - City Bills	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - Total Bills	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - Service Weighted	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - Meter Weighted	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - City	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - Total	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Direct to North Region	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %	0 %	100 %
Direct to Regionals	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	50 %	50 %	0 %	100 %
Direct to Hydrants	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %	100 %
Treatment Allocator	41 %	2 %	2 %	6 %	8 %	4 %	7 %	7 %	0 %	0 %	3 %	20 %	0 %	100 %
Mains Allocator	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Site Allocators (%)	5/8" W16	3/4" W19	1" W25	1-1/2" W38	2" W50	3" W75	4" W100	6" W150	8" W200	10" W250	South Hill	North Region	Fire Protection	Total
Demand - CP	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Demand - NCP	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Volume - City Sales	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Volume - Total Sales	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Sites - City Bills	93 %	2 %	2 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %
Sites - Total Bills	93 %	2 %	2 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %
Sites - Service Weighted	86 %	2 %	2 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	6 %	100 %
Sites - Meter Weighted	85 %	2 %	2 %	4 %	3 %	3 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %
Sites - City	87 %	2 %	1 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	6 %	100 %
Sites - Total	87 %	2 %	1 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	6 %	100 %
Direct to North Region	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Direct to Regionals	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Direct to Hydrants	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Treatment Allocator	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
Mains Allocator	87 %	2 %	1 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	6 %	100 %
equivalent meter	30,698	882	1,268	3,266	3,636	2,048	926	903	0	0	39	244	0	43,912
50% volume 50% equivalent meter	56 %	2 %	3 %	7 %	8 %	4 %	5 %	4 %	0 %	0 %	1 %	10 %	0 %	100 %
Mains Allocator	52 %	2 %	2 %	5 %	6 %	3 %	6 %	5 %	0 %	0 %	2 %	15 %	1 %	100 %
Services Allocator	86 %	2 %	2 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	6 %	100 %
Meters Allocator	85 %	2 %	2 %	4 %	3 %	3 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %
Customer Care Allocator	93 %	2 %	2 %	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	100 %

Schedule 7	
Volume Allocators (%)	Weight
Demand - CP	
Demand - NCP	
Volume - City Sales	
Volume - Total Sales	
Sites - City Bills	
Sites - Total Bills	
Sites - Service Weighted	
Sites - Meter Weighted	
Sites - City	
Sites - Total	
Direct to North Region	
Direct to Regionals	
Direct to Hydrants	
Treatment Allocator	85 %
Mains Allocator	0 %
Site Allocators (%)	Weight
Demand - CP	
Demand - NCP	
Volume - City Sales	
Volume - Total Sales	
Sites - City Bills	
Sites - Total Bills	
Sites - Service Weighted	
Sites - Meter Weighted	
Sites - City	
Sites - Total	
Direct to North Region	
Direct to Regionals	
Direct to Hydrants	
Treatment Allocator	0 %
Mains Allocator	22 %
equivalent meter	
50% volume 50% equivalent meter	
Mains Allocator	
Services Allocator	
Meters Allocator	
Customer Care Allocator	

Schedule 8								
Classification by Allocator (2018)								
Classification	Classification (%)				Classification (\$)			
Allocators	Demand	Volume	Site	Total (%)	Demand	Volume	Site	Total (\$)
Demand - CP	100 %	0 %	0 %	100 %	0	0	0	0
Demand - NCP	100 %	0 %	0 %	100 %	0	0	0	0
Volume - City Sales	0 %	100 %	0 %	100 %	0	(412,134)	0	(412,134)
Volume - Total Sales	0 %	100 %	0 %	100 %	0	0	0	0
Sites - City Bills	0 %	0 %	100 %	100 %	0	0	1,895,926	1,895,926
Sites - Total Bills	0 %	0 %	100 %	100 %	0	0	0	0
Sites - Service Weighted	0 %	0 %	100 %	100 %	0	0	1,416,793	1,416,793
Sites - Meter Weighted	0 %	0 %	100 %	100 %	0	0	39,207	39,207
Sites - City	0 %	0 %	100 %	100 %	0	0	0	0
Sites - Total	0 %	0 %	100 %	100 %	0	0	0	0
Direct to North Region	0 %	100 %	0 %	100 %	0	0	0	0
Direct to Regionals	0 %	100 %	0 %	100 %	0	6,394	0	6,394
Direct to Hydrants	0 %	100 %	0 %	100 %	0	424,387	0	424,387
Treatment Allocator	15 %	85 %	0 %	100 %	2,231,170	12,365,852	0	14,597,022
Mains Allocator	78 %	0 %	22 %	100 %	6,330,282	0	1,794,833	8,125,115
Average / Total	33 %	47 %	20 %	100 %	8,561,452	12,384,500	5,146,758	26,092,710
Calculate Blended Allocators								
Component Allocators	Treatment Allocator	Mains Allocator						
Demand - CP	15.3 %			April 13, 2015	Shelley Masciangelo			
Demand - NCP		78 %		Updated treatment allocator data based on 5 yr avg (2010-2014)				
Volume - City Sales								
Volume - Total Sales	84.7 %							
Sites - City Bills								
Sites - Total Bills								
Sites - Service Weighted								
Sites - Meter Weighted	0 %							
Sites - City								
Sites - Total		22 %						
Direct to North Region								
Direct to Regionals								
Direct to Hydrants								
Total	100 %	100 %						

Schedule 8								
Diameter-Length Calculation for Classification of Mains								
Diameter (mm)	Length (km)	Diameter- Length	Diameter- Length @ 50 mm					
50	1.00	50	50	Minimum service size required without fire protection.				
100	4.11	411	206					
150	213.71	32,056	10,685					
200	178.63	35,726	8,932					
250	84.23	21,057	4,211					
300	62.33	18,699	3,117					
350	12.64	4,424	632					
400	24.99	9,995	1,249					
450	0.08	37	4					
500	9.91	4,955	495					
600	0.10	57	5					
750	5.34	4,003	267					
900	2.78	2,500	139					
1,050	0.02	24	1					
1,200	1.12	1,339	56					
Total	600.98	134,872	29,793					

Schedule 9					
Functionalized Revenue Requirement (2018)					
Function	Total Utility Expenses	Misc Revenues	Other	Net Revenue Requirement	Allocation
Treatment	11,889,051	0	0	11,889,051	Treatment Allocator
Pump Stations	2,707,972	0	0	2,707,972	Treatment Allocator
North Region Line	0	0	0	0	Direct to North Region
Distribution Mains & Valves	8,125,115	0	0	8,125,115	Mains Allocator
Distribution Services	1,416,793	0	0	1,416,793	Sites - Service Weighted
Meters	39,207	0	0	39,207	Sites - Meter Weighted
Hydrants	424,387	0	0	424,387	Direct to Hydrants
Regional Care	6,394	0	0	6,394	Direct to Regionals
Customer Care	2,656,779	(760,853)	0	1,895,926	Sites - City Bills
Rate Adjustments	0	0	(412,134)	(412,134)	Volume - City Sales
Total	27,265,697	(760,853)	(412,134)	26,092,710	

Schedule 10													
Functionalize Revenue Requirement (2018)													
Direct assigned to functions													
Function	Operating Expenses	Capital Expenses	Misc Revenues	Other	Net Revenue Requirement								
Treatment	6,629,350	0	0	0	6,629,350								
Pump Stations	782,761	0	0	0	782,761								
North Region Line	0	0	0	0	0								
Distribution Mains & Valves	0	0	0	0	0								
Distribution Services	0	0	0	0	0								
Meters	0	0	0	0	0								
Hydrants	0	0	0	0	0								
Regional Care	0	0	0	0	0								
Customer Care	1,192,955	0	(760,853)	0	432,102								
Rate Adjustments	0	0	0	(412,134)	(412,134)								
Total	8,605,066	0	(760,853)	(412,134)	7,432,079								
Allocated to functions													
Allocator	Operating Expenses	Capital Expenses	Misc Revenues	Other	Net Revenue Requirement								
Treatment and Pump Plant	0	0	0	0	0								
Mains and Services Plant	85,947	0	0	0	85,947								
Regionals and Customer Care	1,335,804	0	0	0	1,335,804								
Hydrant Benefit to Distribution	0	0	0	0	0								
Distribution Work Orders	3,587,635	0	0	0	3,587,635								
Depreciation	0	7,915,524	0	0	7,915,524								
Amortization	0	(2,195,780)	0	0	(2,195,780)								
Rate Base	0	7,498,933	0	0	7,498,933								
All Other Operating	432,568	0	0	0	432,568								
Total	5,441,954	13,218,677	0	0	18,660,631								
Allocator Construction (\$)													
Function	Treatment and Pump Plant	Mains and Services Plant	Regionals and Customer Care	Hydrant Benefit to Distribution	Distribution Work Orders	Depreciation	Amortization	Rate Base	All Other Operating	Work Orders from Hansen (sp?)	Data for Budget 2015	Data for Budget 2016	Data for Budget 2017
Treatment	71,001,126			0		2,952,323	184,000	40,493,770	6,629,350				
Pump Stations	32,256,116			0		1,079,526	114,610	16,925,433	782,761				
North Region Line				0		0	0	0	0				
Distribution Mains & Valves		161,817,679		50	87	3,423,746	1,622,090	57,228,425	71,116	79	79	73	84
Distribution Services		33,745,559		0	4	615,567	230,737	15,573,594	14,831	4	4	4	5
Meters				0	1	0	0	0	0	1	3	0	0
Hydrants		0		50	8	94,363	44,342	1,601,507	0	16	14	23	11
Regional Care			4,800	0		0	0	1,072	6,072				
Customer Care			1,051,219	0		0	0	445,542	2,522,687				
Rate Adjustments				0		0	0	0	0				
Total	103,257,242	195,563,238	1,056,019	100	100	8,165,524	2,195,779	132,269,344	10,026,817	100	100	100	100

Schedule 10													
Allocator Construction (%)													
Function	Treatment and Pump Plant	Mains and Services Plant	Regionals and Customer Care	Hydrant Benefit to Distribution	Distribution Work Orders	Depreciation	Amortization	Rate Base	All Other Operating				
Treatment	69 %	0 %	0 %	0 %	0 %	36 %	8 %	31 %	66 %				
Pump Stations	31 %	0 %	0 %	0 %	0 %	13 %	5 %	13 %	8 %				
North Region Line	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %				
Distribution Mains & Valves	0 %	83 %	0 %	50 %	87 %	42 %	74 %	43 %	1 %				
Distribution Services	0 %	17 %	0 %	0 %	4 %	8 %	11 %	12 %	0 %				
Meters	0 %	0 %	0 %	0 %	1 %	0 %	0 %	0 %	0 %				
Hydrants	0 %	0 %	0 %	50 %	8 %	1 %	2 %	1 %	0 %				
Regional Care	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %				
Customer Care	0 %	0 %	100 %	0 %	0 %	0 %	0 %	0 %	25 %				
Rate Adjustments	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %				
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %				
Allocated to functions													
Function	Operating Expenses	Capital Expenses	Misc Revenues	Other	Net Revenue Requirement					Function	Operating Expenses	Capital Expenses	Misc Revenues
Treatment	285,998	4,973,703	0	0	5,259,701					Treatment	285,998	4,973,703	0
Pump Stations	33,769	1,891,442	0	0	1,925,211					Pump Stations	33,769	1,891,442	0
North Region Line	0	0	0	0	0					North Region Line	0	0	0
Distribution Mains & Valves	3,183,751	4,941,364	0	0	8,125,115					Distribution Mains & Valves	3,183,751	4,941,364	0
Distribution Services	167,874	1,248,919	0	0	1,416,793					Distribution Services	167,874	1,248,919	0
Meters	39,207	0	0	0	39,207					Meters	39,207	0	0
Hydrants	286,459	137,929	0	0	424,387					Hydrants	286,459	137,929	0
Regional Care	6,334	61	0	0	6,394					Regional Care	6,334	61	0
Customer Care	1,438,564	25,260	0	0	1,463,824					Customer Care	1,438,564	25,260	0
Rate Adjustments	0	0	0	0	0					Rate Adjustments	0	0	0
Total	5,441,954	13,218,677	0	0	18,660,631					Total	5,441,954	13,218,677	0
Total direct plus allocated													
Function	Operating Expenses	Capital Expenses	Misc Revenues	Other	Net Revenue Requirement								
Treatment	6,915,348	4,973,703	0	0	11,889,051								
Pump Stations	816,530	1,891,442	0	0	2,707,972								
North Region Line	0	0	0	0	0								
Distribution Mains & Valves	3,183,751	4,941,364	0	0	8,125,115								
Distribution Services	167,874	1,248,919	0	0	1,416,793								
Meters	39,207	0	0	0	39,207								
Hydrants	286,459	137,929	0	0	424,387								
Regional Care	6,334	61	0	0	6,394								
Customer Care	2,631,519	25,260	(760,853)	0	1,895,926								
Rate Adjustments	0	0	0	(412,134)	(412,134)								
Total	14,047,020	13,218,677	(760,853)	(412,134)	26,092,710								

Schedule 11								
Functionalization of Rate Base Components (2018 mid year)								
Direct assigned to functions								
Function	Gross Plant	Accumulated Depreciation	Annual Depreciation	No-Cost Capital	Accumulated Amortization	Annual Amortization	Working Capital	Rate Base
Treatment	71,001,126	33,326,710	2,621,976	4,600,000	1,364,373	184,000	0	34,438,789
Pump Stations	32,256,116	15,376,653	884,345	3,843,225	1,244,381	114,610	0	14,280,620
North Region Line	0	0	0	0	0	0	0	0
Distribution Mains & Valves	161,817,679	40,402,571	2,350,228	109,569,991	31,194,670	1,577,748	0	43,039,787
Distribution Services	33,745,559	7,738,414	454,302	17,063,372	4,277,387	230,737	0	13,221,160
Meters	0	0	0	0	0	0	0	0
Hydrants	0	0	0	0	0	0	0	0
Regional Care	0	0	0	0	0	0	0	0
Customer Care	0	0	0	0	0	0	0	0
Rate Adjustments	0	0	0	0	0	0	0	0
Total	298,820,480	96,844,348	6,310,850	135,076,588	38,080,811	2,107,095	0	104,980,356
Allocated to functions								
Allocator	Gross Plant	Accumulated Depreciation	Annual Depreciation	No-Cost Capital	Accumulated Amortization	Annual Amortization	Working Capital	Rate Base
Bulk Delivery Plant	2,359,643	954,420	235,964	0	0	0	0	1,405,223
Treatment and Distribution Plant	0	0	0	0	0	0	0	0
Treatment and Distribution Assigned	431,800	218,008	34,408	0	0	0	0	213,792
Hydrant Benefit to Distribution	8,518,889	2,241,702	149,309	5,318,214	1,659,489	88,684	0	2,618,462
Operating Expenses	0	0	0	0	0	0	1,770,878	1,770,878
All Other Plant	36,758,537	15,273,076	1,434,993	204,828	0	0	0	21,280,633
not used	0	0	0	0	0	0	0	0
not used	0	0	0	0	0	0	0	0
not used	0	0	0	0	0	0	0	0
Total	48,068,869	18,687,206	1,854,674	5,523,042	1,659,489	88,684	1,770,878	27,288,988
Allocator Construction (\$)								
Function	Bulk Delivery Plant	Treatment and Distribution Plant	Treatment and Distribution Assigned	Hydrant Benefit to Distribution	Operating Expenses	All Other Plant		
Treatment		71,001,126	5		6,629,350	71,022,716		
Pump Stations	32,256,116	32,256,116	13		782,761	32,706,382		
North Region Line	0	0	0		0	0		
Distribution Mains & Valves	161,817,679	161,817,679	67	50	71,116	168,335,949		
Distribution Services		33,745,559	14		14,831	33,806,321		
Meters		0			0	0		
Hydrants		0		50	0	4,259,445		
Regional Care					6,072	0		
Customer Care					2,522,687	0		
Rate Adjustments					0	0		
Total	194,073,795	298,820,480	100	100	10,026,817	310,130,812		

Schedule 11								
Allocator Construction (%)								
Function	Bulk Delivery Plant	Treatment and Distribution Plant	Treatment and Distribution Assigned	Hydrant Benefit to Distribution	Operating Expenses	All Other Plant		
Treatment	0 %	24 %	5 %	0 %	66 %	23 %		
Pump Stations	17 %	11 %	13 %	0 %	8 %	11 %		
North Region Line	0 %	0 %	0 %	0 %	0 %	0 %		
Distribution Mains & Valves	83 %	54 %	67 %	50 %	1 %	54 %		
Distribution Services	0 %	11 %	14 %	0 %	0 %	11 %		
Meters	0 %	0 %	0 %	0 %	0 %	0 %		
Hydrants	0 %	0 %	0 %	50 %	0 %	1 %		
Regional Care	0 %	0 %	0 %	0 %	0 %	0 %		
Customer Care	0 %	0 %	0 %	0 %	25 %	0 %		
Rate Adjustments	0 %	0 %	0 %	0 %	0 %	0 %		
Total	100 %	100 %	100 %	100 %	100 %	100 %		
Allocated to functions								
Function	Gross Plant	Accumulated Depreciation	Annual Depreciation	No-Cost Capital	Accumulated Amortization	Annual Amortization	Working Capital	Rate Base
Treatment	8,439,622	3,508,571	330,347	46,907	0	0	1,170,837	6,054,981
Pump Stations	4,326,819	1,798,651	195,181	21,601	0	0	138,247	2,644,813
North Region Line	0	0	0	0	0	0	0	0
Distribution Mains & Valves	26,470,442	10,353,823	1,073,518	2,770,286	829,745	44,342	12,560	14,188,638
Distribution Services	4,067,687	1,695,545	161,266	22,328	0	0	2,619	2,352,434
Meters	0	0	0	0	0	0	0	0
Hydrants	4,764,299	1,330,617	94,363	2,661,920	829,745	44,342	0	1,601,507
Regional Care	0	0	0	0	0	0	1,072	1,072
Customer Care	0	0	0	0	0	0	445,542	445,542
Rate Adjustments	0	0	0	0	0	0	0	0
Total	48,068,869	18,687,206	1,854,674	5,523,042	1,659,489	88,684	1,770,878	27,288,988
Total direct plus allocated								
Function	Gross Plant	Accumulated Depreciation	Annual Depreciation	No-Cost Capital	Accumulated Amortization	Annual Amortization	Working Capital	Rate Base
Treatment	79,440,748	36,835,281	2,952,323	4,646,907	1,364,373	184,000	1,170,837	40,493,770
Pump Stations	36,582,935	17,175,304	1,079,526	3,864,826	1,244,381	114,610	138,247	16,925,433
North Region Line	0	0	0	0	0	0	0	0
Distribution Mains & Valves	188,288,121	50,756,394	3,423,746	112,340,276	32,024,415	1,622,090	12,560	57,228,425
Distribution Services	37,813,246	9,433,958	615,567	17,085,700	4,277,387	230,737	2,619	15,573,594
Meters	0	0	0	0	0	0	0	0
Hydrants	4,764,299	1,330,617	94,363	2,661,920	829,745	44,342	0	1,601,507
Regional Care	0	0	0	0	0	0	1,072	1,072
Customer Care	0	0	0	0	0	0	445,542	445,542
Rate Adjustments	0	0	0	0	0	0	0	0
Total	346,889,349	115,531,553	8,165,524	140,599,630	39,740,300	2,195,779	1,770,878	132,269,344

Schedule 12				
Revenue Requirement Prior to Functionalization (2018 mid year)				
REVENUE REQUIREMENT	\$	Method	Function	
Operating				
388 Water Pumping Stations	782,761	Direct	Pump Stations	
393 Water Trtmnt Plant Operations				
Treatment Operations	6,629,350	Direct	Treatment	
General and Administrative				
Utility (non treatment) costs for allocation	185,005	Allocation	All Other Operating	
393.8920.1 Engineering	153,900	Allocation	All Other Operating	
393.8920.2 EnvS Admin Exp Allocation	93,663	Allocation	All Other Operating	
393.8920.4 Locate Costs	85,947	Allocation	Mains and Services Plant	
393.8920.5 Utility Billing - Water	1,056,019	Direct	Customer Care	
393.8920.6 Corporate Overhead Recovery	1,299,367	Allocation	Regionals and Customer Care	
393.8920.6 Corporate O/H - Civic Yards SGF	0	Allocation	Regionals and Customer Care	
393.8920.6 Corporate O/H - Municipal Suite	34,170	Allocation	Regionals and Customer Care	
393.8920.6 Corporate O/H - Enterprise Asset Mgmt	0	Allocation	Regionals and Customer Care	
393.8920.6 Corporate O/H - Legal Services	2,267	Allocation	Regionals and Customer Care	
Subtotal	2,725,333			
Subtotal 393 Water Trtmnt Plant Operations	9,539,688			
397 Water Util Distribution	3,587,635	Allocation	Distribution Work Orders	
398 Water Util Hydrant Inspection	0	Allocation	Distribution Work Orders	
399 Water Util Valve Inspection	0	Allocation	Distribution Work Orders	
400 Water Util Customer Service	136,936	Direct	Customer Care	
404 Water Util Meter Maintenance	0	Allocation	Distribution Work Orders	
Total Operating	14,047,020			
Depreciation	7,915,524	Allocation	Depreciation	
Amortization of contributions	(2,195,780)	Allocation	Amortization	
Cost of capital	7,498,933	Allocation	Rate Base	
Total utility expenses	27,265,697			
Offsets				
Penalties and user fees	(760,853)	Direct	Customer Care	
Hydrant inspections	0	Direct	Hydrant Benefit to Distribution	
Rate stabilization subsidy	0	Direct	Rate Adjustments	
Reserve accumulation	(412,134)	Direct	Rate Adjustments	
Net revenue requirement	26,092,710			

Schedule 13						
Components of Rate Base Prior to Functionalization (2018 mid year)						
PLANT AS OF MID YEAR	Gross Plant	Accumulated Depreciation	Annual Depreciation	Method	Function	
401100 Parking Lot Gravel	46,291	46,291	0	Allocation	All Other Plant	
402100 Landscaping	595,705	187,757	23,828	Allocation	All Other Plant	
404200 Fences Non Wood	226,624	36,240	4,493	Allocation	All Other Plant	
408500 Outdoor Amenities	4,783	1,581	239	Allocation	All Other Plant	
410200 Signs Non Wood	5,078	1,603	254	Allocation	All Other Plant	
501010 Major Buildings Shell	8,695,630	4,477,420	171,918	Allocation	All Other Plant	
501020 Major Buildings Electrical/Lighting	892,357	198,922	26,303	Allocation	All Other Plant	
501030 Major Buildings Plumbing/Mechanical	1,047,024	337,328	34,901	Allocation	All Other Plant	
501040 Major Buildings Fire/Safety	984,454	408,876	148,288	Allocation	All Other Plant	
501060 Major Buildings HVAC	3,503,821	771,822	105,415	Allocation	All Other Plant	
501070 Major Buildings Roof	1,724,463	449,679	86,223	Allocation	All Other Plant	
501080 Major Buildings Fixed Equipment	20,161	12,619	1,344	Allocation	All Other Plant	
501090 Major Buildings Floors	76,119	61,892	7,612	Allocation	All Other Plant	
501100 Major Buildings Interior Finish	503,048	227,847	25,152	Allocation	All Other Plant	
502050 Minor Buildings Permanent	1,381,974	103,705	27,639	Allocation	All Other Plant	
601100 Heavy Construction Equipment	41,067	0	0	Allocation	All Other Plant	
603100 Communication Links	382	119	19	Allocation	All Other Plant	
603300 SCADA Master Station	2,359,643	954,420	235,964	Allocation	Bulk Delivery Plant	
604100 Meters	10,498,526	2,679,317	619,929	Allocation	All Other Plant	
606100 Servers & Network Equipment	111,106	59,896	22,221	Allocation	All Other Plant	
606200 Desktops	7,500	11,258	1,875	Allocation	All Other Plant	
606600 Major Software	375,902	163,727	37,590	Allocation	All Other Plant	
608100 Safety Equip Emerg/Life	59,651	32,177	5,965	Allocation	All Other Plant	
609200 Generator Fixed	2,254,753	384,851	112,738	Direct	Pump Stations	
610100 Tools, Shop and Garage Equipment	265,830	126,581	17,811	Allocation	Treatment and Distribution Assigned	
611100 Office Furniture	66,507	27,046	3,412	Allocation	All Other Plant	
611200 Office Equipment	12,693	12,166	1,269	Allocation	All Other Plant	
611300 Office A/V	2,254	2,160	225	Allocation	All Other Plant	
612200 Laboratory Equipment	165,970	91,427	16,597	Allocation	Treatment and Distribution Assigned	
801103 Road Surface	4,297,869	4,297,869	0	Allocation	All Other Plant	
801203 Road Non-Surface Collector	816,747	153,224	40,837	Direct	Distribution Mains & Valves	
801601 Road Retaining Walls	1,577,548	663,758	78,877	Allocation	All Other Plant	
802101 Reservoirs Structural	20,136,202	11,328,232	409,413	Direct	Pump Stations	
802102 Reservoirs Mechanical	1,371,471	1,178,651	54,859	Direct	Pump Stations	
802103 Reservoirs Electrical	392,643	300,001	15,706	Direct	Pump Stations	
802104 Reservoirs Instrumentation	32,453	32,453	0	Direct	Pump Stations	
802105 Reservoirs General	729,495	163,509	16,211	Direct	Pump Stations	
802201 Mains	149,142,530	35,884,839	2,012,092	Direct	Distribution Mains & Valves	
802202 Services	33,745,559	7,738,414	454,302	Direct	Distribution Services	
802203 Valves	11,804,313	4,348,853	294,594	Direct	Distribution Mains & Valves	
802204 Hydrants	8,518,889	2,241,702	149,309	Direct	Hydrant Benefit to Distribution	
802205 ICCP System	54,089	15,655	2,704	Direct	Distribution Mains & Valves	
802301 Pump Stations Structural	1,415,732	274,896	31,461	Direct	Pump Stations	
802302 Pump Stations Mechanical	3,176,757	690,569	127,070	Direct	Pump Stations	
802303 Pump Stations Electrical	1,241,849	390,941	49,674	Direct	Pump Stations	
802304 Stations Instrumentation	519,994	432,762	45,330	Direct	Pump Stations	
802305 Pump Station General	984,767	199,788	21,884	Direct	Pump Stations	
802401 WTP Low Lift Structural	8,604,714	2,894,174	191,216	Direct	Treatment	
802402 WTP Low Lift Mechanical	7,651,806	2,792,511	306,072	Direct	Treatment	

Schedule 13						
802403 WTP Low Lift Electrical	649,619	225,959	25,985	Direct	Treatment	
802404 WTP Low Lift Instrumentation	734,579	636,083	105,045	Direct	Treatment	
802405 WTP Low Lift General	804,289	116,147	17,694	Direct	Treatment	
802412 WTP Boiler Area Mechanical	2,022,696	494,819	80,908	Direct	Treatment	
802413 WTP Boiler Area Electrical	344,995	97,433	13,800	Direct	Treatment	
802414 WTP Boiler Area Instrumentation	78,772	63,803	11,264	Direct	Treatment	
802415 WTP Boiler Area General	38,756	4,093	861	Direct	Treatment	
802421 WTP Chemical Systems Structural	1,557,390	527,285	34,263	Direct	Treatment	
802422 WTP Chemical Systems Mechanical	4,107,781	673,382	164,311	Direct	Treatment	
802423 WTP Chemical Systems Electrical	605,251	123,821	24,210	Direct	Treatment	
802424 WTP Chemical Systems Instrumentation	663,099	390,847	94,823	Direct	Treatment	
802425 WTP Chemical Systems General	593,669	52,825	13,193	Direct	Treatment	
802431 WTP Clarifiers Structural	3,890,394	1,504,405	85,589	Direct	Treatment	
802432 WTP Clarifiers Mechanical	3,537,802	1,161,925	141,512	Direct	Treatment	
802433 WTP Clarifiers Electrical	256,739	52,363	10,270	Direct	Treatment	
802434 WTP Clarifiers Instrumentation	181,872	112,329	26,008	Direct	Treatment	
802441 WTP Filtration Structural	6,075,643	4,455,588	130,986	Direct	Treatment	
802442 WTP Filtration Mechanical	1,718,490	1,413,987	68,740	Direct	Treatment	
802443 WTP Filtration Electrical	2,916,922	1,292,198	116,677	Direct	Treatment	
802444 WTP Filtration Instrumentation	127,513	152,719	18,234	Direct	Treatment	
802451 WTP UV Disinfection Structural	387,039	103,703	8,601	Direct	Treatment	
802452 WTP UV Disinfection Mechanical	1,200,000	648,000	48,000	Direct	Treatment	
802453 WTP UV Disinfection Electrical	63,151	29,305	2,526	Direct	Treatment	
802461 WTP High Lift Structural	10,158,353	7,932,032	231,055	Direct	Treatment	
802462 WTP High Lift Mechanical	5,400,887	2,145,241	231,783	Direct	Treatment	
802463 WTP High Lift Electrical	4,726,167	1,811,081	394,763	Direct	Treatment	
802464 WTP High Lift Instrumentation	171,801	161,619	4,149	Direct	Treatment	
802471 WTP Solid/Sludge Structural	432,521	364,835	9,612	Direct	Treatment	
802472 WTP Solid/Sludge Mechanical	694,790	694,790	0	Direct	Treatment	
802473 WTP Solid/Sludge Electrical	19,300	19,300	0	Direct	Treatment	
802474 WTP Solid/Sludge Instrumentation	19,300	19,300	0	Direct	Treatment	
802493 WTP Process Electrical	0	0	0	Direct	Treatment	
804104 Outfalls	368,377	39,717	4,912	Direct	Treatment	
805203 Electrical Transformers	196,649	119,091	4,916	Direct	Treatment	
Total gross plant as of mid year	346,889,349	115,531,553	8,165,524			
NO-COST CAPITAL AS OF MID YEAR	Gross Plant	Accumulated Depreciation	Annual Amortization	Method	Function	
501020 Major Buildings Electrical/Lighting	204,828	0	0	Direct	All Other Plant	
801203 Road Non-Surface Collector	816,747	112,386	40,837	Direct	Distribution Mains & Valves	
802201 Mains	101,667,045	27,994,379	1,369,449	Direct	Distribution Mains & Valves	
802202 Services	17,063,372	4,277,387	230,737	Direct	Distribution Services	
802203 Valves	7,038,143	3,077,093	165,059	Direct	Distribution Mains & Valves	
802204 Hydrants	5,318,214	1,659,489	88,684	Direct	Hydrant Benefit to Distribution	
802205 ICCP System	48,055	10,812	2,403	Direct	Distribution Mains & Valves	
802301 Pump Stations Structural	989,751	199,848	21,994	Direct	Pump Stations	
802302 Pump Stations Mechanical	1,206,793	438,611	48,272	Direct	Pump Stations	
802303 Pump Stations Electrical	689,725	250,682	27,589	Direct	Pump Stations	
802304 Stations Instrumentation	203,001	203,002	0	Direct	Pump Stations	
802305 Pump Station General	753,954	152,238	16,755	Direct	Pump Stations	
802402 WTP Low Lift Mechanical	4,600,000	1,364,373	184,000	Direct	Treatment	
Total no-cost capital as of mid year	140,599,630	39,740,300	2,195,779			

Schedule 13						
WORKING CAPITAL				Method	Function	
Operating Reserve (working capital)	1,770,878			Allocation	Operating Expenses	
RATE BASE	132,269,344					

Schedule 14											
Financial Model Input											
REVENUE REQUIREMENT	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
Operating											
393 Water Trtmnt Plant Operations											
Operations	5,703,113	6,471,275	5,879,021	5,422,962	5,869,282	6,679,800	6,608,376	6,814,355	7,805,038	7,986,255	8,021,426
Utility (non treatment) costs for allocation								185,005	188,705	192,479	196,329
Treatment Operations	5,703,113	6,471,275	5,879,021	5,422,962	5,869,282	6,679,800	6,608,376	6,629,350	7,616,333	7,793,776	7,825,097
General and Administrative											
393.8920.1 Engineering	153,900	153,900	153,900	153,900	153,900	153,900	153,900	153,900	0	0	0
393.8920.2 EnvS Admin Exp Allocation	72,374	74,303	74,774	127,860	105,705	148,382	148,382	93,663	95,536	97,447	99,396
393.8920.4 Locate Costs	40,649	37,357	40,567	50,701	102,621	53,922	54,614	85,947	87,666	89,419	91,208
393.8920.5 Utility Billing - Water	764,572	846,576	868,274	949,177	991,675	1,048,050	1,048,050	1,056,019	1,077,139	1,098,682	1,120,656
393.8920.6 Corporate Overhead Recovery	888,212	895,939	780,375	892,024	872,277	1,300,178	1,355,218	1,299,367	1,325,354	1,351,861	1,378,899
393.8920.6 Corporate O/H - Civic Yards SGF	0	0	120,752	120,752	120,752	0	0	0	0	0	0
393.8920.6 Corporate O/H - Municipal Suite	0	0	34,170	34,170	34,170	34,170	34,170	34,170	34,853	35,550	36,261
393.8920.6 Corporate O/H - Enterprise Asset Mgt	0	0	100,279	100,279	100,279	0	0	0	0	0	0
393.8920.6 Corporate O/H - Legal Services	0	0	2,267	2,267	2,267	2,267	2,267	2,267	2,312	2,359	2,406
393.8920.9 C&M Costs	0	0	0	0	0	0	0	0	0	0	0
Subtotal	1,919,707	2,008,075	2,175,358	2,431,130	2,483,646	2,740,868	2,796,601	2,725,333	2,622,862	2,675,319	2,728,825
Subtotal 393 Water Trtmnt Plant Operations	7,622,820	8,479,350	8,054,379	7,854,092	8,352,928	9,420,669	9,404,977	9,539,688	10,427,900	10,661,574	10,750,252
387 Water Utility Dairyworld Property	32,198	0	0	0	0	0	0	0	0	0	0
388 Water Pumping Stations	401,474	492,451	655,607	635,076	795,046	774,735	776,824	782,761	753,206	768,270	783,635
394 Water Trtmnt Plant Maintenance	681,094	0	0	0	0	0	0	0	0	0	0
397 Water Util Distribution	1,516,302	2,208,130	2,410,568	3,501,639	3,532,627	3,556,231	3,554,726	3,587,635	3,436,814	3,505,550	3,575,661
398 Water Util Hydrant Inspection	421,823	0	0	0	0	0	0	0	0	0	0
399 Water Util Valve Inspection	41,349	0	0	0	0	0	0	0	0	0	0
400 Water Util Customer Service	95,526	170,053	254,013	259,770	147,425	114,714	115,710	136,936	129,241	131,826	134,462
404 Water Util Meter Maintenance	145,528	0	0	0	0	0	0	0	0	0	0
406 Water Util Service Kills	28,751	0	0	0	0	0	0	0	0	0	0
407 Water Util Cathodic Protection	1,942	0	0	0	0	0	0	0	0	0	0
Total Operating	10,988,807	11,349,984	11,374,567	12,250,577	12,828,026	13,866,348	13,852,237	14,047,020	14,747,160	15,067,220	15,244,010
Depreciation	4,881,716	5,203,910	5,196,022	5,726,092	6,670,054	7,700,605	7,700,605	7,915,524	8,594,772	9,488,468	10,265,320
Amortization of contributions	(1,622,114)	(2,038,388)	(1,919,464)	(2,013,966)	(2,053,864)	(2,139,536)	(2,139,536)	(2,195,780)	(2,222,020)	(2,237,199)	(2,243,546)
Cost of capital	5,871,012	5,842,190	6,193,965	6,928,369	7,622,936	7,606,661	7,272,855	7,498,933	7,658,306	8,475,499	9,208,416
Total utility expenses	20,119,421	20,357,696	20,845,089	22,891,072	25,067,152	27,034,079	26,686,161	27,265,698	28,778,219	30,793,988	32,474,200
Offsets											
Penalties and user fees	(1,141,052)	(1,123,629)	(985,298)	(892,964)	(2,018,619)	(744,889)	(744,889)	(760,853)	(762,850)	(859,509)	(922,970)
Hydrant inspections	(9,718)	0	0	0	0	0	0	0	0	0	0
Rate stabilization subsidy	0	0	0	0	0	0	0	0	0	0	0
Reserve accumulation	544,950	1,741,290	2,853,026	2,461,873	1,148,751	(287,544)	60,374	(412,134)	410,295	86,302	220,030
Net revenue requirement	19,513,601	20,975,357	22,712,817	24,459,981	24,197,284	26,001,646	26,001,646	26,092,710	28,425,664	30,020,781	31,771,260
GROSS PLANT AS OF MID YEAR	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
401100 Parking Lot Gravel	46,291	46,291	46,291	46,291	46,291	46,291	46,291	46,291	46,291	46,291	46,291
402100 Landscaping	439,735	567,833	595,705	595,705	595,705	595,705	595,705	595,705	595,705	595,705	595,705
404200 Fences Non Wood	226,624	226,624	226,624	226,624	226,624	226,624	226,624	226,624	226,624	226,624	226,624
408500 Outdoor Amenities	2,250	4,642	4,783	4,783	4,783	4,783	4,783	4,783	4,783	4,783	4,783

Schedule 14											
410200 Signs Non Wood	648	2,863	5,078	5,078	5,078	5,078	5,078	5,078	5,078	5,078	5,078
501010 Major Buildings Shell	8,280,519	8,365,391	8,473,770	8,473,770	8,495,537	8,606,467	8,606,467	8,695,630	8,695,630	8,695,630	8,695,630
501020 Major Buildings Electrical/Lighting	461,974	505,415	548,857	548,857	618,193	687,529	687,529	892,357	1,112,684	1,128,183	1,128,183
501030 Major Buildings Plumbing/Mechanical	928,933	1,012,658	1,045,645	1,047,024	1,047,024	1,047,024	1,047,024	1,047,024	1,047,024	1,047,024	1,047,024
501040 Major Buildings Fire/Safety	86,897	158,659	169,109	169,109	551,306	958,979	958,979	984,454	984,454	984,454	984,454
501060 Major Buildings HVAC	1,584,515	1,563,626	1,055,380	2,035,922	3,503,821	3,503,821	3,503,821	3,503,821	3,503,821	3,503,821	3,503,821
501070 Major Buildings Roof	423,117	530,142	499,702	1,079,525	1,724,463	1,724,463	1,724,463	1,724,463	1,724,463	1,724,463	1,724,463
501080 Major Buildings Fixed Equipment	15,475	17,818	20,161	20,161	20,161	20,161	20,161	20,161	20,161	20,161	20,161
501090 Major Buildings Floors	35,307	55,713	76,119	76,119	76,119	76,119	76,119	76,119	76,119	76,119	76,119
501100 Major Buildings Interior Finish	361,118	432,083	503,048	503,048	503,048	503,048	503,048	503,048	503,048	503,048	503,048
502050 Minor Buildings Permanent	0	0	0	690,987	1,381,974	1,381,974	1,381,974	1,381,974	1,381,974	1,381,974	1,381,974
601100 Heavy Construction Equipment	0	0	0	0	0	0	0	41,067	113,649	145,163	145,163
603100 Communication Links	0	191	382	382	382	382	382	382	382	382	382
603300 SCADA Master Station	135,385	135,385	135,385	884,261	1,996,390	2,359,643	2,359,643	2,359,643	2,359,643	2,359,643	2,359,643
604100 Meters	3,324,903	3,474,794	3,682,978	4,289,657	5,600,103	7,692,076	7,692,076	10,498,526	13,443,568	16,352,655	18,120,843
606100 Servers & Network Equipment	0	15,612	39,224	47,224	47,224	47,224	47,224	111,106	174,988	174,988	174,988
606200 Desktops	0	3,750	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500
606600 Major Software	0	33,031	66,061	220,982	375,902	375,902	375,902	375,902	375,902	375,902	375,902
608100 Safety Equip Emerg/Life	19,635	39,271	39,271	39,271	39,271	49,461	49,461	59,651	59,651	59,651	59,651
609200 Generator Fixed	0	0	58,408	116,816	1,185,784	2,254,753	2,254,753	2,254,753	2,254,753	2,254,753	2,254,753
610100 Tools, Shop and Garage Equipment	177,045	177,045	181,184	198,573	211,823	238,826	238,826	265,830	275,129	299,169	313,910
611100 Office Furniture	41,631	52,440	63,248	63,248	64,878	66,507	66,507	66,507	66,507	66,507	66,507
611200 Office Equipment	12,693	12,693	12,693	12,693	12,693	12,693	12,693	12,693	12,693	12,693	12,693
611300 Office A/V	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254
612200 Laboratory Equipment	30,614	67,747	104,880	104,880	104,880	130,355	130,355	165,970	186,443	207,304	228,562
801103 Road Surface	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869
801203 Road Non-Surface Collector	0	0	408,374	816,747	816,747	816,747	816,747	816,747	816,747	816,747	816,747
801601 Road Retaining Walls	1,577,548	1,577,548	1,577,548	1,577,548	1,577,548	1,577,548	1,577,548	1,577,548	1,577,548	1,577,548	1,577,548
802101 Reservoirs Structural	19,736,546	20,135,727	20,136,202	20,136,202	20,136,202	20,136,202	20,136,202	20,136,202	20,136,202	20,136,202	20,136,202
802102 Reservoirs Mechanical	2,099,392	1,763,000	1,419,516	1,395,493	1,371,471	1,371,471	1,371,471	1,371,471	1,371,471	1,395,161	1,418,851
802103 Reservoirs Electrical	545,541	469,092	392,643	392,643	392,643	392,643	392,643	392,643	392,643	392,643	392,643
802104 Reservoirs Instrumentation	32,453	32,453	32,453	32,453	32,453	32,453	32,453	32,453	32,453	32,453	32,453
802105 Reservoirs General	729,495	729,495	729,495	729,495	729,495	729,495	729,495	729,495	729,495	729,495	729,495
802201 Mains	112,338,987	118,601,399	126,000,178	134,339,714	138,667,599	143,673,806	143,673,806	149,142,530	153,896,478	159,598,143	165,580,574
802202 Services	24,855,419	25,827,003	27,418,102	29,522,795	30,733,708	32,061,315	32,061,315	33,745,559	34,926,925	35,630,600	36,367,715
802203 Valves	7,811,459	8,271,979	9,032,686	10,008,111	10,739,166	11,384,176	11,384,176	11,804,313	12,103,137	12,415,615	12,742,560
802204 Hydrants	5,650,361	6,008,619	6,551,808	7,153,499	7,676,279	8,211,397	8,211,397	8,518,889	8,718,499	8,928,349	9,149,050
802205 ICCP System	6,034	30,062	54,089	54,089	54,089	54,089	54,089	54,089	54,089	54,089	54,089
802301 Pump Stations Structural	989,751	1,187,278	1,384,805	1,384,805	1,384,805	1,384,805	1,384,805	1,415,732	1,509,688	1,572,717	1,572,717
802302 Pump Stations Mechanical	1,206,812	1,556,303	1,912,016	1,918,218	1,918,218	2,020,118	2,020,118	3,176,757	4,873,804	5,516,113	5,516,113
802303 Pump Stations Electrical	689,725	917,938	1,149,312	1,152,474	1,152,474	1,152,474	1,152,474	1,241,849	1,331,224	1,331,224	1,331,224
802304 Stations Instrumentation	248,612	332,696	430,174	443,569	443,569	481,781	481,781	519,994	519,994	525,395	530,797
802305 Pump Station General	753,954	869,361	984,767	984,767	984,767	984,767	984,767	984,767	984,767	984,767	984,767
802401 WTP Low Lift Structural	8,384,857	8,416,452	8,445,424	8,449,197	8,449,197	8,487,410	8,487,410	8,604,714	8,696,722	8,722,799	8,749,372
802402 WTP Low Lift Mechanical	6,472,502	6,472,502	6,413,511	6,363,713	6,372,907	6,863,444	6,863,444	7,651,806	8,142,850	22,504,745	36,700,779
802403 WTP Low Lift Electrical	539,858	594,561	649,619	649,619	649,619	649,619	649,619	649,619	649,619	649,619	649,619
802404 WTP Low Lift Instrumentation	455,549	511,155	513,389	513,389	513,389	569,434	569,434	734,579	848,845	854,012	871,178
802405 WTP Low Lift General	354,182	546,084	546,134	675,212	804,289	804,289	804,289	804,289	804,289	804,289	804,289

Schedule 14											
802412 WTP Boiler Area Mechanical	465,804	464,472	1,051,722	1,772,241	1,905,511	1,964,104	1,964,104	2,022,696	2,022,696	2,022,696	2,022,696
802413 WTP Boiler Area Electrical	50,179	50,179	171,163	318,571	344,995	344,995	344,995	344,995	344,995	344,995	344,995
802414 WTP Boiler Area Instrumentation	16,726	16,726	43,354	74,377	78,772	78,772	78,772	78,772	78,772	78,772	78,772
802415 WTP Boiler Area General	0	0	19,378	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756
802421 WTP Chemical Systems Structural	551,488	551,488	551,488	1,054,439	1,557,390	1,557,390	1,557,390	1,557,390	1,557,390	1,653,203	1,749,017
802422 WTP Chemical Systems Mechanical	387,084	387,084	217,667	1,945,238	3,842,227	3,933,937	3,933,937	4,107,781	4,490,595	4,791,276	4,791,276
802423 WTP Chemical Systems Electrical	271,931	271,931	166,917	333,576	605,251	605,251	605,251	605,251	605,251	605,251	605,251
802424 WTP Chemical Systems Instrumentation	34,586	34,399	24,401	338,751	663,099	663,099	663,099	663,099	663,099	663,099	663,099
802425 WTP Chemical Systems General	0	0	0	296,835	593,669	593,669	593,669	593,669	593,669	593,669	593,669
802431 WTP Clarifiers Structural	2,780,016	2,842,372	2,842,372	3,244,755	3,768,766	3,890,394	3,890,394	3,890,394	3,890,394	3,890,394	3,890,394
802432 WTP Clarifiers Mechanical	3,349,505	3,349,505	2,608,555	2,702,704	3,537,802	3,537,802	3,537,802	3,537,802	3,537,802	3,537,802	3,537,802
802433 WTP Clarifiers Electrical	28,232	28,232	28,232	90,541	204,794	256,739	256,739	256,739	256,739	256,739	256,739
802434 WTP Clarifiers Instrumentation	18,558	18,520	18,520	94,258	175,934	181,872	181,872	181,872	181,872	181,872	181,872
802441 WTP Filtration Structural	6,032,124	6,075,643	6,075,643	6,075,643	6,075,643	6,075,643	6,075,643	6,075,643	6,075,643	6,075,643	6,075,643
802442 WTP Filtration Mechanical	1,353,470	1,353,470	1,353,470	1,505,905	1,660,202	1,677,348	1,677,348	1,718,490	1,744,347	1,744,347	1,744,347
802443 WTP Filtration Electrical	2,887,973	2,887,973	2,887,973	2,902,448	2,916,922	2,916,922	2,916,922	2,916,922	2,916,922	2,916,922	2,916,922
802444 WTP Filtration Instrumentation	102,333	102,333	102,333	114,923	127,513	127,513	127,513	127,513	127,513	127,513	127,513
802451 WTP UV Disinfection Structural	343,520	387,039	387,039	387,039	387,039	387,039	387,039	387,039	387,039	387,039	387,039
802452 WTP UV Disinfection Mechanical	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
802453 WTP UV Disinfection Electrical	63,151	63,151	63,151	63,151	63,151	63,151	63,151	63,151	63,151	63,151	63,151
802461 WTP High Lift Structural	9,681,205	9,724,724	9,724,724	9,724,724	9,941,538	10,158,353	10,158,353	10,158,353	10,158,353	10,158,353	10,158,353
802462 WTP High Lift Mechanical	3,646,400	3,862,226	3,862,226	3,862,226	4,122,056	4,891,387	4,891,387	5,400,887	5,400,887	5,400,887	5,400,887
802463 WTP High Lift Electrical	1,354,289	1,354,289	1,354,289	1,354,289	2,950,489	4,546,689	4,546,689	4,726,167	4,905,645	4,905,645	4,905,645
802464 WTP High Lift Instrumentation	147,680	147,680	147,680	147,680	159,741	171,801	171,801	171,801	171,801	171,801	171,801
802471 WTP Solid/Sludge Structural	399,608	432,521	432,521	432,521	432,521	432,521	432,521	432,521	432,521	432,521	432,521
802472 WTP Solid/Sludge Mechanical	694,790	694,790	694,790	694,790	694,790	694,790	694,790	694,790	694,790	694,790	694,790
802473 WTP Solid/Sludge Electrical	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300
802474 WTP Solid/Sludge Instrumentation	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300
802493 WTP Process Electrical	0	0	0	0	0	0	0	0	0	0	0
804104 Outfalls	368,377	368,377	368,377	368,377	368,377	368,377	368,377	368,377	368,377	368,377	368,377
805203 Electrical Transformers	186,313	191,481	196,649	196,649	196,649	196,649	196,649	196,649	196,649	196,649	196,649
Total gross plant as of mid year	252,868,411	263,551,752	274,777,087	295,876,373	316,999,912	332,356,557	332,356,557	346,889,346	359,820,548	385,273,278	408,709,335
ACCUMULATED DEPRECIATION AS OF MID YEAR											
	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
401100 Parking Lot Gravel	46,291	46,291	46,291	46,291	46,291	46,291	46,291	46,291	46,291	46,291	46,291
402100 Landscaping	23,447	45,474	68,616	92,444	116,272	140,100	163,928	187,757	211,585	235,413	259,241
404200 Fences Non Wood	4,688	9,221	13,753	18,266	22,760	27,253	31,747	36,240	40,734	45,227	49,721
408500 Outdoor Amenities	19	152	386	625	864	1,103	1,342	1,581	1,821	2,060	2,299
410200 Signs Non Wood	31	134	333	587	841	1,095	1,349	1,603	1,857	2,111	2,364
501010 Major Buildings Shell	3,474,073	3,548,623	3,636,796	3,801,487	3,967,385	4,136,228	4,306,384	4,477,420	4,649,338	4,821,257	4,993,175
501020 Major Buildings Electrical/Lighting	50,295	66,785	84,723	103,019	122,665	146,316	172,619	198,922	232,281	272,992	314,000
501030 Major Buildings Plumbing/Mechanical	96,915	128,619	162,847	197,725	232,625	267,526	302,427	337,328	372,228	407,129	442,030
501040 Major Buildings Fire/Safety	3,020	6,352	11,903	17,540	33,095	118,057	262,507	408,876	557,163	705,451	853,739
501060 Major Buildings HVAC	1,457,118	1,409,477	854,230	386,760	455,578	560,992	666,407	771,822	877,236	982,651	1,088,066
501070 Major Buildings Roof	47,018	79,475	105,025	128,905	191,009	277,232	363,455	449,679	535,902	622,125	708,348
501080 Major Buildings Fixed Equipment	2,491	4,117	5,899	7,243	8,587	9,931	11,275	12,619	13,963	15,307	16,651
501090 Major Buildings Floors	11,656	16,724	23,833	31,445	39,057	46,669	54,280	61,892	69,504	77,116	84,728
501100 Major Buildings Interior Finish	60,068	79,302	102,085	127,237	152,390	177,542	202,694	227,847	252,999	278,152	303,304

Schedule 14											
502050 Minor Buildings Permanent	0	0	0	3,483	20,786	48,426	76,065	103,705	131,344	158,984	186,623
601100 Heavy Construction Equipment	0	0	0	0	0	0	0	0	0	0	0
603100 Communication Links	0	7	24	43	62	81	100	119	138	157	177
603300 SCADA Master Station	41,784	55,322	68,861	120,151	264,591	482,491	718,456	954,420	1,190,384	1,426,348	1,662,313
604100 Meters	1,822,424	1,955,507	2,086,773	2,120,348	1,774,799	1,688,038	2,142,248	2,679,317	3,386,197	4,265,917	5,283,732
606100 Servers & Network Equipment	0	1,574	7,077	15,728	25,173	34,618	44,063	59,896	88,505	123,503	158,500
606200 Desktops	0	473	1,883	3,758	5,633	7,508	9,383	11,258	13,133	15,008	16,883
606600 Major Software	0	1,665	6,633	21,049	50,957	88,547	126,137	163,727	201,318	238,908	276,498
608100 Safety Equip Emerg/Life	1,797	5,558	9,485	13,412	17,339	21,776	26,722	32,177	38,142	44,108	50,073
609200 Generator Fixed	0	0	976	4,873	55,400	159,375	272,113	384,851	497,588	610,326	723,064
610100 Tools, Shop and Garage Equipment	27,645	39,448	51,390	64,053	78,175	93,674	109,675	126,581	144,704	163,943	184,481
611100 Office Furniture	5,011	7,500	10,529	13,692	16,895	20,223	23,634	27,046	30,457	33,869	37,281
611200 Office Equipment	3,281	4,550	5,820	7,089	8,358	9,628	10,897	12,166	13,436	14,705	15,974
611300 Office A/V	583	808	1,033	1,259	1,484	1,710	1,935	2,160	2,386	2,611	2,837
612200 Laboratory Equipment	26,512	29,904	37,008	45,028	53,047	63,575	76,611	91,427	109,048	128,735	150,528
801103 Road Surface	4,231,832	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869	4,297,869
801203 Road Non-Surface Collector	0	0	5,147	16,223	36,641	71,549	112,386	153,224	194,061	234,898	275,736
801601 Road Retaining Walls	111,617	190,494	269,371	348,249	427,126	506,003	584,881	663,758	742,636	821,513	900,390
802101 Reservoirs Structural	8,467,524	8,871,759	9,281,167	9,690,580	10,099,993	10,509,406	10,918,819	11,328,232	11,737,644	12,147,057	12,556,470
802102 Reservoirs Mechanical	1,661,838	1,344,259	1,026,723	1,027,592	1,028,496	1,068,934	1,123,792	1,178,651	1,233,510	1,288,843	1,345,123
802103 Reservoirs Electrical	367,556	301,442	235,206	245,418	255,631	268,590	284,296	300,001	315,707	331,413	347,119
802104 Reservoirs Instrumentation	32,453	32,453	32,453	32,453	32,453	32,453	32,453	32,453	32,453	32,453	32,453
802105 Reservoirs General	50,032	66,243	82,454	98,665	114,876	131,087	147,298	163,509	179,720	195,931	212,142
802201 Mains	23,380,228	24,974,429	26,607,873	28,300,924	30,076,659	31,971,150	33,909,579	35,884,839	37,925,799	40,034,175	42,218,281
802202 Services	4,970,769	5,308,188	5,663,854	6,044,186	6,444,446	6,863,884	7,295,470	7,738,414	8,200,560	8,675,313	9,159,644
802203 Valves	2,627,797	2,821,194	3,030,855	3,258,604	3,505,672	3,776,177	4,059,763	4,348,853	4,646,552	4,951,531	5,264,171
802204 Hydrants	1,382,509	1,479,009	1,583,648	1,694,780	1,815,387	1,951,331	2,095,142	2,241,702	2,392,633	2,547,144	2,705,432
802205 ICCP System	328	630	2,133	4,837	7,542	10,246	12,950	15,655	18,359	21,064	23,768
802301 Pump Stations Structural	67,881	92,088	120,685	151,459	182,232	213,006	243,779	274,896	307,401	341,650	376,599
802302 Pump Stations Mechanical	148,983	204,300	273,725	350,331	427,060	505,826	586,631	690,569	851,580	1,059,378	1,280,023
802303 Pump Stations Electrical	85,148	117,338	158,721	204,758	250,857	296,955	343,054	390,941	442,402	495,651	548,900
802304 Stations Instrumentation	123,933	161,845	205,891	257,807	309,013	350,299	390,164	432,762	478,092	523,808	570,297
802305 Pump Station General	51,710	69,758	90,370	112,253	134,137	156,021	177,904	199,788	221,672	243,555	265,439
802401 WTP Low Lift Structural	1,578,200	1,764,766	1,951,990	2,139,708	2,327,468	2,515,653	2,704,262	2,894,174	3,086,413	3,279,963	3,474,098
802402 WTP Low Lift Mechanical	1,068,456	1,212,580	1,547,719	1,758,459	1,978,036	2,227,668	2,502,206	2,792,511	3,108,404	3,721,356	4,905,466
802403 WTP Low Lift Electrical	51,789	73,741	98,251	123,349	148,448	173,990	199,974	225,959	251,944	277,929	303,913
802404 WTP Low Lift Instrumentation	106,468	175,459	245,472	315,564	385,656	461,417	542,846	636,083	749,297	871,052	994,403
802405 WTP Low Lift General	7,597	17,961	30,097	45,101	62,974	80,758	98,453	116,147	133,841	151,536	169,230
802412 WTP Boiler Area Mechanical	381,482	388,200	271,601	186,002	259,126	336,519	415,083	494,819	575,727	656,634	737,542
802413 WTP Boiler Area Electrical	29,104	31,111	34,338	42,847	56,033	69,833	83,633	97,433	111,232	125,032	138,832
802414 WTP Boiler Area Instrumentation	16,726	16,726	17,685	22,711	31,210	41,274	52,538	63,803	75,067	86,332	97,596
802415 WTP Boiler Area General	0	0	109	648	1,509	2,370	3,231	4,093	4,954	5,815	6,677
802421 WTP Chemical Systems Structural	352,858	365,114	377,369	395,258	424,325	458,760	493,023	527,285	561,548	596,864	634,289
802422 WTP Chemical Systems Mechanical	387,202	387,083	217,666	86,501	200,632	355,190	512,547	673,382	845,349	1,030,987	1,222,638
802423 WTP Chemical Systems Electrical	72,624	82,247	56,901	33,238	51,480	75,401	99,611	123,821	148,031	172,241	196,451
802424 WTP Chemical Systems Instrumentation	34,596	34,398	24,400	37,761	107,454	201,201	296,024	390,847	485,670	580,494	675,317
802425 WTP Chemical Systems General	0	0	0	3,325	13,247	26,440	39,632	52,825	66,017	79,210	92,403
802431 WTP Clarifiers Structural	1,015,163	1,069,717	1,124,837	1,182,211	1,251,229	1,333,228	1,418,817	1,504,405	1,589,994	1,675,583	1,761,171

Schedule 14											
802432 WTP Clarifiers Mechanical	678,367	810,092	727,777	624,244	738,516	878,901	1,020,413	1,161,925	1,303,437	1,444,949	1,586,461
802433 WTP Clarifiers Electrical	11,815	12,810	13,805	15,428	21,621	31,823	42,093	52,363	62,632	72,902	83,171
802434 WTP Clarifiers Instrumentation	18,558	18,520	18,520	21,247	35,642	60,314	86,322	112,329	138,337	164,345	190,352
802441 WTP Filtration Structural	3,539,087	3,669,672	3,800,658	3,931,644	4,062,630	4,193,616	4,324,602	4,455,588	4,586,574	4,717,561	4,848,547
802442 WTP Filtration Mechanical	1,184,822	1,194,655	1,204,489	1,216,360	1,234,372	1,278,977	1,346,071	1,413,987	1,483,244	1,553,018	1,622,792
802443 WTP Filtration Electrical	483,146	597,772	712,397	827,216	942,614	1,058,845	1,175,522	1,292,198	1,408,875	1,525,552	1,642,229
802444 WTP Filtration Instrumentation	96,619	102,333	102,333	102,934	105,334	116,250	134,484	152,719	170,953	189,188	207,422
802451 WTP UV Disinfection Structural	43,899	52,098	60,699	69,300	77,901	86,502	95,102	103,703	112,304	120,905	129,506
802452 WTP UV Disinfection Mechanical	312,000	360,000	408,000	456,000	504,000	552,000	600,000	648,000	696,000	744,000	792,000
802453 WTP UV Disinfection Electrical	11,623	14,149	16,675	19,201	21,727	24,253	26,779	29,305	31,831	34,357	36,883
802461 WTP High Lift Structural	6,394,339	6,605,154	6,816,373	7,027,592	7,243,798	7,469,921	7,700,977	7,932,032	8,163,087	8,394,142	8,625,197
802462 WTP High Lift Mechanical	945,400	1,083,173	1,227,410	1,371,646	1,526,640	1,714,473	1,924,391	2,145,241	2,377,023	2,608,806	2,840,589
802463 WTP High Lift Electrical	582,890	628,074	673,259	718,444	797,596	1,044,042	1,423,813	1,811,081	2,213,339	2,623,094	3,032,848
802464 WTP High Lift Instrumentation	143,395	147,680	147,680	147,680	149,464	153,321	157,470	161,619	165,768	169,917	174,066
802471 WTP Solid/Sludge Structural	297,858	307,166	316,778	326,389	336,001	345,612	355,224	364,835	374,447	384,059	393,670
802472 WTP Solid/Sludge Mechanical	694,790	694,790	694,790	694,790	694,790	694,790	694,790	694,790	694,790	694,790	694,790
802473 WTP Solid/Sludge Electrical	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300
802474 WTP Solid/Sludge Instrumentation	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300
802493 WTP Process Electrical	0	0	0	0	0	0	0	0	0	0	0
804104 Outfalls	5,335	10,247	15,159	20,070	24,982	29,894	34,806	39,717	44,629	49,541	54,452
805203 Electrical Transformers	87,507	89,657	94,510	99,426	104,342	109,258	114,175	119,091	124,007	128,923	133,839
Total accumulated depreciation as of mid year	75,640,619	79,932,107	83,460,701	87,631,422	93,167,603	99,897,884	107,598,489	115,531,553	123,911,702	132,953,322	142,830,216
ANNUAL DEPRECIATION											
	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
401100 Parking Lot Gravel	0	0	0	0	0	0	0	0	0	0	0
402100 Landscaping	21,598	22,455	23,828	23,828	23,828	23,828	23,828	23,828	23,828	23,828	23,828
404200 Fences Non Wood	4,533	4,532	4,532	4,493	4,493	4,493	4,493	4,493	4,493	4,493	4,493
408500 Outdoor Amenities	38	229	239	239	239	239	239	239	239	239	239
410200 Signs Non Wood	62	144	254	254	254	254	254	254	254	254	254
501010 Major Buildings Shell	166,002	167,357	165,118	164,264	167,532	170,155	170,155	171,918	182,245	192,571	192,571
501020 Major Buildings Electrical/Lighting	15,399	17,581	18,295	18,295	20,998	26,303	26,303	26,303	40,415	41,008	41,008
501030 Major Buildings Plumbing/Mechanical	29,806	35,406	34,855	34,901	34,901	34,901	34,901	34,901	34,901	34,901	34,901
501040 Major Buildings Fire/Safety	1,199	5,465	5,637	5,637	25,473	144,450	144,450	148,288	148,288	148,288	148,288
501060 Major Buildings HVAC	48,054	6,665	7,555	32,221	105,415	105,415	105,415	105,415	105,415	105,415	105,415
501070 Major Buildings Roof	23,587	41,327	27,698	37,985	86,223	86,223	86,223	86,223	86,223	86,223	86,223
501080 Major Buildings Fixed Equipment	1,032	2,220	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344
501090 Major Buildings Floors	3,531	6,606	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612
501100 Major Buildings Interior Finish	18,056	20,412	25,152	25,152	25,152	25,152	25,152	25,152	25,152	25,152	25,152
502050 Minor Buildings Permanent	0	0	0	6,967	27,639	27,639	27,639	27,639	27,639	27,639	27,639
601100 Heavy Construction Equipment	0	0	0	0	0	0	0	0	0	0	0
603100 Communication Links	0	14	19	19	19	19	19	19	19	19	19
603300 SCADA Master Station	13,539	13,539	13,539	89,042	199,837	235,964	235,964	235,964	235,964	235,964	235,964
604100 Meters	212,855	159,972	153,522	187,199	282,366	454,210	454,210	619,929	793,831	965,610	1,070,020
606100 Servers & Network Equipment	0	3,148	7,858	9,445	9,445	9,445	9,445	22,221	34,998	34,998	34,998
606200 Desktops	0	945	1,875	1,875	1,875	1,875	1,875	1,875	1,875	1,875	1,875
606600 Major Software	0	3,330	6,606	22,225	37,590	37,590	37,590	37,590	37,590	37,590	37,590
608100 Safety Equip Emerg/Life	3,594	3,927	3,927	3,927	3,927	4,946	4,946	5,965	5,965	5,965	5,965

Schedule 14											
609200 Generator Fixed	0	0	1,952	5,841	95,214	112,738	112,738	112,738	112,738	112,738	112,738
610100 Tools, Shop and Garage Equipment	11,803	11,803	12,081	13,245	14,998	16,001	16,001	17,811	18,434	20,044	21,032
611100 Office Furniture	2,082	2,896	3,162	3,162	3,244	3,412	3,412	3,412	3,412	3,412	3,412
611200 Office Equipment	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269
611300 Office A/V	225	225	225	225	225	225	225	225	225	225	225
612200 Laboratory Equipment	593	6,189	8,020	8,020	8,020	13,036	13,036	16,597	18,644	20,730	22,856
801103 Road Surface	132,073	0	0	0	0	0	0	0	0	0	0
801203 Road Non-Surface Collector	0	0	10,293	11,860	28,978	40,837	40,837	40,837	40,837	40,837	40,837
801601 Road Retaining Walls	78,877	78,877	78,877	78,877	78,877	78,877	78,877	78,877	78,877	78,877	78,877
802101 Reservoirs Structural	399,176	409,402	409,413	409,413	409,413	409,413	409,413	409,413	409,413	409,413	409,413
802102 Reservoirs Mechanical	37,796	25,948	25,948	25,993	26,017	54,859	54,859	54,859	54,859	55,806	56,754
802103 Reservoirs Electrical	11,227	10,213	10,213	10,213	10,213	15,706	15,706	15,706	15,706	15,706	15,706
802104 Reservoirs Instrumentation	0	0	0	0	0	0	0	0	0	0	0
802105 Reservoirs General	16,211	16,211	16,211	16,211	16,211	16,211	16,211	16,211	16,211	16,211	16,211
802201 Mains	1,571,175	1,581,702	1,685,187	1,793,681	1,850,553	1,938,429	1,938,429	2,012,092	2,069,827	2,146,924	2,221,289
802202 Services	330,937	343,901	367,433	393,229	407,291	431,586	431,586	454,302	469,990	479,516	489,147
802203 Valves	219,049	200,534	218,788	241,386	257,424	283,586	283,586	294,594	300,803	309,154	316,127
802204 Hydrants	123,749	100,151	109,127	118,613	128,078	143,811	143,811	149,309	152,555	156,466	160,111
802205 ICCP System	302	302	2,704	2,704	2,704	2,704	2,704	2,704	2,704	2,704	2,704
802301 Pump Stations Structural	21,994	26,420	30,773	30,773	30,773	30,773	30,773	31,461	33,549	34,949	34,949
802302 Pump Stations Mechanical	48,268	62,367	76,483	76,729	76,729	80,805	80,805	127,070	194,952	220,645	220,645
802303 Pump Stations Electrical	27,589	36,793	45,974	46,099	46,099	46,099	46,099	49,674	53,249	53,249	53,249
802304 Stations Instrumentation	31,857	43,968	59,846	59,708	42,705	39,866	39,866	45,330	45,330	46,102	46,875
802305 Pump Station General	16,755	19,340	21,884	21,884	21,884	21,884	21,884	21,884	21,884	21,884	21,884
802401 WTP Low Lift Structural	186,360	186,771	187,677	187,760	187,760	188,609	188,609	191,216	193,261	193,840	194,430
802402 WTP Low Lift Mechanical	(6,605)	463,225	227,917	224,427	224,726	274,538	274,538	306,072	325,714	900,190	1,468,031
802403 WTP Low Lift Electrical	20,694	23,919	25,099	25,099	25,099	25,985	25,985	25,985	25,985	25,985	25,985
802404 WTP Low Lift Instrumentation	68,161	69,935	70,092	70,092	70,092	81,429	81,429	105,045	121,385	122,124	124,579
802405 WTP Low Lift General	8,593	12,135	12,136	17,873	17,873	17,694	17,694	17,694	17,694	17,694	17,694
802412 WTP Boiler Area Mechanical	8,339	8,029	22,529	70,028	76,220	78,564	78,564	80,908	80,908	80,908	80,908
802413 WTP Boiler Area Electrical	2,007	2,007	4,447	12,572	13,800	13,800	13,800	13,800	13,800	13,800	13,800
802414 WTP Boiler Area Instrumentation	0	0	1,918	8,134	8,864	11,264	11,264	11,264	11,264	11,264	11,264
802415 WTP Boiler Area General	0	0	217	861	861	861	861	861	861	861	861
802421 WTP Chemical Systems Structural	12,255	12,255	12,255	23,524	34,609	34,263	34,263	34,263	34,263	36,370	38,478
802422 WTP Chemical Systems Mechanical	275	0	0	76,503	151,759	157,357	157,357	164,311	179,624	191,651	191,651
802423 WTP Chemical Systems Electrical	9,485	9,485	8,853	12,853	23,631	24,210	24,210	24,210	24,210	24,210	24,210
802424 WTP Chemical Systems Instrumentation	20	0	0	46,716	92,671	94,823	94,823	94,823	94,823	94,823	94,823
802425 WTP Chemical Systems General	0	0	0	6,651	13,193	13,193	13,193	13,193	13,193	13,193	13,193
802431 WTP Clarifiers Structural	53,969	55,120	55,120	59,628	78,409	85,589	85,589	85,589	85,589	85,589	85,589
802432 WTP Clarifiers Mechanical	131,725	131,724	126,785	89,288	139,256	141,512	141,512	141,512	141,512	141,512	141,512
802433 WTP Clarifiers Electrical	995	995	995	2,251	10,135	10,270	10,270	10,270	10,270	10,270	10,270
802434 WTP Clarifiers Instrumentation	0	0	0	5,454	23,336	26,008	26,008	26,008	26,008	26,008	26,008
802441 WTP Filtration Structural	130,183	130,986	130,986	130,986	130,986	130,986	130,986	130,986	130,986	130,986	130,986
802442 WTP Filtration Mechanical	9,833	9,833	9,833	13,909	22,115	67,094	67,094	68,740	69,774	69,774	69,774
802443 WTP Filtration Electrical	114,626	114,626	114,626	115,013	115,784	116,677	116,677	116,677	116,677	116,677	116,677
802444 WTP Filtration Instrumentation	11,429	0	0	1,202	3,597	18,234	18,234	18,234	18,234	18,234	18,234
802451 WTP UV Disinfection Structural	7,798	8,601	8,601	8,601	8,601	8,601	8,601	8,601	8,601	8,601	8,601
802452 WTP UV Disinfection Mechanical	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000

Schedule 14											
802453 WTP UV Disinfection Electrical	2,546	2,526	2,526	2,526	2,526	2,526	2,526	2,526	2,526	2,526	2,526
802461 WTP High Lift Structural	210,416	211,219	211,219	211,219	221,192	231,055	231,055	231,055	231,055	231,055	231,055
802462 WTP High Lift Mechanical	131,311	144,237	144,237	144,237	165,750	209,917	209,917	231,783	231,783	231,783	231,783
802463 WTP High Lift Electrical	45,185	45,185	45,185	45,185	113,120	379,772	379,772	394,763	409,754	409,754	409,754
802464 WTP High Lift Instrumentation	8,627	0	0	0	3,566	4,149	4,149	4,149	4,149	4,149	4,149
802471 WTP Solid/Sludge Structural	9,004	9,612	9,612	9,612	9,612	9,612	9,612	9,612	9,612	9,612	9,612
802472 WTP Solid/Sludge Mechanical	0	0	0	0	0	0	0	0	0	0	0
802473 WTP Solid/Sludge Electrical	0	0	0	0	0	0	0	0	0	0	0
802474 WTP Solid/Sludge Instrumentation	0	0	0	0	0	0	0	0	0	0	0
802493 WTP Process Electrical	0	0	0	0	0	0	0	0	0	0	0
804104 Outfalls	4,912	4,912	4,912	4,912	4,912	4,912	4,912	4,912	4,912	4,912	4,912
805203 Electrical Transformers	5,681	4,788	4,916	4,916	4,916	4,916	4,916	4,916	4,916	4,916	4,916
Total annual depreciation	4,881,716	5,203,910	5,196,022	5,726,092	6,670,054	7,700,605	7,700,605	8,165,524	8,605,099	9,509,121	10,285,973
NO-COST CAPITAL AS OF MID YEAR											
	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
501020 Major Buildings Electrical/Lighting	0	0	0	0	0	0	0	204,828	409,656	409,656	409,656
801203 Road Non-Surface Collector	0	0	408,374	816,747	816,747	816,747	816,747	816,747	816,747	816,747	816,747
802201 Mains	80,822,954	84,461,065	89,074,653	94,064,679	96,403,492	99,509,908	99,509,908	101,667,045	102,155,762	102,644,479	103,133,196
802202 Services	10,318,545	11,187,854	12,477,312	14,042,260	14,674,107	15,590,909	15,590,909	17,063,372	18,023,333	18,494,065	18,986,081
802203 Valves	5,166,372	5,423,588	5,812,745	6,303,745	6,557,669	6,834,926	6,834,926	7,038,143	7,108,515	7,178,886	7,249,258
802204 Hydrants	3,934,208	4,121,836	4,471,249	4,842,617	4,984,773	5,173,411	5,173,411	5,318,214	5,346,484	5,374,754	5,403,024
802205 ICCP System	0	24,028	48,055	48,055	48,055	48,055	48,055	48,055	48,055	48,055	48,055
802301 Pump Stations Structural	989,751	989,751	989,751	989,751	989,751	989,751	989,751	989,751	989,751	989,751	989,751
802302 Pump Stations Mechanical	1,206,812	1,206,793	1,206,793	1,206,793	1,206,793	1,206,793	1,206,793	1,206,793	1,206,793	1,206,793	1,206,793
802303 Pump Stations Electrical	689,725	689,725	689,725	689,725	689,725	689,725	689,725	689,725	689,725	689,725	689,725
802304 Stations Instrumentation	223,001	223,001	213,001	203,001	203,001	203,001	203,001	203,001	203,001	203,001	203,001
802305 Pump Station General	753,954	753,954	753,954	753,954	753,954	753,954	753,954	753,954	753,954	753,954	753,954
802402 WTP Low Lift Mechanical	4,600,000	4,600,000	4,600,000	4,600,000	4,600,000	4,600,000	4,600,000	4,600,000	4,600,000	4,600,000	4,600,000
Total no-cost capital as of mid year	108,705,323	113,681,596	120,745,613	128,561,328	131,928,068	136,417,181	136,417,181	140,599,630	142,351,776	143,409,867	144,489,241
ACCUMULATED AMORTIZATION AS OF MID YEAR											
	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
501020 Major Buildings Electrical/Lighting	0	0	0	0	0	0	0	0	6,759	20,278	33,797
801203 Road Non-Surface Collector	0	0	5,147	16,223	36,641	71,549	71,549	112,386	153,224	194,061	234,898
802201 Mains	20,692,902	21,764,204	22,924,694	24,104,196	25,327,718	26,639,348	26,639,348	27,994,379	29,363,829	30,736,545	32,112,527
802202 Services	3,182,852	3,325,648	3,484,074	3,661,580	3,853,068	4,056,589	4,056,589	4,277,387	4,514,484	4,761,144	5,014,179
802203 Valves	2,211,488	2,335,827	2,470,073	2,611,695	2,759,171	2,914,590	2,914,590	3,077,093	3,242,153	3,408,097	3,574,927
802204 Hydrants	1,196,839	1,263,244	1,334,855	1,409,422	1,487,802	1,572,013	1,572,013	1,659,489	1,748,174	1,837,094	1,926,251
802205 ICCP System	0	0	1,201	3,604	6,007	8,410	8,410	10,812	13,215	15,618	18,021
802301 Pump Stations Structural	67,881	89,876	111,870	133,865	155,859	177,854	177,854	199,848	221,843	243,837	265,832
802302 Pump Stations Mechanical	148,983	197,253	245,524	293,796	342,068	390,340	390,340	438,611	486,883	535,155	583,426
802303 Pump Stations Electrical	85,148	112,737	140,326	167,915	195,504	223,093	223,093	250,682	278,271	305,860	333,449
802304 Stations Instrumentation	98,322	130,179	154,056	176,504	197,003	203,002	203,002	203,002	203,002	203,002	203,002
802305 Pump Station General	51,710	68,465	85,219	101,974	118,728	135,483	135,483	152,238	168,992	185,747	202,501
802402 WTP Low Lift Mechanical	142,915	326,915	628,373	812,373	996,373	1,180,373	1,180,373	1,364,373	1,548,373	1,732,373	1,916,373
Total accumulated amortization as of mid year	27,879,040	29,614,347	31,585,412	33,493,146	35,475,943	37,572,643	37,572,643	39,740,300	41,949,200	44,178,810	46,419,182
AMORTIZATION AS OF MID YEAR											
	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
501020 Major Buildings Electrical/Lighting	0	0	0	0	0	0	0	0	13,519	13,519	13,519

Schedule 14											
801203 Road Non-Surface Collector	0	0	10,293	11,860	28,978	40,837	40,837	40,837	40,837	40,837	40,837
802201 Mains	1,147,153	1,126,375	1,194,604	1,256,485	1,282,646	1,340,613	1,340,613	1,369,449	1,369,449	1,375,983	1,375,983
802202 Services	136,958	148,634	168,220	186,792	196,183	210,859	210,859	230,737	243,458	249,862	256,209
802203 Valves	149,129	129,303	139,188	148,733	150,893	159,946	159,946	165,059	165,059	166,830	166,830
802204 Hydrants	93,326	68,694	74,528	80,083	82,155	86,267	86,267	88,684	88,684	89,156	89,156
802205 ICCP System	0	0	2,403	2,403	2,403	2,403	2,403	2,403	2,403	2,403	2,403
802301 Pump Stations Structural	21,994	21,994	21,994	21,994	21,994	21,994	21,994	21,994	21,994	21,994	21,994
802302 Pump Stations Mechanical	48,268	48,272	48,272	48,272	48,272	48,272	48,272	48,272	48,272	48,272	48,272
802303 Pump Stations Electrical	27,589	27,589	27,589	27,589	27,589	27,589	27,589	27,589	27,589	27,589	27,589
802304 Stations Instrumentation	31,857	31,857	31,619	29,000	11,997	0	0	0	0	0	0
802305 Pump Station General	16,755	16,755	16,755	16,755	16,755	16,755	16,755	16,755	16,755	16,755	16,755
802402 WTP Low Lift Mechanical	(50,915)	418,915	184,000	184,000	184,000	184,000	184,000	184,000	184,000	184,000	184,000
Total amortization as of mid year	1,622,114	2,038,388	1,919,464	2,013,966	2,053,864	2,139,536	2,139,536	2,195,780	2,222,020	2,237,199	2,243,546
WORKING CAPITAL	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
Operating Reserve (working capital)	1,373,601	1,418,748	1,421,821	1,531,322	1,603,503	1,733,294	1,731,530	1,770,878	1,843,395	1,883,402	1,905,501
BILLS	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
5/8" W16	337,980	344,664	350,352	349,224	365,592	357,012	357,012	365,592	373,745	382,079	390,600
3/4" W19	5,808	6,240	6,444	6,888	7,476	7,042	7,042	7,476	7,643	7,813	7,987
1" W25	5,532	5,880	5,880	5,988	6,216	6,122	6,122	6,216	6,355	6,496	6,641
1-1/2" W38	6,228	6,732	6,696	6,612	6,900	6,760	6,760	6,900	7,054	7,211	7,372
2" W50	4,128	4,380	4,380	4,272	4,404	4,368	4,368	4,404	4,502	4,603	4,705
3" W75	996	1,032	1,044	1,068	1,116	1,092	1,092	1,116	1,141	1,166	1,192
4" W100	264	288	288	276	276	283	283	276	282	288	295
6" W150	108	132	132	120	120	123	123	120	123	126	128
8" W200	0	0	0	0	0	0	0	0	0	0	0
10" W250	0	0	0	0	0	0	0	0	0	0	0
South Hill	12	12	12	12	12	12	12	12	12	12	12
North Region	12	12	12	12	12	12	12	12	12	12	12
Total bills	361,068	369,372	375,240	374,472	392,124	382,826	382,826	392,124	400,868	409,807	418,945
CUSTOMERS	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
5/8" W16	28,387	29,028	29,438	29,133	30,466	29,811	29,811	30,698	31,383	32,083	32,798
3/4" W19	498	517	540	577	623	590	590	626	640	654	668
1" W25	473	483	490	503	518	512	512	520	531	543	555
1-1/2" W38	539	548	555	564	575	567	567	579	592	605	619
2" W50	355	355	361	376	367	372	372	372	381	389	398
3" W75	82	83	85	92	93	90	90	93	95	97	100
4" W100	23	24	25	24	23	24	24	24	24	25	25
6" W150	11	11	11	13	10	10	10	10	11	11	11
8" W200	0	0	0	0	0	0	0	0	0	0	0
10" W250	0	0	0	0	0	0	0	0	0	0	0
South Hill	1	1	1	1	1	1	1	1	1	1	1
North Region	1	1	1	1	1	1	1	1	1	1	1
Total customers	30,370	31,051	31,507	31,284	32,677	31,978	31,978	32,924	33,658	34,409	35,176
VOLUME	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021

Schedule 14											
5/8" W16	6,053,446	6,130,698	5,945,328	6,309,126	5,836,792	6,119,391	6,119,391	5,836,792	6,482,411	6,624,393	6,772,117
3/4" W19	215,127	224,094	215,805	221,675	218,826	225,954	225,954	218,826	234,224	242,136	247,536
1" W25	358,475	372,064	359,890	369,664	352,288	371,281	371,281	352,288	380,040	388,803	397,473
1-1/2" W38	943,219	941,197	886,917	907,966	801,197	905,508	905,508	801,197	909,423	928,619	949,327
2" W50	1,324,025	1,298,286	1,270,879	1,260,124	1,141,127	1,261,555	1,261,555	1,141,127	1,255,201	1,291,034	1,319,824
3" W75	476,354	522,953	546,171	539,017	585,607	544,655	544,655	585,607	581,569	591,990	605,191
4" W100	1,006,268	1,080,663	1,033,525	1,045,082	989,423	1,057,091	1,057,091	989,423	1,080,419	1,105,381	1,130,031
6" W150	891,815	833,599	786,472	863,275	941,917	754,363	754,363	941,917	870,615	840,270	859,008
8" W200	0	0	0	0	0	0	0	0	0	0	0
10" W250	0	0	0	0	0	0	0	0	0	0	0
South Hill	225,458	223,733	321,193	377,801	363,576	395,000	386,725	397,000	426,000	455,000	484,000
North Region	2,472,133	2,589,061	2,758,003	2,889,697	2,717,000	2,804,145	2,740,645	2,812,263	2,840,433	2,890,050	2,941,184
Total Deliveries	13,966,320	14,216,348	14,124,183	14,783,427	13,947,753	14,438,943	14,367,168	14,076,440	15,060,336	15,357,674	15,705,689
COINCIDENT PEAK (Average)	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
5/8" W16					9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%
3/4" W19					9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%
1" W25					9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1-1/2" W38					9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%
2" W50					9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%
3" W75					9.8%	9.8%	9.8%	9.8%	9.8%	9.8%	9.8%
4" W100					10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
6" W150					8.1%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%
8" W200					0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10" W250	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Hill					9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
North Region					9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
NON-COINCIDENT PEAK (Average)	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
5/8" W16					10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
3/4" W19					10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
1" W25					10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
1-1/2" W38					10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%
2" W50					10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
3" W75					10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
4" W100					11.2%	11.2%	11.2%	11.2%	11.2%	11.2%	11.2%
6" W150					9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%
8" W200					0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10" W250	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Hill					10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%
North Region					10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
AVERAGE PEAK RATIO	2012	2013	2014	2015	2016 YE	2017 Sub	2017 V2	2018	2019	2020	2021
Volume - Total Sales					84.7%	84.7%	84.7%	84.7%	84.7%	84.7%	84.7%
Demand - CP					15.3%	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%
Total					100%	100%	100%	100%	100%	100%	100%
Import Dates											
October 20, 2017 10:41 am (jmf)											

Schedule 15		
Standard Lists		
Functions	Allocators	Rate Classes
Treatment	Demand - CP	5/8" W16
Pump Stations	Demand - NCP	3/4" W19
North Region Line	Volume - City Sales	1" W25
Distribution Mains & Valves	Volume - Total Sales	1-1/2" W38
Distribution Services	Sites - City Bills	2" W50
Meters	Sites - Total Bills	3" W75
Hydrants	Sites - Service Weighted	4" W100
Regional Care	Sites - Meter Weighted	6" W150
Customer Care	Sites - City	8" W200
Rate Adjustments	Sites - Total	10" W250
	Direct to North Region	South Hill
	Direct to Regionals	North Region
	Direct to Hydrants	Fire Protection
	Treatment Allocator	
	Mains Allocator	
Plant Accounts	No Cost Capital Accounts	
401100 Parking Lot Gravel	501020 Major Buildings Electrical/Lighting	
402100 Landscaping	801203 Road Non-Surface Collector	
404200 Fences Non Wood	802201 Mains	
408500 Outdoor Amenities	802202 Services	
410200 Signs Non Wood	802203 Valves	
501010 Major Buildings Shell	802204 Hydrants	
501020 Major Buildings Electrical/Lighting	802205 ICCP System	
501030 Major Buildings Plumbing/Mechanical	802301 Pump Stations Structural	
501040 Major Buildings Fire/Safety	802302 Pump Stations Mechanical	
501060 Major Buildings HVAC	802303 Pump Stations Electrical	
501070 Major Buildings Roof	802304 Stations Instrumentation	
501080 Major Buildings Fixed Equipment	802305 Pump Station General	
501090 Major Buildings Floors	802402 WTP Low Lift Mechanical	
501100 Major Buildings Interior Finish		

Schedule 15		
502050 Minor Buildings Permanent		
601100 Heavy Construction Equipment		
603100 Communication Links		
603300 SCADA Master Station		
604100 Meters		
606100 Servers & Network Equipment		
606200 Desktops		
606600 Major Software		
608100 Safety Equip Emerg/Life		
609200 Generator Fixed		
610100 Tools, Shop and Garage Equipment		
611100 Office Furniture		
611200 Office Equipment		
611300 Office A/V		
612200 Laboratory Equipment		
801103 Road Surface		
801203 Road Non-Surface Collector		
801601 Road Retaining Walls		
802101 Reservoirs Structural		
802102 Reservoirs Mechanical		
802103 Reservoirs Electrical		
802104 Reservoirs Instrumentation		
802105 Reservoirs General		
802201 Mains		
802202 Services		
802203 Valves		
802204 Hydrants		
802205 ICCP System		
802301 Pump Stations Structural		
802302 Pump Stations Mechanical		
802303 Pump Stations Electrical		
802304 Stations Instrumentation		
802305 Pump Station General		
802401 WTP Low Lift Structural		

Schedule 15		
802402 WTP Low Lift Mechanical		
802403 WTP Low Lift Electrical		
802404 WTP Low Lift Instrumentation		
802405 WTP Low Lift General		
802412 WTP Boiler Area Mechanical		
802413 WTP Boiler Area Electrical		
802414 WTP Boiler Area Instrumentation		
802415 WTP Boiler Area General		
802421 WTP Chemical Systems Structural		
802422 WTP Chemical Systems Mechanical		
802423 WTP Chemical Systems Electrical		
802424 WTP Chemical Systems Instrumentation		
802425 WTP Chemical Systems General		
802431 WTP Clarifiers Structural		
802432 WTP Clarifiers Mechanical		
802433 WTP Clarifiers Electrical		
802434 WTP Clarifiers Instrumentation		
802441 WTP Filtration Structural		
802442 WTP Filtration Mechanical		
802443 WTP Filtration Electrical		
802444 WTP Filtration Instrumentation		
802451 WTP UV Disinfection Structural		
802452 WTP UV Disinfection Mechanical		
802453 WTP UV Disinfection Electrical		
802461 WTP High Lift Structural		
802462 WTP High Lift Mechanical		
802463 WTP High Lift Electrical		
802464 WTP High Lift Instrumentation		
802471 WTP Solid/Sludge Structural		
802472 WTP Solid/Sludge Mechanical		
802473 WTP Solid/Sludge Electrical		
802474 WTP Solid/Sludge Instrumentation		
802493 WTP Process Electrical		
804104 Outfalls		

Schedule 15		
805203 Electrical Transformers		

Schedule Meters Services			2017	2017 Prices	
			Meter c/w Register	Meter c/w Register	
Size	Model No.		Assembly	Assembly	
5/8" W16 16 mm	M25		152.15	227.15	227 based on cc
3/4" W19 19 mm	M35		180.90	255.90	256 based on cc
1" W25 25 mm	M55		218.00	293.00	293 based on cc
1-1/2" W38 38 mm	E Series		495.97	570.97	571 based on cc
2" W50 50 mm	E Series		636.60	711.60	712 based on cc
3" W75 75 mm	M5000		2,264.00	2,339.00	2339 based on cc
4" W100 100 mm	M5000		2,456.00	2,531.00	2531 based on cc
6" W150 150 mm	M5000		3,634.00	3,709.00	3709 based on cc
8" W200 200 mm	M5000		4,070.00	4,145.00	4145 estimate fr
10" W250 250 mm	M5000		5,070.00	5,100.00	5100 estimate fr

2017

0% Inflation *contract prices effective October 1, 2016 - August 31, 2018*

\$75 Labour per meter

2017 Bylaw effective March 1

Schedule D (2)	New Service Connection
2 (2)	8,650.00 <i>Basic charge for 25 mm water service (from main in street)</i>
2 (8)	<i>Extra charge for larger water service</i>

Full cost for Tab 7

0 16 mm	not in bylaw	8,650.00
200 19 mm	not in bylaw	8,850.00
463.00 38 mm	adder to 25mm	9,113.00
749.00 50 mm	adder to 38mm	9,399.00
3,500.00 100 mm	adder to 50mm	12,150.00
4,253.00 150 mm	adder to 75mm	12,903.00
5,985.00 200 mm	adder to 100 mm	14,635.00
7,534.00 250 mm	adder to 150mm	16,184.00
9,507.00 300 mm	adder to 200mm	18,157.00
	adder to 250mm	8,650.00

Schedule D (2)	New Service Connection
2 (12b)	8,821.00 <i>Fire Hydrant and Valve Installation at time of service</i>

contract
contract
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Schedule Water Mains					
Length	Size	Size	Length		
4.9	0	0	98		
3.4	0	19	35		
1.5	0	25	256		
6.6	0	38	108		
4.9	0	50	508	1.00	1,004 <=50
1.9	0	100	4,110	4.11	
1.5	0	150	213,706	213.71	
15.4	0	200	178,631	178.63	
42.5	0	250	84,229	84.23	
4.7	0	300	62,330	62.33	
2.2	0	350	12,639	12.64	
2.2	0	400	24,988	24.99	
3.5	0	450	82	0.08	
2.6	0	500	9,910	9.91	
34.6	19	600	95	0.10	
65.7	25	750	5,337	5.34	
4.0	25	900	2,778	2.78	
45.7	25	1050	23	0.02	
25.2	25	1200	1,116	1.12	
20.5	25		600,979		
31.2	25				
20.6	25				
43.3	25				
15.2	38				
15.2	38				
15.2	38				
36.6	38				
3.1	38				
16.9	38				
5.3	38				
4.5	50				
94.5	50				
10.7	50				
70.2	50				
37.1	50				
3.0	50				
47.4	50				
23.6	50				
5.7	50				
2.1	50				
25.0	50				
184.2	50				
130.4	100				
57.9	100				
12.8	100				