



## CITY COUNCIL

December 17, 2018

1. Call to Order - 7:00 P.M. - City Hall Council Chambers
2. Recitation - Pledge of Allegiance to the Flag of the United States of America
3. Roll Call
4. Consent Agenda – Adoption of a proposed resolution that would confirm approval of the following:
  - (a) December 3, 2018 regular session City Council meeting minutes
  - (b) Acknowledge receipt of a report concerning certain administrative transactions since December 3, 2018
5. Miscellaneous Public Comments
6. City Manager Updates
7. Appointments – Consideration of appointments to the Downtown Management Board
8. Old Business
  - (a) Adoption of a proposed resolution approving changes to Downtown parking fees, fines and enforcement hours as recommended by the Downtown Management Board
  - (b) Adoption of a proposed resolution establishing electric utility rates for the years of 2019 through 2021
9. New Business
  - (a) Hear presentation from a representative of Tetra Tech, Ann Arbor, concerning the water and sewer rate study and consider adoption of a proposed resolution that would adjust water and sewer rates for each of the five years beginning in 2019 through 2023
  - (b) First reading of a proposed ordinance that would amend the zoning district map to rezone 200 East Lake Street property to B2 Central Business District
  - (c) Adoption of a proposed resolution that would authorize the Mayor and City Clerk to execute a contract with the Michigan Department of Transportation for construction of work associated with the 2019 US-31 Reconstruct Project
  - (d) Adoption of a proposed resolution that would authorize final amendments to the City's 2018 Annual Budget
10. City Council Comments
11. Adjournment



# City of Petoskey

## Agenda Memo

**BOARD:** City Council

**MEETING DATE:** December 17, 2018      **PREPARED:** December 13, 2018

**AGENDA SUBJECT:** Consent Agenda Resolution

**RECOMMENDATION:** That the City Council approve this proposed resolution

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The City Council will be asked to adopt a resolution that would approve the following consent agenda items:

- (1) Draft minutes of the December 3, 2018 regular session City Council meetings; and
- (2) Acknowledge receipt of a report from the City Manager concerning all checks that have been issued since December 3, 2018 for contract and vendor claims at \$975,682.15, intergovernmental claims at \$178,728.52, and the December 13 payroll at \$300,372.99 for a total of \$1,454,783.66.

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Enclosures



## CITY COUNCIL

December 3, 2018

A regular meeting of the City of Petoskey City Council was held in the City Hall Council Chambers, Petoskey, Michigan, on Monday, December 3, 2018. This meeting was called to order at 7:00 P.M.; then, after a recitation of the Pledge of Allegiance to the Flag of the United States of America, a roll call then determined that the following were

Present: John Murphy, Mayor  
Kate Marshall, City Councilmember  
Grant Dittmar, City Councilmember  
Jeremy Wills, City Councilmember

Absent: Izzy Lyman, City Councilmember

Also in attendance were City Manager Robert Straebel, Clerk-Treasurer Alan Terry and Downtown Director Becky Goodman.

### **Hear Electric Rate Study Presentation**

Dawn Lund of Utility Financial Solutions, LLC, Holland, Michigan, gave a brief presentation regarding the Electric Cost of Service Study and Financial Projection and the methodology used in determining electric service rates based on annual revenue requirements and the costs involved in providing those services to the various customer classes. Ms. Lund also reviewed that the report provides the City with a long-term financial plan, electric cost of service and unbundling rate study that would determine the City's electric-utility revenue requirements for 2019 and beyond; identify cross-subsidies that may exist between rate classes; recommend rate adjustments needed to meet targeted revenue requirements; unbundled electric rates; and identify the appropriate monthly Ready-to-Service Charge for each customer class.

Mayor Murphy asked for public comments and heard an inquiry on rate shock. Ms. Lund reviewed rate amounts.

The Finance Director reported that the Rate Design, which includes rate recommendations, will be presented to City Council at the next regular Council meeting.

### **Consent Agenda - Resolution No. 19240**

Following introduction of the consent agenda for this meeting of December 3, 2018, City Councilmember Marshall moved that, seconded by City Councilmember Wills adoption of the following resolution:

BE IT RESOLVED that the City Council does and hereby confirms that the draft minutes of the November 19, 2018 regular session City Council meeting be and are hereby approved; and

BE IT RESOLVED that receipt by the City Council of a report concerning all checks that had been issued since November 19, for contract and vendor claims at \$735,952.51 intergovernmental claims at \$29,698.32, and the November 29 payroll at \$202,106.01, for a total of \$967,756.84 be and is hereby acknowledged.

Said resolution was adopted by the following vote:

AYES: Marshall, Dittmar, Wills, Murphy (4)

NAYS: None (0)

### **Hear Public Comment**

Mayor Murphy asked for public comments and Jim Ehrnst, 702 Elizabeth Street, commented on recreational marijuana and that Charlevoix and Traverse City have taken action; that over 50% of Petoskey voters were in favor of recreational marijuana; that East Jordan and Harbor Springs opted out; and that allowing businesses is an opportunity for the City to receive revenues.

### **Hear City Manager Updates**

The City Manager reviewed that a legal brief was developed by the City Attorney regarding recreational marijuana for Council's review and that there is no rush to opt in or out on commercial operations at this time as the State has one year to promulgate regulations regarding retail shops, growing facilities and other licensing provisions; that winter street parking regulations began December 1 and are in effect until April 1; that the Michigan Recreation and Park Association (mParks) recently selected Phase II of the Greenway Corridor for a "Park Design" award; that City staff was trained last week in the use of Energy Star Portfolio Manager as well as incorporating energy efficiency projects into the annual CIP review process and that the City benchmarked energy usage in Portfolio Manager for both the DPW building and City Hall; that the Planning Commission will hold two public hearings on December 13 concerning rezoning 200 East Lake Street and fence regulations; reviewed downtown bathroom progress and that the new structure should be enclosed by December 24, weather permitting; and that City staff is working on a \$15,000 Healthy Greenspace grant through the Health Department of Northwest Michigan to go towards construction of three pickle ball courts at Riverbend Park.

Councilmembers discussed pedestrian access to stairs, sidewalks and City facilities during the winter.

### **Discuss Changes to Downtown Parking Fees, Fines and Enforcement Hours**

The Downtown Director reviewed that the DMB voted 6-2 to support the Parking Committee's recommendations to City Council and City Manager concerning revisions to the parking fees, fines and enforcement hours. The Downtown Director further reviewed use of past and current parking revenues for various projects and how proposed increase in revenues would be used; that the purpose of additional revenues has always been to aid in funding a future parking structure; that the reserves are increasing, but not fast enough to fund a structure; reviewed proposed fee increases including raising meter fees, raising ticket fines since a \$5 ticket is no incentive to feed the meter, increasing hours of enforcement by an hour until 6:00 P.M., raising meter bag fees and increase monthly tiered permit fees; that there is free parking outside the downtown area; that the DMB discussed accelerated late fees and recommended reduction on those fees; and that the DMB is looking at purchasing new meters that would accept credit cards.

City Councilmembers inquired on how parking lot permits work; commented that changing fees now would aid in funding a ramp as well as parking space turnover; discussed the importance of using revenues for past, current and future projects; and appreciated efforts of the DMB for moving forward on the proposed parking changes.

Mayor Murphy asked for public comments and heard comments to be cautious about raising rates and who they will affect; that proposed changes should be tabled if City staff is not serious about building a parking structure; heard from those opposed to increases; that talk about a parking structure has been ongoing for years and seems greedy; that there is only a real problem about a month out of the year; that meters are important and that the DMB has been funding projects as urged to do so by City Council; and heard that various parking spaces are \$0.25 to park and other areas that are free.

### **Approve 2019 Meeting Schedule – Resolution No. 19241**

The City Manager next reviewed the proposed City Council meeting schedule for 2019 and noted two cancellations due to the same timing as Petoskey School's spring break and Labor Day holiday. The City Manager also noted that dates were flexible if any Councilmembers had concerns.



City Councilmember Marshall moved that, seconded by City Councilmember Dittmar adoption of the following resolution:

WHEREAS, Section 4.4 of the City Charter governing City Council meetings requires the City Council to meet regularly, preferably in the City Council Chambers in the City Hall, on the first and third Mondays of each month; and

WHEREAS, due to the holidays certain scheduling conflicts preclude the City Council from holding meetings on the first and third Mondays of each month; and

WHEREAS, the City Council desires to establish a regular meeting schedule in accordance with the requirements of Section 4.4 of the City Charter for the 2019 calendar year:

NOW, THEREFORE, BE IT RESOLVED that the City Council shall hold its regular meetings in the City Council Chambers in the City Hall on the following dates in 2019:

Monday, January 7  
Monday, January 21  
Monday, February 4  
Monday, February 18  
Monday, March 4  
Monday, March 18  
Monday, April 1 (No Meeting)  
Monday, April 15  
Monday, May 6  
Monday, May 20  
Monday, June 3  
Monday, June 17  
Monday, July 1  
Monday, July 15  
Monday, August 5  
Monday, August 19  
Monday, September 2 (No Meeting)  
Monday, September 16  
Monday, October 7  
Monday, October 21  
Monday, November 4  
Monday, November 18  
Monday, December 2  
Monday, December 16

Said resolution was adopted by the following vote:

AYES: Marshall, Dittmar, Wills, Murphy (5)

NAYS: None (0)

#### **Council Comments**

Mayor Murphy asked for Council comments and there were no comments.

There being no further business to come before the City Council, this December 3, 2018, meeting of the City Council adjourned at 9:00 P.M.

John Murphy, Mayor

Alan Terry, Clerk-Treasurer

GL Period	Check Issue Date	Check Number	Payee	Invoice GL Account	Check Amount
12/18	12/12/2018	78341	C. C. UNLIMITED LLC	582-586-775.000	348.96- V
12/18	12/12/2018	81339	Biskup, Sarah	271-790-958.100	225.00- V
11/18	11/28/2018	82679	24/7 Sewer & Drain Cleaning	101-265-802.000	285.00
11/18	11/28/2018	82680	ACCESS LOCKSMITHING INC.	271-790-752.000	35.00
11/18	11/28/2018	82681	ACH-CHILD SUPPORT	701-000-230.160	160.23
11/18	11/28/2018	82682	ACH-EFTPS	701-000-230.100	20,163.51
11/18	11/28/2018	82682	ACH-EFTPS	701-000-230.200	12,200.62
11/18	11/28/2018	82682	ACH-EFTPS	701-000-230.200	12,200.62
11/18	11/28/2018	82682	ACH-EFTPS	701-000-230.200	2,853.38
11/18	11/28/2018	82682	ACH-EFTPS	701-000-230.200	2,853.38
11/18	11/28/2018	82683	ACH-ICMA 457	701-000-230.700	1,872.07
11/18	11/28/2018	82683	ACH-ICMA 457	701-000-230.700	5,667.00
11/18	11/28/2018	82684	Adams, Mary	271-790-958.100	150.00
11/18	11/28/2018	82685	Alliance Entertainment	271-790-761.100	43.73
11/18	11/28/2018	82685	Alliance Entertainment	271-790-761.000	246.35
11/18	11/28/2018	82686	AMAZON CREDIT PLAN	271-790-761.100	38.21
11/18	11/28/2018	82686	AMAZON CREDIT PLAN	271-790-761.200	192.85
11/18	11/28/2018	82686	AMAZON CREDIT PLAN	271-790-986.000	297.30
11/18	11/28/2018	82686	AMAZON CREDIT PLAN	271-790-760.000	46.53
11/18	11/28/2018	82686	AMAZON CREDIT PLAN	271-790-761.000	11.21
11/18	11/28/2018	82686	AMAZON CREDIT PLAN	271-790-751.000	12.14
11/18	11/28/2018	82687	AMERICAN WASTE	582-593-802.000	150.00
11/18	11/28/2018	82687	AMERICAN WASTE	592-554-802.000	125.00
11/18	11/28/2018	82687	AMERICAN WASTE	582-586-802.000	125.00
11/18	11/28/2018	82687	AMERICAN WASTE	582-594-775.000	125.00
11/18	11/28/2018	82687	AMERICAN WASTE	582-593-802.000	128.50
11/18	11/28/2018	82688	AT&T	592-538-850.000	162.29
11/18	11/28/2018	82689	BEAR RIVER ELECTRIC	271-790-930.000	308.33
11/18	11/28/2018	82690	BILL'S FARM MARKET	248-540-792.000	1,911.00
11/18	11/28/2018	82691	Central Lake Armor Express Inc.	101-345-782.000	1,680.00
11/18	11/28/2018	82692	CHAR-EM UNITED WAY	701-000-230.800	77.00
11/18	11/28/2018	82693	Chrissy Lewis	101-756-808.010	21.20
11/18	11/28/2018	82694	DECKA DIGITAL LLC	592-551-775.000	459.77
11/18	11/28/2018	82694	DECKA DIGITAL LLC	101-441-751.000	204.99
11/18	11/28/2018	82695	DELTA DENTAL	101-172-724.000	43.05
11/18	11/28/2018	82695	DELTA DENTAL	101-201-724.000	209.69
11/18	11/28/2018	82695	DELTA DENTAL	101-208-724.000	33.89
11/18	11/28/2018	82695	DELTA DENTAL	101-215-724.000	45.75-
11/18	11/28/2018	82695	DELTA DENTAL	101-265-724.000	21.00
11/18	11/28/2018	82695	DELTA DENTAL	101-268-724.000	39.34
11/18	11/28/2018	82695	DELTA DENTAL	101-345-724.000	743.17
11/18	11/28/2018	82695	DELTA DENTAL	101-400-724.000	14.06
11/18	11/28/2018	82695	DELTA DENTAL	101-441-724.000	97.94
11/18	11/28/2018	82695	DELTA DENTAL	101-754-724.000	23.47
11/18	11/28/2018	82695	DELTA DENTAL	101-756-724.000	69.15
11/18	11/28/2018	82695	DELTA DENTAL	101-770-724.000	92.08
11/18	11/28/2018	82695	DELTA DENTAL	101-773-724.000	7.92
11/18	11/28/2018	82695	DELTA DENTAL	101-789-724.000	18.47
11/18	11/28/2018	82695	DELTA DENTAL	204-481-724.000	150.70
11/18	11/28/2018	82695	DELTA DENTAL	271-790-724.000	202.58
11/18	11/28/2018	82695	DELTA DENTAL	514-587-724.000	16.66
11/18	11/28/2018	82695	DELTA DENTAL	582-588-724.000	222.74

GL Period	Check Issue Date	Check Number	Payee	Invoice GL Account	Check Amount
11/18	11/28/2018	82695	DELTA DENTAL	592-549-724.000	202.59
11/18	11/28/2018	82695	DELTA DENTAL	592-560-724.000	66.48
11/18	11/28/2018	82695	DELTA DENTAL	701-000-230.110	1,835.76
11/18	11/28/2018	82696	DERRER OIL CO.	661-598-759.000	2,139.36
11/18	11/28/2018	82697	DTE ENERGY	592-538-920.000	56.61
11/18	11/28/2018	82697	DTE ENERGY	101-265-924.000	611.47
11/18	11/28/2018	82697	DTE ENERGY	582-593-924.000	1,453.28
11/18	11/28/2018	82697	DTE ENERGY	101-773-924.000	50.70
11/18	11/28/2018	82697	DTE ENERGY	101-265-924.000	212.24
11/18	11/28/2018	82697	DTE ENERGY	592-538-920.000	134.10
11/18	11/28/2018	82697	DTE ENERGY	271-790-924.000	164.31
11/18	11/28/2018	82697	DTE ENERGY	101-268-924.000	1,185.37
11/18	11/28/2018	82697	DTE ENERGY	101-770-924.000	193.84
11/18	11/28/2018	82697	DTE ENERGY	514-587-802.100	113.09
11/18	11/28/2018	82697	DTE ENERGY	592-538-920.000	162.99
11/18	11/28/2018	82697	DTE ENERGY	592-551-920.000	103.23
11/18	11/28/2018	82697	DTE ENERGY	592-551-920.000	3,173.68
11/18	11/28/2018	82697	DTE ENERGY	271-790-924.000	389.53
11/18	11/28/2018	82697	DTE ENERGY	592-555-920.000	50.92
11/18	11/28/2018	82697	DTE ENERGY	101-345-920.000	671.23
11/18	11/28/2018	82697	DTE ENERGY	592-558-920.000	31.00
11/18	11/28/2018	82697	DTE ENERGY	592-538-920.000	46.10
11/18	11/28/2018	82697	DTE ENERGY	101-345-920.100	431.55
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	204-481-751.000	19.08
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	582-593-751.000	19.08
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	582-588-751.000	19.08
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	592-549-751.000	19.08
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	592-560-751.000	19.09
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	661-598-751.000	19.09
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	204-481-751.000	20.37
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	582-593-751.000	20.37
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	582-588-751.000	20.38
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	592-549-751.000	20.38
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	592-560-751.000	20.38
11/18	11/28/2018	82698	DUNN'S BUSINESS SOLUTIONS	661-598-751.000	20.38
11/18	11/28/2018	82699	FASTENAL COMPANY	592-549-767.000	44.97
11/18	11/28/2018	82700	GALE/CENGAGE LEARNING	271-790-761.000	52.98
11/18	11/28/2018	82700	GALE/CENGAGE LEARNING	271-790-761.000	20.99
11/18	11/28/2018	82701	Goodman, Becky	514-587-912.000	469.11
11/18	11/28/2018	82701	Goodman, Becky	248-739-886.000	25.44
11/18	11/28/2018	82702	Great Lakes Pipe & Supply	592-551-775.000	59.46
11/18	11/28/2018	82703	GRP ENGINEERING INC.	582-588-802.000	1,280.79
11/18	11/28/2018	82703	GRP ENGINEERING INC.	582-588-802.000	410.42
11/18	11/28/2018	82704	Himebauch, Kelly L	271-790-802.000	360.00
11/18	11/28/2018	82705	ICMA-ROTH	701-000-230.900	350.00
11/18	11/28/2018	82706	Jakeway, Patricia	271-790-802.000	330.00
11/18	11/28/2018	82707	K & J SEPTIC SERVICE LLC	101-265-970.000	435.00
11/18	11/28/2018	82708	Klingelsmith, Kendall	101-756-880.000	8.00
11/18	11/28/2018	82709	KRING CHEVROLET CADILLAC, DAVE	661-598-932.000	49.35
11/18	11/28/2018	82709	KRING CHEVROLET CADILLAC, DAVE	661-598-932.000	49.35
11/18	11/28/2018	82709	KRING CHEVROLET CADILLAC, DAVE	661-598-932.000	36.75
11/18	11/28/2018	82709	KRING CHEVROLET CADILLAC, DAVE	661-598-932.000	49.35

GL Period	Check Issue Date	Check Number	Payee	Invoice GL Account	Check Amount
11/18	11/28/2018	82709	KRING CHEVROLET CADILLAC, DAVE	661-598-932.000	204.48
11/18	11/28/2018	82709	KRING CHEVROLET CADILLAC, DAVE	661-598-932.000	623.01
11/18	11/28/2018	82710	KSS Enterprises	101-268-775.000	120.99
11/18	11/28/2018	82711	LEXISNEXIS RISK DATA MGT	101-208-802.000	50.00
11/18	11/28/2018	82712	MANAGEMENT & BEHAVIOR	101-345-784.000	1,100.00
11/18	11/28/2018	82713	MICHIGAN OFFICEWAYS INC.	271-790-751.000	19.15
11/18	11/28/2018	82714	MIKULSKI, MATTHEW	101-345-912.000	33.28
11/18	11/28/2018	82715	National Association of	101-345-915.000	155.00
11/18	11/28/2018	82716	NORTHERN A-1 SERVICES KALKASKA	592-556-802.000	1,039.50
11/18	11/28/2018	82716	NORTHERN A-1 SERVICES KALKASKA	592-556-802.000	891.00
11/18	11/28/2018	82717	Oelke, Linda	271-790-802.000	120.00
11/18	11/28/2018	82718	Oil Paintings	248-739-880.900	400.00
11/18	11/28/2018	82719	PAC2	271-790-802.000	7,001.00
11/18	11/28/2018	82720	PARKER, MICHAEL	101-345-912.000	474.60
11/18	11/28/2018	82721	Penguin Random House	271-790-761.100	22.50
11/18	11/28/2018	82721	Penguin Random House	271-790-761.100	37.50
11/18	11/28/2018	82721	Penguin Random House	271-790-761.100	33.75
11/18	11/28/2018	82721	Penguin Random House	271-790-761.100	45.00
11/18	11/28/2018	82721	Penguin Random House	271-790-761.100	24.00
11/18	11/28/2018	82721	Penguin Random House	271-790-761.100	15.00
11/18	11/28/2018	82722	Petoskey Machining & Hydraulic	592-545-775.000	105.00
11/18	11/28/2018	82723	PETOSKEY REGIONAL CHAMBER	101-172-860.000	30.00
11/18	11/28/2018	82723	PETOSKEY REGIONAL CHAMBER	101-770-912.000	30.00
11/18	11/28/2018	82723	PETOSKEY REGIONAL CHAMBER	248-739-774.000	30.00
11/18	11/28/2018	82723	PETOSKEY REGIONAL CHAMBER	101-101-860.000	30.00
11/18	11/28/2018	82723	PETOSKEY REGIONAL CHAMBER	271-790-880.000	240.00
11/18	11/28/2018	82724	POWER LINE SUPPLY	582-586-775.000	1,264.00
11/18	11/28/2018	82724	POWER LINE SUPPLY	582-586-775.000	53.00
11/18	11/28/2018	82724	POWER LINE SUPPLY	582-592-775.000	109.60
11/18	11/28/2018	82724	POWER LINE SUPPLY	582-593-785.000	17.28
11/18	11/28/2018	82724	POWER LINE SUPPLY	582-586-775.000	43.00
11/18	11/28/2018	82724	POWER LINE SUPPLY	582-593-785.000	13.81
11/18	11/28/2018	82725	PRANTERA, MARY SUE	271-790-912.000	132.44
11/18	11/28/2018	82726	Priority Health	101-172-724.000	1,312.09
11/18	11/28/2018	82726	Priority Health	101-201-724.000	4,197.99
11/18	11/28/2018	82726	Priority Health	101-208-724.000	770.45
11/18	11/28/2018	82726	Priority Health	101-215-724.000	385.23
11/18	11/28/2018	82726	Priority Health	101-265-724.000	531.62
11/18	11/28/2018	82726	Priority Health	101-268-724.000	1,144.14
11/18	11/28/2018	82726	Priority Health	101-345-724.000	17,225.49
11/18	11/28/2018	82726	Priority Health	101-400-724.000	385.23
11/18	11/28/2018	82726	Priority Health	101-441-724.000	2,544.83
11/18	11/28/2018	82726	Priority Health	101-754-724.000	520.06
11/18	11/28/2018	82726	Priority Health	101-756-724.000	1,752.78
11/18	11/28/2018	82726	Priority Health	101-770-724.000	1,906.89
11/18	11/28/2018	82726	Priority Health	101-773-724.000	277.36
11/18	11/28/2018	82726	Priority Health	101-789-724.000	647.19
11/18	11/28/2018	82726	Priority Health	204-481-724.000	3,279.34
11/18	11/28/2018	82726	Priority Health	271-790-724.000	5,040.35
11/18	11/28/2018	82726	Priority Health	514-587-724.000	385.23
11/18	11/28/2018	82726	Priority Health	582-588-724.000	4,776.85
11/18	11/28/2018	82726	Priority Health	592-549-724.000	4,625.65

GL Period	Check Issue Date	Check Number	Payee	Invoice GL Account	Check Amount
11/18	11/28/2018	82726	Priority Health	592-560-724.000	1,541.88
11/18	11/28/2018	82727	PROCLEAN NORTH	592-554-802.000	786.50
11/18	11/28/2018	82727	PROCLEAN NORTH	582-593-930.000	1,463.00
11/18	11/28/2018	82728	SMITH, EDWARD J	101-756-767.000	27.82
11/18	11/28/2018	82729	SOLUTIONS ELECTRIC INC.	204-481-802.000	947.12
11/18	11/28/2018	82729	SOLUTIONS ELECTRIC INC.	101-345-802.000	208.20
11/18	11/28/2018	82730	Spok	204-481-850.000	2.78
11/18	11/28/2018	82730	Spok	582-588-850.000	2.78
11/18	11/28/2018	82730	Spok	592-549-850.000	2.78
11/18	11/28/2018	82730	Spok	592-560-850.000	2.78
11/18	11/28/2018	82730	Spok	661-598-850.000	2.78
11/18	11/28/2018	82731	STANDARD ELECTRIC COMPANY	582-586-775.000	313.85
11/18	11/28/2018	82731	STANDARD ELECTRIC COMPANY	582-010-111.000	1,226.92
11/18	11/28/2018	82731	STANDARD ELECTRIC COMPANY	582-592-775.000	34.56
11/18	11/28/2018	82732	Starr Garter dba Techplex	271-790-802.000	116.66
11/18	11/28/2018	82733	State Industrial Products	592-551-775.000	223.42
11/18	11/28/2018	82734	SYSCO GRAND RAPIDS	101-268-775.000	784.80
11/18	11/28/2018	82734	SYSCO GRAND RAPIDS	101-345-751.000	1,029.00
11/18	11/28/2018	82734	SYSCO GRAND RAPIDS	101-268-775.000	205.80
11/18	11/28/2018	82735	Trace Analytical Laboratories LLC	592-553-802.000	280.00
11/18	11/28/2018	82736	TRUCK & TRAILER SPECIALTIES	661-598-931.000	7,083.80
11/18	11/28/2018	82737	Valley City Linen	271-790-752.000	25.00
11/18	11/28/2018	82737	Valley City Linen	271-790-752.000	25.00
11/18	11/28/2018	82737	Valley City Linen	271-790-752.000	25.00
11/18	11/28/2018	82737	Valley City Linen	271-790-752.000	25.00
11/18	11/28/2018	82737	Valley City Linen	271-790-752.000	25.00
11/18	11/28/2018	82738	VSP	101-172-724.000	27.11
11/18	11/28/2018	82738	VSP	101-201-724.000	109.54
11/18	11/28/2018	82738	VSP	101-208-724.000	20.05
11/18	11/28/2018	82738	VSP	101-215-724.000	40.09
11/18	11/28/2018	82738	VSP	101-265-724.000	12.09
11/18	11/28/2018	82738	VSP	101-268-724.000	26.45
11/18	11/28/2018	82738	VSP	101-345-724.000	422.92
11/18	11/28/2018	82738	VSP	101-400-724.000	10.73
11/18	11/28/2018	82738	VSP	101-441-724.000	57.49
11/18	11/28/2018	82738	VSP	101-754-724.000	10.42
11/18	11/28/2018	82738	VSP	101-756-724.000	44.98
11/18	11/28/2018	82738	VSP	101-770-724.000	49.59
11/18	11/28/2018	82738	VSP	101-773-724.000	4.92
11/18	11/28/2018	82738	VSP	101-789-724.000	11.46
11/18	11/28/2018	82738	VSP	204-481-724.000	67.20
11/18	11/28/2018	82738	VSP	271-790-724.000	123.67
11/18	11/28/2018	82738	VSP	514-587-724.000	10.73
11/18	11/28/2018	82738	VSP	582-588-724.000	115.19
11/18	11/28/2018	82738	VSP	592-549-724.000	118.85
11/18	11/28/2018	82738	VSP	592-560-724.000	40.09
11/18	11/28/2018	82739	WINDEMULLER	592-558-802.000	218.18
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	701-000-230.190	1,899.56
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-172-724.000	19.16
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-201-724.000	44.89
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-208-724.000	21.35
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-215-724.000	21.35

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11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-265-724.000	4.79
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-268-724.000	11.98
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-345-724.000	504.19
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-400-724.000	9.58
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-441-724.000	29.22
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-754-724.000	5.27
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-756-724.000	18.20
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-770-724.000	32.57
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-773-724.000	2.87
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	101-789-724.000	6.71
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	204-481-724.000	68.43
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	271-790-724.000	69.25
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	514-587-724.000	15.81
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	582-588-724.000	73.29
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	592-549-724.000	59.67
11/18	11/28/2018	82740	Dearborn National Life Insurance Co	592-560-724.000	19.16
12/18	12/05/2018	82749	5H Irrigation & Maintenance	101-770-802.000	2,002.50
12/18	12/05/2018	82750	ALL-PHASE ELECTRIC SUPPLY	101-265-775.000	16.32-
12/18	12/05/2018	82750	ALL-PHASE ELECTRIC SUPPLY	582-586-775.000	126.00
12/18	12/05/2018	82751	Alro Steel Corporation	203-475-775.000	119.45
12/18	12/05/2018	82751	Alro Steel Corporation	202-475-775.000	119.00
12/18	12/05/2018	82751	Alro Steel Corporation	202-475-775.000	62.12
12/18	12/05/2018	82751	Alro Steel Corporation	203-475-775.000	62.12
12/18	12/05/2018	82752	ALTEC INDUSTRIES INC.	661-598-932.000	18.13
12/18	12/05/2018	82753	AMERICAN WATER WORKS ASSOC.	592-549-915.000	218.00
12/18	12/05/2018	82753	AMERICAN WATER WORKS ASSOC.	592-549-915.000	218.00
12/18	12/05/2018	82753	AMERICAN WATER WORKS ASSOC.	592-549-915.000	218.00
12/18	12/05/2018	82753	AMERICAN WATER WORKS ASSOC.	592-549-915.000	218.00
12/18	12/05/2018	82754	Applied Pavement Markings	202-477-802.000	10,822.60
12/18	12/05/2018	82754	Applied Pavement Markings	203-477-802.000	4,129.00
12/18	12/05/2018	82754	Applied Pavement Markings	101-770-802.000	1,572.40
12/18	12/05/2018	82754	Applied Pavement Markings	101-789-802.000	412.60
12/18	12/05/2018	82754	Applied Pavement Markings	514-587-802.000	1,653.00
12/18	12/05/2018	82754	Applied Pavement Markings	582-593-930.000	114.00
12/18	12/05/2018	82754	Applied Pavement Markings	202-477-802.000	663.75
12/18	12/05/2018	82754	Applied Pavement Markings	203-477-802.000	663.75
12/18	12/05/2018	82755	AT&T	101-172-850.000	336.05
12/18	12/05/2018	82755	AT&T	101-201-850.000	179.23
12/18	12/05/2018	82755	AT&T	101-208-850.000	112.02
12/18	12/05/2018	82755	AT&T	101-257-850.000	112.02
12/18	12/05/2018	82755	AT&T	101-215-850.000	89.61
12/18	12/05/2018	82755	AT&T	101-345-850.000	246.45
12/18	12/05/2018	82755	AT&T	101-400-850.000	112.02
12/18	12/05/2018	82755	AT&T	101-756-850.000	134.42
12/18	12/05/2018	82755	AT&T	101-441-850.000	201.63
12/18	12/05/2018	82755	AT&T	204-481-850.000	67.21
12/18	12/05/2018	82755	AT&T	204-481-850.000	67.21
12/18	12/05/2018	82755	AT&T	582-588-850.000	224.04
12/18	12/05/2018	82755	AT&T	582-593-850.000	89.61
12/18	12/05/2018	82755	AT&T	592-549-850.000	134.42
12/18	12/05/2018	82755	AT&T	592-560-850.000	134.42
12/18	12/05/2018	82755	AT&T	592-560-850.000	321.72

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12/18	12/05/2018	82755	AT&T	592-560-850.000	138.48
12/18	12/05/2018	82755	AT&T	592-558-920.000	156.86
12/18	12/05/2018	82755	AT&T	592-538-850.000	153.34
12/18	12/05/2018	82755	AT&T	592-538-850.000	153.34
12/18	12/05/2018	82756	BECKETT & RAEDER INC.	247-751-802.000	840.00
12/18	12/05/2018	82757	Benchmark Engineering Inc.	204-481-802.000	1,856.00
12/18	12/05/2018	82757	Benchmark Engineering Inc.	592-020-342.000	4,488.80
12/18	12/05/2018	82758	C2AE	204-481-802.000	35,581.68
12/18	12/05/2018	82758	C2AE	204-481-802.000	3,616.86
12/18	12/05/2018	82759	CCP INDUSTRIES INC.	204-481-767.000	64.80
12/18	12/05/2018	82759	CCP INDUSTRIES INC.	661-598-767.000	32.41
12/18	12/05/2018	82759	CCP INDUSTRIES INC.	592-560-767.000	32.41
12/18	12/05/2018	82760	CENTER POINT LARGE PRINT	271-790-760.000	27.27
12/18	12/05/2018	82761	Cintas Corp #729	204-481-767.000	55.77
12/18	12/05/2018	82761	Cintas Corp #729	582-588-767.000	64.79
12/18	12/05/2018	82761	Cintas Corp #729	592-560-767.000	28.71
12/18	12/05/2018	82761	Cintas Corp #729	592-549-767.000	28.71
12/18	12/05/2018	82761	Cintas Corp #729	582-593-802.000	29.77
12/18	12/05/2018	82761	Cintas Corp #729	204-481-767.000	55.77
12/18	12/05/2018	82761	Cintas Corp #729	582-588-767.000	64.79
12/18	12/05/2018	82761	Cintas Corp #729	592-560-767.000	28.71
12/18	12/05/2018	82761	Cintas Corp #729	592-549-767.000	28.71
12/18	12/05/2018	82761	Cintas Corp #729	101-268-802.000	14.79
12/18	12/05/2018	82761	Cintas Corp #729	592-544-802.000	43.28
12/18	12/05/2018	82761	Cintas Corp #729	592-549-767.000	28.71
12/18	12/05/2018	82761	Cintas Corp #729	592-560-767.000	28.71
12/18	12/05/2018	82761	Cintas Corp #729	582-588-767.000	64.79
12/18	12/05/2018	82761	Cintas Corp #729	204-481-767.000	55.77
12/18	12/05/2018	82761	Cintas Corp #729	582-593-802.000	29.77
12/18	12/05/2018	82761	Cintas Corp #729	204-481-767.000	46.34
12/18	12/05/2018	82761	Cintas Corp #729	582-588-767.000	37.77
12/18	12/05/2018	82761	Cintas Corp #729	592-560-767.000	19.60
12/18	12/05/2018	82761	Cintas Corp #729	592-549-767.000	19.60
12/18	12/05/2018	82761	Cintas Corp #729	101-268-802.000	14.79
12/18	12/05/2018	82761	Cintas Corp #729	592-544-802.000	43.28
12/18	12/05/2018	82762	CINTAS CORPORATION	582-593-930.000	26.26
12/18	12/05/2018	82762	CINTAS CORPORATION	661-598-767.000	26.27
12/18	12/05/2018	82762	CINTAS CORPORATION	592-551-775.000	15.72
12/18	12/05/2018	82762	CINTAS CORPORATION	582-588-912.000	533.80
12/18	12/05/2018	82762	CINTAS CORPORATION	592-549-915.000	533.80
12/18	12/05/2018	82762	CINTAS CORPORATION	204-481-912.000	533.80
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	101-265-920.000	1,021.00
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	101-268-920.000	1,246.18
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	101-345-920.000	3,224.15
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	101-345-920.100	395.82
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	101-754-920.000	24.54
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	101-770-920.000	1,624.88
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	101-773-920.000	1,406.78
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	101-789-920.000	1,265.75
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	202-475-920.000	162.50
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	204-448-920.000	2,600.00
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	271-790-920.000	2,746.32

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12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	514-587-802.100	61.54
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	514-587-920.000	69.64
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	582-586-920.000	90.09
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	582-593-920.000	1,107.56
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	592-538-920.000	8,797.28
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	592-542-920.000	90.11
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	592-551-920.000	18,138.12
12/18	12/05/2018	82763	CITY TREAS. FOR UTILITY BILLS	592-555-920.000	1,169.03
12/18	12/05/2018	82764	Collias-Glaser, Hellene Kay	271-790-802.000	795.00
12/18	12/05/2018	82765	Costume Specialists	271-790-958.100	280.00
12/18	12/05/2018	82766	Cowell, Don	248-540-882.200	250.00
12/18	12/05/2018	82767	CUMMINS BRIDGEWAY LLC	101-345-802.100	188.97
12/18	12/05/2018	82768	DTE ENERGY	101-268-970.000	524.00
12/18	12/05/2018	82769	ELMER'S CRANE AND DOZER INC.	592-556-802.000	3,376.50
12/18	12/05/2018	82770	EMMET COUNTY TREASURER	703-040-222.218	4,536.20
12/18	12/05/2018	82770	EMMET COUNTY TREASURER	703-040-228.218	6,401.53
12/18	12/05/2018	82770	EMMET COUNTY TREASURER	703-040-229.218	3,644.08
12/18	12/05/2018	82770	EMMET COUNTY TREASURER	703-040-230.218	7,533.58
12/18	12/05/2018	82770	EMMET COUNTY TREASURER	703-040-231.218	1,673.04
12/18	12/05/2018	82770	EMMET COUNTY TREASURER	703-040-232.218	697.42
12/18	12/05/2018	82770	EMMET COUNTY TREASURER	703-040-236.218	7,370.46
12/18	12/05/2018	82770	EMMET COUNTY TREASURER	703-040-237.218	1,529.19
12/18	12/05/2018	82771	Empiric Solutions Inc.	101-228-802.000	8,654.00
12/18	12/05/2018	82772	Englebrecht, Robert	101-257-802.100	3,750.00
12/18	12/05/2018	82773	ETNA SUPPLY	204-010-111.000	91.00
12/18	12/05/2018	82773	ETNA SUPPLY	592-010-111.000	1,865.60
12/18	12/05/2018	82774	EYES ONLY MEDIA LLC	248-540-882.200	299.70
12/18	12/05/2018	82775	FASTENAL COMPANY	582-586-775.000	91.50
12/18	12/05/2018	82775	FASTENAL COMPANY	661-598-785.000	6.00
12/18	12/05/2018	82775	FASTENAL COMPANY	661-598-931.000	154.79
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-931.000	3.52
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-932.000	20.29
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	29.44
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-932.000	104.90
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	74.63
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-785.000	75.50
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	29.44
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	29.44
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	5.16
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	592-556-775.000	17.98
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	592-547-775.000	716.00
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	101-345-775.000	93.84
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	101-268-775.000	8.07
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	4.81
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-785.000	20.40
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-932.000	11.09
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-932.000	22.92
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	6.65
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-759.000	60.41
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-785.000	10.98
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	8.97
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-931.000	23.38



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12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-785.000	74.24
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-010-111.000	8.97
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	101-268-775.000	38.20
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	101-770-775.000	4.18
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-931.000	49.24
12/18	12/05/2018	82776	FOCHTMAN'S AUTO & TRUCK PARTS	661-598-932.000	124.49
12/18	12/05/2018	82777	Freshwater Charch	101-265-970.000	39,650.40
12/18	12/05/2018	82778	GALE/CENGAGE LEARNING	271-790-760.000	21.00
12/18	12/05/2018	82778	GALE/CENGAGE LEARNING	271-790-760.000	21.99
12/18	12/05/2018	82779	Gibby's Garage	514-587-708.000	34.00
12/18	12/05/2018	82779	Gibby's Garage	582-593-930.000	68.00
12/18	12/05/2018	82779	Gibby's Garage	514-587-931.000	238.00
12/18	12/05/2018	82779	Gibby's Garage	661-598-931.000	136.00
12/18	12/05/2018	82779	Gibby's Garage	661-598-932.000	816.00
12/18	12/05/2018	82779	Gibby's Garage	582-593-930.000	102.00
12/18	12/05/2018	82779	Gibby's Garage	661-598-931.000	816.00
12/18	12/05/2018	82779	Gibby's Garage	661-598-932.000	170.00
12/18	12/05/2018	82779	Gibby's Garage	202-475-802.000	68.00
12/18	12/05/2018	82779	Gibby's Garage	203-479-802.000	68.00
12/18	12/05/2018	82779	Gibby's Garage	592-547-802.000	34.00
12/18	12/05/2018	82779	Gibby's Garage	582-586-802.000	34.00
12/18	12/05/2018	82779	Gibby's Garage	661-598-931.000	340.00
12/18	12/05/2018	82779	Gibby's Garage	661-598-932.000	476.00
12/18	12/05/2018	82779	Gibby's Garage	582-593-930.000	136.00
12/18	12/05/2018	82780	Gibson Excavating LLC	101-770-802.000	1,735.00
12/18	12/05/2018	82781	GINOP SALES INC.	661-598-931.000	111.30
12/18	12/05/2018	82781	GINOP SALES INC.	661-598-931.000	349.37
12/18	12/05/2018	82782	Greenwell Machine Shop	592-542-775.000	95.20
12/18	12/05/2018	82783	Haviland Products Company	592-540-783.000	2,743.92
12/18	12/05/2018	82784	Himebauch, Kelly L	271-790-802.000	150.00
12/18	12/05/2018	82785	Jakeway, Patricia	271-790-802.000	240.00
12/18	12/05/2018	82786	Lockery, Jim	248-540-882.800	200.00
12/18	12/05/2018	82787	MCLAREN NORTHERN MICH HOSPITAL	101-345-802.000	15.00
12/18	12/05/2018	82788	MEYERSON, VALERIE	271-790-958.100	9.54
12/18	12/05/2018	82788	MEYERSON, VALERIE	271-790-751.000	32.89
12/18	12/05/2018	82788	MEYERSON, VALERIE	271-790-912.000	8.00
12/18	12/05/2018	82788	MEYERSON, VALERIE	271-790-958.200	27.00
12/18	12/05/2018	82788	MEYERSON, VALERIE	271-790-912.000	70.85
12/18	12/05/2018	82788	MEYERSON, VALERIE	271-790-880.000	41.04
12/18	12/05/2018	82789	MIDWEST SIDING & SALES INC.	661-598-931.000	7.22
12/18	12/05/2018	82790	Midwest Tape	271-790-761.000	284.90
12/18	12/05/2018	82791	MITCHELL GRAPHICS INC.	248-739-880.200	5,592.43
12/18	12/05/2018	82792	mParks	101-756-912.000	10.00
12/18	12/05/2018	82793	Music Makers of Petoskey, The	101-754-775.000	52.88
12/18	12/05/2018	82794	NORTHERN A-1 SERVICES KALKASKA	592-554-802.000	6,170.00
12/18	12/05/2018	82795	OMNIPARK INC.	514-587-775.000	178.00
12/18	12/05/2018	82796	ON DUTY GEAR LLC	101-345-775.000	1,175.81
12/18	12/05/2018	82796	ON DUTY GEAR LLC	101-345-775.000	181.90
12/18	12/05/2018	82796	ON DUTY GEAR LLC	101-345-775.000	182.87
12/18	12/05/2018	82797	Owen, James C.	248-540-882.800	100.00
12/18	12/05/2018	82798	PETOSKEY PUBLIC SCHOOLS	703-040-236.218	9,969.96
12/18	12/05/2018	82798	PETOSKEY PUBLIC SCHOOLS	703-040-237.218	1,447.76

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12/18	12/05/2018	82798	PETOSKEY PUBLIC SCHOOLS	703-040-237.218	1,013.00
12/18	12/05/2018	82798	PETOSKEY PUBLIC SCHOOLS	703-040-237.218	430.40
12/18	12/05/2018	82798	PETOSKEY PUBLIC SCHOOLS	703-040-233.000	205.47
12/18	12/05/2018	82798	PETOSKEY PUBLIC SCHOOLS	703-040-233.000	35.27
12/18	12/05/2018	82798	PETOSKEY PUBLIC SCHOOLS	703-040-233.000	24.74
12/18	12/05/2018	82798	PETOSKEY PUBLIC SCHOOLS	703-040-233.000	10.47
12/18	12/05/2018	82799	Petoskey Towing Inc.	661-598-932.000	89.00
12/18	12/05/2018	82800	Petoskey Urgent Care	204-481-802.000	442.00
12/18	12/05/2018	82801	RECORD-EAGLE, THE	271-790-760.400	352.83
12/18	12/05/2018	82802	Rowland, Kimberly	271-790-802.000	270.00
12/18	12/05/2018	82803	Scientific Brake & Equipment	661-598-932.000	454.14
12/18	12/05/2018	82803	Scientific Brake & Equipment	661-598-932.000	22.58
12/18	12/05/2018	82804	Sign & Design	514-587-884.000	480.00
12/18	12/05/2018	82805	Spectrum Business	592-560-850.000	35.07
12/18	12/05/2018	82806	STANDARD ELECTRIC COMPANY	582-584-775.000	122.08
12/18	12/05/2018	82807	State of Michigan - MDOT	202-451-802.000	1,345.39
12/18	12/05/2018	82807	State of Michigan - MDOT	202-451-802.000	19,499.58
12/18	12/05/2018	82808	State of Michigan-Department of LARA	582-081-642.300	3,727.44
12/18	12/05/2018	82808	State of Michigan-Department of LARA	582-081-642.400	731.91
12/18	12/05/2018	82808	State of Michigan-Department of LARA	582-081-642.500	18.60
12/18	12/05/2018	82808	State of Michigan-Department of LARA	582-081-642.200	167.40
12/18	12/05/2018	82809	TAYLOR RENTAL CENTER	101-770-985.000	134.75
12/18	12/05/2018	82809	TAYLOR RENTAL CENTER	248-540-882.200	125.00
12/18	12/05/2018	82809	TAYLOR RENTAL CENTER	101-770-985.000	38.50
12/18	12/05/2018	82810	T-Mobile	271-790-850.000	188.40
12/18	12/05/2018	82811	Trafficalm Systems	101-345-985.000	4,223.24
12/18	12/05/2018	82811	Trafficalm Systems	202-475-775.000	2,111.61
12/18	12/05/2018	82812	TROPHY CASE, THE	514-587-775.000	10.00
12/18	12/05/2018	82813	Up North Services	514-587-802.000	1,592.00
12/18	12/05/2018	82814	VAN'S BUSINESS MACHINES	101-345-751.000	98.38
12/18	12/05/2018	82815	Verdin Company, The	101-265-802.000	630.00
12/18	12/05/2018	82816	West Marine Pro	101-208-751.000	251.92
12/18	12/05/2018	82817	Emmet County Treasurer	703-040-222.218	3,786.66
12/18	12/05/2018	82817	Emmet County Treasurer	703-040-228.218	4,684.55
12/18	12/05/2018	82817	Emmet County Treasurer	703-040-233.000	92.48
12/18	12/05/2018	82817	Emmet County Treasurer	703-040-233.000	114.39
12/18	12/12/2018	82818	5H Irrigation & Maintenance	101-770-802.000	120.00
12/18	12/12/2018	82819	Alliance Entertainment	271-790-761.000	335.83
12/18	12/12/2018	82819	Alliance Entertainment	271-790-761.000	511.44
12/18	12/12/2018	82819	Alliance Entertainment	271-790-761.000	209.40
12/18	12/12/2018	82820	AMERIGAS	592-547-775.000	17.67
12/18	12/12/2018	82821	AT&T	582-593-850.000	126.64
12/18	12/12/2018	82822	AT&T LONG DISTANCE	582-588-850.000	44.77
12/18	12/12/2018	82823	Biskup, Sarah	271-790-958.100	33.41
12/18	12/12/2018	82824	BRADFORD MASTER DRY CLEANERS	101-345-775.000	314.70
12/18	12/12/2018	82825	CHAR-EM UNITED WAY	701-000-230.800	77.00
12/18	12/12/2018	82826	COMPLETE PAINT & SUPPLIES	101-770-775.000	178.94
12/18	12/12/2018	82827	DERRER OIL CO.	661-598-759.000	1,525.73
12/18	12/12/2018	82828	Dinges Fire Company	101-345-985.000	2,741.97
12/18	12/12/2018	82828	Dinges Fire Company	101-345-985.000	2,269.97
12/18	12/12/2018	82829	Dinon Law PLLC	101-266-802.000	647.50
12/18	12/12/2018	82830	EMMET CO. DEPT OF PUBLIC WORKS	101-529-802.000	6,241.30

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12/18	12/12/2018	82831	EMMET COUNTY CLERK	101-262-802.000	1,738.09
12/18	12/12/2018	82832	ENVIRONMENTAL RESOURCE ASSOC.	592-553-802.000	196.35
12/18	12/12/2018	82833	ENVISIONWARE INC.	271-790-986.000	14,806.45
12/18	12/12/2018	82833	ENVISIONWARE INC.	271-790-986.000	5,470.00
12/18	12/12/2018	82833	ENVISIONWARE INC.	271-790-986.000	516.00
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	248-739-880.200	280.52
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	248-540-882.190	14.80
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	248-540-882.200	31.77
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	101-262-751.000	63.68
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	592-560-915.000	164.65
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	101-268-775.000	84.33
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	101-756-880.000	40.46
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	582-586-775.000	4.49
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	582-593-785.000	27.53
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	271-790-958.100	20.74
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	271-790-880.000	26.83
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	271-790-761.000	199.85
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	271-790-905.000	9.95
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	271-790-958.200	80.86
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	271-790-850.000	50.00
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	271-790-964.000	2.95
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	271-790-958.000	19.44
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	101-345-775.000	198.39
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	101-345-912.000	122.75
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	248-540-792.000	271.20
12/18	12/12/2018	82834	FIRST NATIONAL BANK OMAHA	582-594-775.000	35.55
12/18	12/12/2018	82835	Fraternal Order of Police	701-000-230.400	881.00
12/18	12/12/2018	82836	GALE/CENGAGE LEARNING	271-790-760.000	21.99
12/18	12/12/2018	82837	GORDON FOOD SERVICE	101-756-880.000	63.93
12/18	12/12/2018	82838	Gulig, Anthony	101-266-802.000	47.25
12/18	12/12/2018	82838	Gulig, Anthony	204-481-802.000	47.25
12/18	12/12/2018	82838	Gulig, Anthony	582-588-802.000	47.25
12/18	12/12/2018	82838	Gulig, Anthony	592-549-802.000	47.25
12/18	12/12/2018	82838	Gulig, Anthony	592-560-802.000	47.25
12/18	12/12/2018	82838	Gulig, Anthony	101-266-802.000	513.75
12/18	12/12/2018	82839	HEALTH DEPARTMENT OF	101-773-931.000	180.00
12/18	12/12/2018	82840	Heritage Broadcasting Co	248-540-882.190	1,200.00
12/18	12/12/2018	82841	HYDE SERVICES LLC	101-754-775.000	1,590.00
12/18	12/12/2018	82842	Integrity Business Solutions	514-587-802.100	91.77
12/18	12/12/2018	82842	Integrity Business Solutions	101-208-751.000	5.09
12/18	12/12/2018	82842	Integrity Business Solutions	101-208-751.000	11.29
12/18	12/12/2018	82843	JAKEWAY, JOHN	203-479-802.000	42.00
12/18	12/12/2018	82844	JOHNSTONE SUPPLY #234	592-551-775.000	262.18
12/18	12/12/2018	82844	JOHNSTONE SUPPLY #234	101-268-775.000	20.23
12/18	12/12/2018	82845	K & L PLUMBING AND HEATING LLC	592-554-802.000	507.88
12/18	12/12/2018	82846	KEEL, STEPHEN	592-560-915.000	218.55
12/18	12/12/2018	82847	KENDALL ELECTRIC INC.	592-558-775.000	23.18
12/18	12/12/2018	82848	Kevin's Meter Testing LLC	582-592-802.000	493.70
12/18	12/12/2018	82849	KRING CHEVROLET CADILLAC, DAVE	661-598-932.000	329.97
12/18	12/12/2018	82850	LOWERY UNDERGROUND SERVICE	582-586-802.000	5,336.00
12/18	12/12/2018	82851	MARSHALL CONCRETE INC.	582-020-360.000	1,113.00
12/18	12/12/2018	82851	MARSHALL CONCRETE INC.	592-547-802.000	1,714.00

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12/18	12/12/2018	82851	MARSHALL CONCRETE INC.	204-470-802.000	1,800.00
12/18	12/12/2018	82852	MCCARDEL CULLIGAN	514-587-802.100	8.00
12/18	12/12/2018	82852	MCCARDEL CULLIGAN	101-770-802.000	26.00
12/18	12/12/2018	82853	MEAD & HUNT	592-542-802.000	750.00
12/18	12/12/2018	82853	MEAD & HUNT	592-556-802.000	1,500.00
12/18	12/12/2018	82854	Meyer Ace Hardware	514-587-802.000	27.64
12/18	12/12/2018	82855	MICHIGAN PIPE & VALVE	592-010-111.000	542.00
12/18	12/12/2018	82856	MICHIGAN PUBLIC POWER AGENCY	582-576-920.000	308,503.59
12/18	12/12/2018	82857	MICHIGAN SECTION A.W.W.A.	592-560-915.000	85.00
12/18	12/12/2018	82858	MICHIGAN STATE FIREMEN'S ASSOC.	101-345-915.000	75.00
12/18	12/12/2018	82859	NORTH CENTRAL LABORATORIES	592-553-775.000	161.61
12/18	12/12/2018	82860	NORTH COUNTRY PUBLISHING CORP.	248-540-882.190	100.00
12/18	12/12/2018	82860	NORTH COUNTRY PUBLISHING CORP.	248-540-882.190	100.00
12/18	12/12/2018	82860	NORTH COUNTRY PUBLISHING CORP.	248-739-880.200	100.00
12/18	12/12/2018	82861	Northern Michigan Review Inc.	248-739-802.000	71.33
12/18	12/12/2018	82861	Northern Michigan Review Inc.	101-215-751.000	338.40
12/18	12/12/2018	82861	Northern Michigan Review Inc.	582-593-802.000	602.42
12/18	12/12/2018	82861	Northern Michigan Review Inc.	204-444-802.000	245.68
12/18	12/12/2018	82861	Northern Michigan Review Inc.	204-444-802.000	245.68
12/18	12/12/2018	82861	Northern Michigan Review Inc.	101-400-802.000	63.40
12/18	12/12/2018	82861	Northern Michigan Review Inc.	101-400-802.000	317.00
12/18	12/12/2018	82862	Northland Self Storage LLC	592-544-802.000	147.00
12/18	12/12/2018	82863	Nub Games, Inc.	271-790-802.000	315.00
12/18	12/12/2018	82864	Penguin Random House	271-790-761.000	67.50
12/18	12/12/2018	82864	Penguin Random House	271-790-761.000	33.75-
12/18	12/12/2018	82865	Peninsula Fiber Network LLC	101-228-850.000	500.00
12/18	12/12/2018	82866	Petoskey Print Studio	101-101-751.000	33.77
12/18	12/12/2018	82867	Plunkett Cooney	101-266-802.000	1,155.00
12/18	12/12/2018	82867	Plunkett Cooney	101-266-802.000	2,537.50
12/18	12/12/2018	82867	Plunkett Cooney	101-266-802.000	400.00
12/18	12/12/2018	82867	Plunkett Cooney	101-257-802.000	1,470.00
12/18	12/12/2018	82867	Plunkett Cooney	101-266-802.000	3,150.00
12/18	12/12/2018	82867	Plunkett Cooney	101-266-802.000	537.25
12/18	12/12/2018	82867	Plunkett Cooney	204-481-802.000	537.25
12/18	12/12/2018	82867	Plunkett Cooney	582-588-802.000	537.25
12/18	12/12/2018	82867	Plunkett Cooney	592-549-802.000	537.25
12/18	12/12/2018	82867	Plunkett Cooney	592-560-802.000	537.25
12/18	12/12/2018	82867	Plunkett Cooney	101-266-802.000	5,841.56
12/18	12/12/2018	82868	POLICE AND FIREMEN'S INSURANCE	701-000-230.185	307.79
12/18	12/12/2018	82869	POWER LINE SUPPLY	582-588-767.000	315.00
12/18	12/12/2018	82869	POWER LINE SUPPLY	582-010-111.000	4,283.48
12/18	12/12/2018	82869	POWER LINE SUPPLY	582-010-111.000	3,390.00
12/18	12/12/2018	82869	POWER LINE SUPPLY	582-586-775.000	270.00
12/18	12/12/2018	82869	POWER LINE SUPPLY	582-588-767.000	120.00
12/18	12/12/2018	82870	PRESTON FEATHER	101-770-775.000	76.89
12/18	12/12/2018	82870	PRESTON FEATHER	101-754-775.000	3.98
12/18	12/12/2018	82870	PRESTON FEATHER	101-268-775.000	31.67
12/18	12/12/2018	82870	PRESTON FEATHER	101-268-775.000	20.57
12/18	12/12/2018	82870	PRESTON FEATHER	101-754-775.000	32.28
12/18	12/12/2018	82870	PRESTON FEATHER	582-586-775.000	10.83
12/18	12/12/2018	82870	PRESTON FEATHER	101-268-775.000	2.06-
12/18	12/12/2018	82870	PRESTON FEATHER	582-586-775.000	1.08-

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12/18	12/12/2018	82870	PRESTON FEATHER	101-770-775.000	7.69-
12/18	12/12/2018	82870	PRESTON FEATHER	101-268-775.000	3.17-
12/18	12/12/2018	82870	PRESTON FEATHER	101-754-775.000	.40-
12/18	12/12/2018	82870	PRESTON FEATHER	101-754-775.000	3.23-
12/18	12/12/2018	82871	Print Shop, The	514-587-775.000	109.00
12/18	12/12/2018	82872	Renkes, Tom	248-739-880.200	150.00
12/18	12/12/2018	82873	ROYAL TIRE	514-587-931.000	27.55
12/18	12/12/2018	82873	ROYAL TIRE	514-587-931.000	14.06
12/18	12/12/2018	82873	ROYAL TIRE	661-598-932.000	289.06
12/18	12/12/2018	82873	ROYAL TIRE	661-598-931.000	23.16
12/18	12/12/2018	82874	Spectrum Business	101-172-850.000	126.56
12/18	12/12/2018	82874	Spectrum Business	101-201-850.000	67.50
12/18	12/12/2018	82874	Spectrum Business	101-208-850.000	42.19
12/18	12/12/2018	82874	Spectrum Business	101-257-850.000	42.19
12/18	12/12/2018	82874	Spectrum Business	101-215-850.000	33.75
12/18	12/12/2018	82874	Spectrum Business	101-345-850.000	92.80
12/18	12/12/2018	82874	Spectrum Business	101-400-850.000	42.19
12/18	12/12/2018	82874	Spectrum Business	101-441-850.000	75.93
12/18	12/12/2018	82874	Spectrum Business	101-756-850.000	50.62
12/18	12/12/2018	82874	Spectrum Business	204-481-850.000	25.31
12/18	12/12/2018	82874	Spectrum Business	204-481-850.000	25.31
12/18	12/12/2018	82874	Spectrum Business	582-588-850.000	84.37
12/18	12/12/2018	82874	Spectrum Business	582-593-850.000	33.75
12/18	12/12/2018	82874	Spectrum Business	592-549-850.000	50.62
12/18	12/12/2018	82874	Spectrum Business	592-560-850.000	50.62
12/18	12/12/2018	82874	Spectrum Business	101-770-850.000	145.84
12/18	12/12/2018	82874	Spectrum Business	582-593-850.000	35.17
12/18	12/12/2018	82874	Spectrum Business	101-789-850.000	79.84
12/18	12/12/2018	82875	STAFFORD'S PERRY HOTEL	248-540-882.160	2,120.42
12/18	12/12/2018	82876	STANDARD ELECTRIC COMPANY	592-537-775.000	129.87
12/18	12/12/2018	82876	STANDARD ELECTRIC COMPANY	582-592-775.000	34.21
12/18	12/12/2018	82877	State of Michigan	592-542-802.000	2,734.29
12/18	12/12/2018	82878	T2 Systems Canada Inc.	248-739-802.000	165.00
12/18	12/12/2018	82879	TELEDYNE INSTRUMENTS INC.	592-554-802.000	1,385.38
12/18	12/12/2018	82880	TEMPERATURE CONTROL INC.	101-268-802.000	486.15
12/18	12/12/2018	82880	TEMPERATURE CONTROL INC.	592-554-802.000	666.00
12/18	12/12/2018	82881	TETRA TECH INC	592-549-802.000	742.50
12/18	12/12/2018	82881	TETRA TECH INC	592-560-802.000	742.50
12/18	12/12/2018	82881	TETRA TECH INC	592-560-802.000	605.00
12/18	12/12/2018	82882	UPS STORE, THE	592-553-802.000	150.85
12/18	12/12/2018	82883	Van Kalker Construction Inc	592-544-802.000	3,185.00
12/18	12/12/2018	82884	VAN'S BUSINESS MACHINES	248-739-802.000	417.39
12/18	12/12/2018	82885	VERIZON WIRELESS	101-345-850.000	56.55
12/18	12/12/2018	82885	VERIZON WIRELESS	592-549-850.000	1.04
12/18	12/12/2018	82885	VERIZON WIRELESS	582-588-850.000	8.73
12/18	12/12/2018	82885	VERIZON WIRELESS	101-345-850.000	36.01
12/18	12/12/2018	82885	VERIZON WIRELESS	101-770-850.000	36.01
12/18	12/12/2018	82885	VERIZON WIRELESS	101-773-850.000	53.69
12/18	12/12/2018	82885	VERIZON WIRELESS	101-789-850.000	53.69
12/18	12/12/2018	82886	VISUAL ENTITIES INC.	101-101-751.000	70.54
12/18	12/12/2018	82887	WESCO RECEIVABLES CORP.	582-593-785.000	51.98
12/18	12/12/2018	82887	WESCO RECEIVABLES CORP.	582-010-111.000	2,050.00

GL Period	Check Issue Date	Check Number	Payee	Invoice GL Account	Check Amount
12/18	12/12/2018	82888	Zonta Club of Petoskey	271-790-880.000	405.00
12/18	12/12/2018	82894	TEAMSTERS LOCAL #214	701-000-230.400	1,055.00
12/18	12/13/2018	82895	ACH-CHILD SUPPORT	701-000-230.160	160.23
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.100	30,777.75
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.200	18,480.09
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.200	18,480.09
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.200	4,321.96
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.200	4,321.96
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.200	203.35-
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.200	203.35-
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.200	47.54-
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.200	47.54-
12/18	12/13/2018	82896	ACH-EFTPS	701-000-230.100	586.68-
12/18	12/13/2018	82897	ACH-ICMA 457	701-000-230.700	2,033.06
12/18	12/13/2018	82897	ACH-ICMA 457	701-000-230.700	5,617.00
12/18	12/13/2018	82898	ICMA-ROTH	701-000-230.900	350.00
Grand Totals:					969,255.61

## Report Criteria:

Check.Date = 11/29/2018-12/13/2018

Check Number	Date	Name	GL Account	Amount
82741	12/05/2018	City of Petoskey Library	582588803000	4,906.43
82741	12/05/2018	City of Petoskey Library	582588803000	1,087.92
82742	12/05/2018	Holmes, Alexis	582040285000	43.34
82743	12/05/2018	Hutton, Brian	582040285000	40.31
82744	12/05/2018	Lange, Sarah	582040285000	20.72
82745	12/05/2018	McMurray, Mark	582081642300	78.36
82746	12/05/2018	Northern Credit Bureau	582081642300	20.97
82747	12/05/2018	Patterson, Dave	582081642300	6.00
82748	12/05/2018	Wregglesworth, Chelsea	582081642300	15.41
82889	12/12/2018	Demeuse, Melody	582040285000	22.02
82890	12/12/2018	Eppler, Ray	582588803000	16.00
82891	12/12/2018	Keilani, Anthony	582040285000	30.06
82892	12/12/2018	Middaugh, David	582040285000	75.00
82893	12/12/2018	Ryan, Paulina	582588803000	64.00
Grand Totals:				6,426.54



# City of Petoskey

## Agenda Memo

**BOARD:** City Council

**MEETING DATE:** December 17, 2018

**PREPARED:** December 13, 2018

**AGENDA SUBJECT:** Appointment Recommendations

**RECOMMENDATION:** That the City Council consider these appointments

---

The City Council will be asked to consider the following reappointments:

- DOWNTOWN MANAGEMENT BOARD – Reappointment of Doug Buck, 822 Grove Street, and Jessica Stubbs, 1234 Hazelton Street, both for four-year terms ending December 2022.

sb

Enclosures





# City of Petoskey

101 East Lake Street, Petoskey, Michigan 49770 • 231 347-2500 • Fax 231 348-0350

RECEIVED

DEC 06 2018

CITY OF PETOSKEY  
CITY MANAGER

SB

## Application to Serve on a Board or Commission

Please print. Answer each question accurately and completely. If you require any accommodation to complete the application process, please notify a City staff member.

■ Name	Buck		Douglas		G	■ Date	12	5	18
	Last		First		Initial				
■ Residence Address	822	Grove	St	Mi	49770	■ Home Phone	231	330	2269
	Number	Street	City	State	Zip				
■ Email Address	doug.buck@icloud.com					■ Work Phone	231	439	5005

Please answer the following questions using the space provided.

- What Board or Commission interests you and why are you applying? Downtown Management Board ("DMB")
- How do you believe your appointment would benefit the City? The downtown is a great asset to the City of Petoskey. As a board member, I would work to preserve and enhance its economic and social impact on our community. I have a background in finance, which provides for an area of expertise that would help make for a well-balanced board.
- Describe any involvement in the community on a Board or Commission or in another volunteer capacity. I am the current Vice Chairman of the DMB and serve on its Economic Development and Parking Committees. In addition, I am a member of the Petoskey Rotary Club. In the past I have served as Treasurer on the board of Char-Em United Way and the Scoutmaster of Petoskey's St. Francis Xavier's boy scout Troop 7.
- How many continuous years have you lived in Petoskey? 15-years
- Any other helpful information relevant to your application. I have a strong interest in understanding and improving our parking. I view parking as a challenging issue that limits our downtown's full potential.

While it is not required, a resume is helpful in the recruitment process for City Boards and Commissions.

<input checked="" type="checkbox"/>	YES	<input type="checkbox"/>	NO	Are you a registered voter?
<input type="checkbox"/>	YES	<input checked="" type="checkbox"/>	NO	Are you currently in default of taxes or fines to the City of Petoskey?
<input checked="" type="checkbox"/>	YES	<input type="checkbox"/>	NO	Do you or immediate family members currently serve on a City Board or Commission? If yes, which Board or Commission? <u>Downtown Management Board</u>
<input type="checkbox"/>	YES	<input checked="" type="checkbox"/>	NO	Have you ever been convicted of a felony? If yes, please explain.

The applicant acknowledges that the City may be required from time to time to release records in its possession. The applicant hereby gives permission to the City to release any records or materials received by the City from the applicant as it may be requested to do so as permitted by the Freedom of Information Act, MCL 15.231 et seq.

Applicant Signature: \_\_\_\_\_

Date: \_\_\_\_\_

12-5-18



# City of Petoskey

101 East Lake Street, Petoskey, Michigan 49770 • 231 347-2500 • Fax 231 348-0350

RECEIVED

DEC 06 2018

CITY OF PETOSKEY  
CITY MANAGER

SB

## Application to Serve on a Board or Commission

Please print. Answer each question accurately and completely. If you require any accommodation to complete the application process, please notify a City staff member.

■ Name	Stubbs	Jessica	H	■ Date	12	03	18		
	Last	First	Initial						
■ Residence Address	1234	Hazelton	Petoskey	MI	49770	■ Home Phone	231	420	3785
	Number	Street	City	State	Zip				
■ Email Address	jessicahelenstubbs@hotmail.com					■ Work Phone	231	622	8322

Please attach a paragraph that states your interest in serving on a Board or Commission and describe any special experiences or attributes you possess that make you qualified to serve.

1. How many continuous years have you lived in Petoskey? 14 years
2. Are you a registered voter? yes
3. Have you previously served on a Board or Commission or been elected to office in Petoskey? yes

In another community? \_\_\_\_\_

If yes, please provide where you served, the position held, and explain your experience: I have served on the DMB in Petoskey.

4. Are you currently in default of taxes or fines to the City of Petoskey? No
5. Have you ever been convicted of a felony? No

Please explain: \_\_\_\_\_

Applicant Signature: Jessica Stubbs Date: 12-03-18

Thank you for taking the time to complete this application. The people who serve on the City's Boards and Commissions perform a valuable service to the City. I will contact you if a vacancy arises on a Board or Commission in which you have an interest.

~~William J. Fraser~~ John Murphy  
Mayor

Please return your completed application to:

City of Petoskey  
Attn: City Manager's Office  
101 East Lake Street  
Petoskey, MI 49770

Jessica Stubbs

1234 Hazelton St

Petoskey, MI 49770

231-420-3785

Mayor John Murphy,

I would like to continue to serve on the Downtown Management Board.

I am a business owner and a property owner on Mitchell Street. I feel that my ability to run a small business in Petoskey help with the discussions and decisions that need to be made within the Down town. I have appreciated all of the insight from other board members and would like to continue to serve with them.

Thank you,

Jessica



**BOARD:** City Council

**MEETING DATE:** December 17, 2018

**PREPARED:** December 13, 2018

**AGENDA SUBJECT:** Second Discussion and Possible Approval of Changes to Downtown Parking Fees, Fines and Enforcement Schedule

**RECOMMENDATION:** That the City Council adopt the enclosed proposed resolution

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**Background** At the last City Council meeting on December 3, City Council discussed several changes to parking fees, fines and enforcement hours. Since that time, City staff has solicited input on parking fee changes through the City website and the City Facebook page and received 23 emailed comments that are enclosed. Regarding the number of Facebook users, Facebook statistics state the following:

**578 Post Engagements** – number of times people have engaged with the City's parking post through clicks, likes, comments, shares and reactions.

**2,525 Post Reach** – number of people who have had any posts from the City enter their screen. This number is an estimate.

A summary of the 23 emailed comments show the following:

1. Raise meter fees on Lake Street, Mitchell Street and Howard Street and in the Elk's Lot, Clifton Lot, and Saville Lot to \$1.00 an hour; on all other three hour meters to \$.50 an hour; and on all ten hour meters to \$.25 an hour. Proposed rates by DMB would double the current hourly rate charges.

**9 comments in opposition, 1 neutral for \$1.00 per hour  
1 comment in support of 10 hour \$0.25 meter rates**

2. Raise \$5 ticket fine to \$10.

**1 comment supporting, 2 comments in opposition**

3. Increase hours of enforcement by one hour from 5:00 P.M. to 6:00 P.M., Monday through Saturday.

**7 comments in opposition, 1 comment in support**

4. Raise meter bag fees from \$5 to \$10 per day.

**No comments**



5. Increase monthly tiered permit fees (see enclosed map):

	<b>Current</b>	<b>Proposed</b>
Blue Permit (valid in blue permit areas only)	\$20	\$30
Green Permit (valid in green and blue areas only)	\$30	\$60
Yellow Permit (valid in all permit areas)	\$40	\$120

**3 comments in opposition**

6. De-escalate late fees accordingly:

	<b>Current</b>	<b>Proposed</b>
8 days	add \$20	add \$10
14 days	add \$50	add \$30
30 days	add \$80	add \$40
60 days	add \$120	add \$60
90 days	add \$220	add \$90

**1 comment in support**

Based upon comments at the December 3 City Council meeting, a draft resolution has been developed for your review and consideration. The resolution not only addresses the proposed changes to fees, fines and enforcement hours, but also states the additional revenues from increases in parking charges will largely go towards costs associated with construction and any financing of a downtown parking structure. Although resolutions are not legally binding, the resolution reiterates the importance of using the additional revenues to construct a parking structure that may assist both Boards to stay on track and not divert additional funds for other projects.

In discussions with City Treasurer Al Terry, staff believes a line item could be included in the 2020 Downtown Parking Fund-Reserve Fund for Future Parking Structure to earmark additional revenues generated by increases in fines and fees to be used for future construction and financing of a parking structure.

**Action** If City Council is supportive of the proposed changes to parking fees, fines and enforcement hours, a motion could be made to approve the enclosed resolution.

rs  
Enclosures



WHEREAS, the City of Petoskey's Downtown Management Board (DMB) serves as an advisory board to the Petoskey City Council on matters pertaining to the downtown business district including overseeing management of downtown parking issues; and

WHEREAS, in an advisory capacity to the DMB, the DMB Executive Parking Committee has met multiple times to discuss changes to downtown parking fees, fines and enforcement hours; and

WHEREAS, past parking studies commissioned by the DMB have shown that during the busy summer months there is a shortage of parking spaces within the downtown area and a need to increase the parking inventory through construction of a parking structure in the downtown development authority district; and

WHEREAS, if fees and fines are increased by City Council and the City Manager there will be additional revenues generated to help support the construction of a parking structure in the downtown development authority district; and

WHEREAS, the DMB strongly supports construction of a parking structure and has committed to using at least a majority of the additional revenues from increases in parking fees and fines to pay for costs associated with construction and financing a parking structure in the downtown development authority district; and

WHEREAS, at the November 27, 2018 DMB monthly meeting, board members approved a recommendation to City Council to approve revisions to parking fines, fees and enforcement hours effective in the second quarter of 2019.

WHEREAS, under City Code Chapter 21 Traffic and Motor Vehicles, Section 21-33 gives the City Council and City Manager broad authority to set parking rates for both metered and unmetered parking areas in the downtown area; and

WHEREAS, the City Council and City Manager have discussed this item at the December 3, 2018 and December 17, 2018 City Council meeting and approve changes to parking fees, fines and enforcement hours as recommended by the DMB at their November 27, 2018 meeting:

NOW THEREFORE, BE IT RESOLVED that the City of Petoskey approves the following parking fees, fines and enforcement hours:

1. Raise meter fees on Lake Street, Mitchell Street and Howard Street and in the Elk's Lot, Clifton Lot, and Saville Lot to \$1.00 an hour; on all other three hour meters to \$.50 an hour; and on all ten hour meters to \$.25 an hour.
2. Raise \$5 ticket fine to \$10.
3. Increase hours of enforcement by one hour from 5:00 P.M. to 6:00 P.M., Monday through Saturday.

4. Raise meter bag fees from \$5 to \$10 per day.

5. Increase monthly tiered permit fees:

Blue Permit (valid in blue permit areas only)	\$ 30
Green Permit (valid in green and blue areas only)	\$ 60
Yellow Permit (valid in all permit areas)	\$120

6. De-escalate late fees as follows:

8 days	add \$10
14 days	add \$30
30 days	add \$40
60 days	add \$60
90 days	add \$90

**Sarah Bek**

---

**From:** Benjamin Werden <benjaminkorr@gmail.com>  
**Sent:** Wednesday, December 5, 2018 3:55 PM  
**To:** CityManager  
**Subject:** Parking Fee Changes

**RECEIVED**

DEC 05 2018

CITY OF PETOSKEY  
CITY MANAGER

Hello,

I am writing in regards to the proposed changes to the fees and fines in Petoskey. I understand and appreciate the need to raise revenue to help maintain our town's upkeep. I would, however, like to voice opposition to the extension of parking meter enforcement hours from 5:00 PM to 6:00 PM.

Nobody enjoys rate hikes, but I feel this particular change will be the most unpopular by far. Firstly, because of the time it will take for everyone to become aware of the new enforcement hours. Even with solid efforts to inform the public, many folks will be caught off-guard by these new hours. Secondly, I object to the change because during the winter, lighting will be poor at these new hours of enforcement, and I suspect folks will not want to have to fumble in the darkness both checking to see how much time is remaining on the meter, and adding money to it.

I would strongly prefer to see the enforcement hours remain as they are moving forward.

Thank you for taking the time to consider my thoughts on the matter.

Yours Truly,  
Benjamin Werden



**Sarah Bek**

---

**From:** Katie Flood <katie.flood727@gmail.com>  
**Sent:** Thursday, December 6, 2018 9:37 AM  
**To:** CityManager  
**Subject:** City Parking Meter Changes

**RECEIVED**

DEC 06 2018

CITY OF PETOSKEY  
CITY MANAGER

To Whom It May Concern,

My name is Katie Flood. I am a former resident of Petoskey, a current resident of Harbor Springs, and a frequent user of the parking meters. I find myself in downtown Petoskey usually 2-3 times per week using the parking meters. I am an advocate of small businesses and consistent local coffee shop supporter. If parking meter prices were increased this would significantly impact the draw of going to Petoskey.

Thank you for allowing the community to voice their concerns about this matter.

--

Katie Flood

Director of Children, Youth, and Family Ministries at First Presbyterian Church of Harbor Springs  
Young Life Church Partner

**Sarah Bek**

---

**From:** Rose Fitzgerald <rosefitzgerald183@gmail.com>  
**Sent:** Thursday, December 6, 2018 4:11 PM  
**To:** CityManager  
**Subject:** Proposed changes to parking fees, etc.

**RECEIVED**

DEC 06 2018

**CITY OF PETOSKEY  
CITY MANAGER**

I believe that such a large increase to parking meter fees will have a significantly negative impact on the viability of downtown Petoskey. With so many free parking options in nearby cities, the proposed amounts seem excessive — and likely to anger both residents and visitors. Additionally, since we need to put cash into meters rather than “pay stations”, it seems reasonable to assume that most people will not have such large amounts of change available, and either hope no “parking ambassador” catches them if they skip putting money in or drive away in disgust.

The permit parking fee increases also seem as if they will have a negative effect on downtown employees. Businesses already struggle to find employees - why put another obstacle in the way?

I can support raising ticket fees.

Thank you for the opportunity to provide input.  
Rise Fitzgerald  
514 Elizabeth

**Sarah Bek**

---

**From:** Betty Palm <bjpgetoskey@gmail.com>  
**Sent:** Thursday, December 6, 2018 5:30 PM  
**To:** CityManager  
**Subject:** Proposed parking rate changes - NO!

**RECEIVED**

DEC 07 2018

CITY OF PETOSKEY  
CITY MANAGER

The rates on Petoskey meters are already outrageous. We're the only area city that does not provide FREE parking downtown. Please do not raise rates any more!

Betty Palm

**Sarah Bek**

---

**From:** Joe Palm <jrpetoskey@gmail.com>  
**Sent:** Thursday, December 6, 2018 6:47 PM  
**To:** CityManager  
**Subject:** Proposed parking fee revision

**RECEIVED**

DEC 07 2018

CITY OF PETOSKEY  
CITY MANAGER

Parking meters in a tourist town is a turn-off. It spells "CHEAP" to any visitor, especially if they wind up getting a ticket for being a little late getting back from shopping in Petoskey.

As a nearby resident it is irritating to have to pay to do errands in town. This proposal to increasing the fees yet again is shortsighted and unwanted.

-Joe Palm  
3256 Blackbird Rd  
Petoskey

**Sarah Bek**

---

**From:** Carrie Tebeau <crstrand@gmail.com>  
**Sent:** Thursday, December 6, 2018 8:26 PM  
**To:** CityManager  
**Subject:** Proposed parking fees

**RECEIVED**

**DEC 07 2018**

**CITY OF PETOSKEY  
CITY MANAGER**

Dear City of Petoskey,

I live in Resort Township but frequent the downtown area. I am concerned that the proposed parking rate increases are too steep and will keep people from coming downtown—for instance, it's enough that I could see myself deciding to just go to Meijer instead of the farm market because parking will seem especially onerous and expensive.

The proposed change from 5 to 6 pm on meters, on the other hand, seems quite reasonable, as most towns go until 6.

I would rather pay higher late fines on tickets than more per hour.

Thank you,  
Carrie Tebeau  
172 Vantage View  
Petoskey, MI 49770



**Sarah Bek**

---

**From:** Jaymeelynn Camarata <jaymee619sd@gmail.com>  
**Sent:** Friday, December 7, 2018 8:04 AM  
**To:** CityManager  
**Subject:** Parking changes

**RECEIVED**

**DEC 07 2018**

**CITY OF PETOSKEY  
CITY MANAGER**

As someone who works downtown 5 days a week raising these meters is ridiculous. I have customers who complain because they can never find parking and when they do they always seem to get ticketed. Fun fact for you, i watched a parking ambassador circle my car five times waiting for my meter to expire on wednesday dec 5th. Took him ten minutes to write me a ticket for my car that was right outside my store door. I will fight this just so you know, because i watch these men and women you employ to do this wait for people to expire instead of walking around the town like they should. You should be ashamed of yourselves for raising the meters and changing times. this is a hard working community in which you know because you work and live here. Ive been here seven years, i moved from a huge city on the west coast and they dont even do this type of petty thing. You all should be ashamed of what you are trying to do to these downtown businesses who struggle with getting people to then because there is no parking but raise these fees! Gotta pay you guys right? This city is a shame, your council is a shame and all you want is money. You dont have to worry about paying these fines and fees because you have money unlike the real working class of this community. The real working class in this damn town is poor. We are all struggling and all i see and all we see now is you wanting to fatten your pockets. Good luck with that.

**Sarah Bek**

---

**From:** Seamus Norgaard <celticbodyprayers@gmail.com>  
**Sent:** Friday, December 7, 2018 8:32 AM  
**To:** CityManager  
**Subject:** Do not raise parking meter fairs or extend the hours!!!

**RECEIVED**

DEC 07 2018

**CITY OF PETOSKEY  
CITY MANAGER**

I am shocked that the City of Petoskey would make the downtown increasingly unfriendly to folks on limited incomes such as the College students in my classes who are very upset about this prospect, folks who work downtown, and visitors and shoppers in general! Raising parking meter fees and extending the hours of these is a negative move that will skew Petoskey's downtown only towards higher income folks and more wealthy visitors with the apps for meter payment. It makes no sense to increase the hardships on college students and other low income residents, making Boyne City, Gaylord, Harbor Springs (and "home" wherever that is for my College students) more attractive destinations to play, shop, and dine out them than downtown Petoskey.

Do you really want to skew Petoskey more towards the "one percenters" and discourage all the rest of us from shopping, dining, and playing here?

"Seamus" James Norgaard  
Adjunct professor  
NCMC

**Sarah Bek**

---

**From:** Zach Sheppard <zachsheppard97@gmail.com>  
**Sent:** Friday, December 7, 2018 8:49 AM  
**To:** CityManager  
**Subject:** Proposed Meter Changes

**RECEIVED**

DEC 07 2018

CITY OF PETOSKEY  
CITY MANAGER

Why would anybody in their right mind propose doubling the current meter rates? This does not take into consideration the employees of Petoskey's downtown businesses. In some lots, currently, employees are paying up to \$4 to park for an 8 hour shift. There is no real free parking availability. This goes to show that Petoskey only cares about it's more affluent temporary residents. This town is already too expensive for normal people to live in and you are intentionally going out of your way to make this town more expensive.



**Sarah Bek**

---

**From:** Jane Denay <jane.denay@gmail.com>  
**Sent:** Friday, December 7, 2018 1:08 PM  
**To:** CityManager  
**Subject:** Parking

**RECEIVED**

DEC 07 2018

CITY OF PETOSKEY  
CITY MANAGER

Dear Robert Straebel,

Thank you for eliciting the opinion of residents on parking fees. As a walker and biker I don't often use the meters, however I don't support an increase the rates. I think locals and visitors find the meters in general onerous. Increasing the rates may make more rapid turnover in spaces but less money left behind for that quick coffee or lunch after shopping. Myself when I drive to town I might chose to park on a residential street to avoid the meters and fines.

Respectfully,  
Jane Denay

**Sarah Bek**

---

**From:** richard scott <scottusmagnus1@me.com>  
**Sent:** Friday, December 7, 2018 5:50 PM  
**To:** CityManager  
**Subject:** Parking

**RECEIVED**

DEC 07 2018

CITY OF PETOSKEY  
CITY MANAGER

Reviewed parking fees with friends .

We live at the upper edge of Readmond Nd come to Petoskey often. Sometimes cost of parking to dine or shop seems overwhelming, though we would rather shop locally than on the line. Seems like then we are fish being reeled in.

Sent from my iPad

**Robert Straebel**

---

**From:** noreply@petoskey.us  
**Sent:** Monday, December 10, 2018 3:03 PM  
**To:** Robert Straebel  
**Subject:** Citizen Request/Report [internal-from]

**RECEIVED**

DEC 10 2018

**CITY OF PETOSKEY  
CITY MANAGER**

Issue = Increase in parking meter rates

Name = Jean Fought

Email = jandjfought@att.net

Phone = 347-3762

Issues = Merchants want shoppers to "shop small" which I try to do as I worked at the Clothes Post for over 20 years. The biggest complaint was the parking meters. Nothing has changed except for the gradual upward creep of parking costs, the reduction of spaces, and the expansion of meters onto side streets (Woodland.) Now the proposed increases in enforcement times and rates. I would encourage Counsel members to reject such an increase as it will drive even more local, tax-paying shoppers and diners away from downtown - just another "nail" in all the empty stores.

Respond Me = Email

Client IP = 172.12.182.181

**Sarah Bek**

---

**From:** Esther Brill <stellamerteuil@gmail.com>  
**Sent:** Monday, December 10, 2018 3:40 PM  
**To:** CityManager  
**Subject:** Parking fees, fines, enforcement

**RECEIVED**

**DEC 10 2018**

**CITY OF PETOSKEY  
CITY MANAGER**

I am responding to the request for input on this issue I saw online. As I'm sure you know, many locals (myself included) simply avoid downtown Petoskey during certain hours because of the parking fees. Raising those fees would make that even worse. It's already terrible that people who live and work downtown have to feed meters during the day, and increasing fees would be hardest on those people.

Downtown Petoskey already has too many vacant buildings due to astronomical rents and difficult landlords. Raising the fees for simply being in downtown will give people even more reason to shop or open businesses elsewhere. My husband and I recently discussed opening a business, and parking fees were one of the "cons" in our thoughts on downtown. There's a lot of good, don't get me wrong, but the charm can only go so far. If nothing else, please consider the people who staff our many retail shops and food and drink establishments. Many of them are young and not financially secure. They're relying on tips and jobs that don't pay very much. Increasing parking fees hits them harder than the wealthy tourist who is here 3 months out of the year and earns ten times what the barista or sales clerk is making.

We are a resort town, but we can't cater only to the wealthy. There is a full time population who lives here too who earn far less than our summer guests. These people should be considered.

Thank you,  
Esther Brill



**Sarah Bek**

---

**From:** mariah becker <mariahraebecker@gmail.com>  
**Sent:** Wednesday, December 12, 2018 10:07 AM  
**To:** CityManager  
**Subject:** Parking Changes

**RECEIVED**

**DEC 12 2018**

**CITY OF PETOSKEY  
CITY MANAGER**

Hello. I am a shift leader/manager at a business downtown and I have some comments on the new proposed parking changes.

It is evident to me that the city of Petoskey cares more about our part-time tourist residents than our year round residents. It is also evident that the city cares more about our affluent citizens than the working class. As you are aware, we already cannot afford to LIVE in Petoskey. Now, you are making it hard for us to even be able to afford to WORK in Petoskey! WE are supporting your economy. WE are serving all of the tourists that visit here. And WE are miserable because of it. This is going to further contribute to our issues about not having any employees, i'm sure you saw the News Review article regarding that a few weeks ago. We need to be able to afford to live and park close to work in order to continue supporting the local economy.

Furthermore, my morning staff arrives before city employees start shoveling the sidewalks. To expect them to park farther away in a free parking lot is also expecting them to then walk down the unshoveled, not salted sidewalks to get to work. I do not want my employees, who are supporting this economy, to come into work and already be discouraged. I have also had coworkers slip and fall on the sidewalks because they parked in a free parking lot several blocks away. It is absolutely not fair to expect us to find free parking and walk the rest of the commute unless YOUR employees will be out shoveling, plowing, and salting sidewalks by 5 am. Not to mention, the streets right downtown like Lake St. it is the businesses's responsibility to take care of the sidewalk right outside... But most of the businesses are not open until 3-4 hours AFTER my staff starts working. To elaborate even further, Having parking meters at all, especially expensive ones with short limits, is such a discouragement to people trying to shop or eat in downtown Petoskey. I have heard from multiple people that they would rather go to downtown Harbor Springs or Boyne City so they could comfortably shop or eat without the stress and time limit surrounding paying a parking meter.

**Sarah Bek**

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**From:** Anna Gasco <agasco98@gmail.com>  
**Sent:** Wednesday, December 12, 2018 10:42 AM  
**To:** CityManager  
**Subject:** Changes to Parking Meters

If you want the working class happy dont charge them to be at work. Lots of people use that parking while working and increasing parking meters and whatnot is going to dissuade them from working downtown. Dont charge us even more we are poor.

**RECEIVED**

**DEC 12 2018**

**CITY OF PETOSKEY  
CITY MANAGER**

Sarah Bek

DEC 12 2018

CITY OF PETOSKEY  
CITY MANAGER

From: Derek [<mailto:d.r.shiels@gmail.com>]

Sent: Wednesday, December 12, 2018 12:38 PM

To: Robert Straebel <[rstraebel@petoskey.us](mailto:rstraebel@petoskey.us)>; Izzy Lyman <[ilyman@petoskey.us](mailto:ilyman@petoskey.us)>; [suzanne.avis.shumway@gmail.com](mailto:suzanne.avis.shumway@gmail.com)

Subject: Changes to City Parking Fees

12/12/2018

Dear City Manager Straebel,

Thank you for taking my comments on the proposed Changes to City Parking Fees, they are as follows:

**1. Raise meter fees -**

- I am neutral on the meters moving to \$1.00
- Support moving all 10 hour meters to \$0.25
- I do NOT support the increase to \$0.50 on all three hour meters. I would like to see a more strategic plan for the increase of the three hour meters (i.e. not an across the board increase). There should be some lower priced parking options left for those who would choose to seek them out, AND
- I would like to see the Darling lot reduced to \$0.25 per hour (or stay there if that is already the cost). The reason for my opinion is that some parking lots often have empty spots during the day and keeping some lots lower could help alleviate some parking congestion issues.

**2. Raise ticket fine to \$10 and 3. Increase hours of enforcement by one hour -**

- I would like to know about the consistency of enforcement. How often are the parking meters being checked? Is everyone who is getting a ticket paying the fine or is there some unstructured leniency. Maybe more consistent enforcement would nullify the need to raise the fine and extend the hours? For those of us getting out of work after 5 and needing to stop in town briefly before heading home, it is nice that the parking spaces are free after 5.

**4. Raise meter bag fees - no comment**

**5. Increase monthly tiered permit fees**

- I do not support this large of an increase, it seems excessive. These permit holders are regular users of the parking spaces, and, if that is correct, the City shouldn't discourage them or make it more burdensome.

**6. De-escalate late fees -** Keep the initial \$20 fine (keep that initial impact higher) and I support the decrease in the later late fees.

CC: Izzy Lyman and Suzanne Shumway

Follow your joy,  
- Derek Shiels, 1221 Hazelton

**Sarah Bek**

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**From:** Adam Wagenschutz <adamwagenschutz@gmail.com>  
**Sent:** Wednesday, December 12, 2018 2:40 PM  
**To:** CityManager  
**Subject:** Proposed parking fees

I am emailing you to give input on the proposed parking ticket increase. It is a terrible idea and a direct attack to tax working people more.

**RECEIVED**

DEC 12 2018

CITY OF PETOSKEY  
CITY MANAGER



**Sarah Bek**

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**From:** Valerie <valeriesue2u@aol.com>  
**Sent:** Wednesday, December 12, 2018 3:25 PM  
**To:** CityManager  
**Subject:** Parking Changes

**RECEIVED**

DEC 12 2018

CITY OF PETOSKEY  
CITY MANAGER

Hello Rob,

We just met at Roger & Cheryl Tallman's pre Holiday Open House bash.

I felt that I should throw my "two cents" in on the proposed parking changes. As a concerned resident, the approach to the increases seems wrong; the changes "reward" those that didn't "feed the meter" and then didn't pay the fine on time while those that plan ahead and buy a permit are being penalized for doing so. A three-fold increase for residents that work downtown and "pay up front" for a yellow sticker is prohibitive, in my opinion. To go from an annual amount of \$480 to \$1,440, really? Even doubling the monthly fee for a green permit seems way too much.

With regards to the parking lot meter rate jumping from 50 cents to \$1.00 again seems to be putting the burden on the residents that work downtown. By making the lot parking more expensive, it's defeating the goal to free up street parking for visitors and quick trips to local merchants.

It just all seems backwards to me.

I wish you and the City Council luck on finalizing any parking changes. Can't make everyone happy, but let's not put the onus on residents that work and live downtown.

Valerie Wilson

**Sarah Bek**

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**From:** Shawn Peterson <shawn@wineguysgroup.com>  
**Sent:** Wednesday, December 12, 2018 3:56 PM  
**To:** CityManager  
**Subject:** Parking Changes

I wish I had known earlier that there was a public comment deadline of today so I could have protested these changes more eloquently.

As the manager of a downtown business, not only do I object to these changes but I object to the presence parking meters in general. It is the single biggest complaint I hear from people visiting our town.

I would love to discuss this further.

Sincerely,  
Shawn

Shawn Peterson  
General Manager  
Palette Bistro  
231-881-0324

Sent from my iPhone

**RECEIVED**

**DEC 12 2018**

**CITY OF PETOSKEY  
CITY MANAGER**

**Sarah Bek**

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**From:** William Henagan <william.henagan@gmail.com>  
**Sent:** Wednesday, December 12, 2018 4:11 PM  
**To:** CityManager  
**Subject:** Parking Meter Changes

**RECEIVED**

DEC 12 2018

CITY OF PETOSKEY  
CITY MANAGER

Good afternoon,

I am writing you to share my comments on the proposed parking changes for Petoskey. I am a Harbor Springs resident, but work in Petoskey and frequent many of the businesses there during the day and in the evening. While I do not have all of the details on what kind of revenue the parking meters bring in or the costs associated with checking them, maintenance, and administration of the system as a whole, I do think that raising the meter fees and extending the time periods would be counter-productive to business growth downtown. From what I know, the businesses who operate downtown pay fairly high rent if they do not own their building and the increased fees may deter foot traffic to their storefronts – either because people do not want to tarry downtown because their meters are running up and/or may be less inclined to come downtown as frequently. Extending the times would also create more labor costs to check the meters during those hours and hurt downtown restaurants, which are some of the only places that are open after business hours downtown.

I also work quite a bit in Traverse City and their meter fees are quite higher. But I can tell you that when I am in downtown Traverse City, I am more concerned with my meter running out than I am with enjoying the reason why I am there or business I am conducting. It is something I do not look forward to when I have meetings in downtown Traverse City. On the other hand, I do not currently have those same feelings in Petoskey, as many times I spend hours in the coffee shops and restaurants working and conducting business without thinking about how high my meter will be.

I hope that you take pause when considering the impact of these proposed changes and I hope that you chose not to implement them. Thank you for taking the time to read and consider my comments and feel free to call me for further questions or clarification.

--

Will Henagan  
(231) 282-0196  
[william.henagan@gmail.com](mailto:william.henagan@gmail.com)

**Sarah Bek**

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**From:** Bob <bobroaster@yahoo.com>  
**Sent:** Wednesday, December 12, 2018 4:13 PM  
**To:** CityManager; Mary; pat@wineguysgroup.com; caffinatedwalker@gmail.com; Joe  
**Subject:** Parking

Dear Rob,

I wanted to weigh in on the parking change proposal. I am in favor of building a parking structure in the downtown. We have had many negative comments about this proposal from our local clientele. We believe at Wineguys Restaurant Group that there needs to be a cautious approach to this plan. We realize the difficulty finding funding sources for this project. A consideration for this would be to have these rates be seasonal from Memorial Day till Labor Day. The revenue impact would be the largest portion and I believe would be a much easier sell to our year round residents.

Thanks  
Bob Keedy

Sent from my iPhone

**RECEIVED**

DEC 12 2018

CITY OF PETOSKEY  
CITY MANAGER



**Sarah Bek**

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**From:** mroast@yahoo.com  
**Sent:** Wednesday, December 12, 2018 4:14 PM  
**To:** CityManager  
**Subject:** parking meter changes

**RECEIVED**

DEC 12 2018

**CITY OF PETOSKEY  
CITY MANAGER**

Dear City Council and Mayor John Murphy

These are my concerns with the proposed changes based on feedback from my guests:

The increase of the meter charges on Lake, Howard and Mitchell streets to \$1/hour is too drastic an increase. Our customers at Roast & Toast explain that it adds a \$1 to the cost of a \$2 coffee. I think it is a good idea to increase all parking fees during the peak season May-September on par with Traverse City meter fees and relax fees a bit during our off season. The 30 minute free parking on 3 hour and less meters in TC is also a very nice goodwill gesture and would be a good idea here.

What has happened with repeat violators? Do the fines still increase based on the frequency of violations? That seemed to be a good penalty system for repeat offenders and I would guess a good income stream.

I know the problem has been studied but I still marvel at the number of parking structures that Traverse City has built in the past 15 years or so and wonder how they financed them? Are there any lessons to learn from them?

Thank you,

Mary Keedy  
Wineguys Restaurant Group

DEC 12 2018

Sarah Bek

CITY OF PETOSKEY  
CITY MANAGER

Hello there,

My name is Cyndel Thompson. I am a full-time college student at North Central Michigan College, and I am currently a resident in downtown Petoskey.

Living here, I got to know many people over the past year. I also know that affordable living has been a rising issue in the downtown area.

Living on my own at 19, and being a full time college student, I am basically living off of pennies.

I previously lived in East Jordan, so moving to a city like Petoskey was a fairly big change.

One big change was paying for parking. This was fine for a while, but after several months, and starting to use a card more often, I was running out of quarters, dimes, and dollars very quickly.

Another change would be the tickets. Living paycheck to paycheck does not really give someone room in their budget for a \$5 ticket, and then a \$25 dollar ticket if they can't pay it within a week!

After getting a fourth ticket, I refused to pay the city of Petoskey anymore money for parking. Which brings me to my next point.

My last major change was the free parking lot. In the summer time it wasn't too bad having to park several blocks away. But now that winter is here, the free parking lot is almost always full, and the sidewalks are never plowed and drifted over.

Often times my class schedule has a few breaks between classes. So I have to find a parking spot, and tread through a foot of snow several times a day.

I would much rather park downtown, where the sidewalks are shoveled regularly and much closer to my apartment. But I simply cannot afford it.

While I know there will be many benefits to raising the price and extending hours, there will be downfalls too. You will essentially be punishing the permanent resident. Pushing more on the ever-climbing cost of rent.

I believe there is an option where there could be compromise.

Instead of rising the prices and extending times all year, only change seasonally. During the summer when the partial residents visit.

Perhaps that method would be more complicated than I imagine. But regardless, please keep your permanent residents in mind when making a decision. I know we would definitely appreciate it.

Thank you for your time, and good luck with your decision.

Sincerely,

Cyndel Thompson

**The following was included in the December 3, 2018 council packet.**

Over the past several months, the DMB Parking Committee has discussed several recommendations to revise certain downtown parking fees, fines and enforcement hours. At the November 27, 2018 DMB meeting, board members voted 6-2 to support the Parking Committee's recommendations to the City Council and City Manager. The DMB recommends revising parking fees, fines and hours of enforcement as follows:

1. Raise meter fees on Lake Street, Mitchell Street and Howard Street and in the Elk's Lot, Clifton Lot, and Saville Lot to \$1.00 an hour; on all other three hour meters to \$.50 an hour; and on all ten hour meters to \$.25 an hour. Proposed rates by DMB would double the current hourly rate charges.
2. Raise \$5 ticket fine to \$10.
3. Increase hours of enforcement by one hour from 5:00 P.M. to 6:00 P.M., Monday through Saturday.
4. Raise meter bag fees from \$5 to \$10 per day.
5. Increase monthly tiered permit fees (see enclosed map):

	Current	Proposed
Blue Permit (valid in blue permit areas only)	\$20	\$ 30
Green Permit (valid in green and blue areas only)	\$30	\$ 60
Yellow Permit (valid in all permit areas)	\$40	\$120

6. De-escalate late fees accordingly:

	Current	Proposed
8 days	add \$20	add \$10
14 days	add \$50	add \$30
30 days	add \$80	add \$40
60 days	add \$120	add \$60
90 days	add \$220	add \$90

(All additional fees are added to the original ticket amount. Proposed maximum charge for a \$10 ticket after 90 days of non-payment would be \$100 verses \$225 in the current system.)

**City Council and City Manager Authority per City Code** According to the enclosed City Code Chapter 21 Motor and Traffic Vehicles, Code Provision 21-32 and 21-33 gives broad authority to the City Manager to regulate and manage parking throughout the downtown area. Specifically, Section 21-33 Designation of Parking Zones and Controls (a) states the following:

*"The city manager may designate the areas where parking is permitted, may set time limits within such areas, and rates to be charged in any metered parking zones or lots, metered or unmetered, within the maximum limits set by the city council. The city manager may also determine in what areas meters are to be used or removed."*

It is notable that the City Manager can only set rates that are within “*the maximum limits set by city council.*” At this point, City Council has not set the maximum limits for parking rates.

Additionally, enclosed Section 21-37, Establishment of Fines states the following:

*“The city council may, from time to time, by resolution, set fines for violating any provisions contained in this article.”*

Taking these two code provisions into account, City Council will need to set maximum rate limits for downtown parking as well as set parking fines as addressed in #2 of the DMB’s recommendations.

**Past/Current Use of Parking Revenues** Over the years, parking revenues have assisted in paying for a wide variety of downtown improvements and enhancements such as:

- Purchase of land for Phase II Greenway Corridor that was recently completed;
- Partnering with the City, the DMB earmarked funds to pay for half the costs of the downtown bathroom improvement project;
- Wayfinding signs;
- Street and landscape improvements;
- Parking lot improvements and maintenance on parking meters; and
- Sidewalk snow removal.

In 2019, the DMB budgeted for new street parking meters that will accept credit cards or coinage, parking lot landscaping and irrigation and a new snow blower for downtown sidewalks. All these improvements will be paid for using parking revenues.

**Additional Parking Revenues Used to Expand Parking Inventory** If the City Council and City Manager were to raise parking fees and fines, there is the question as to what the additional revenues will be earmarked for. The DMB continues to be interested in building a parking structure in the downtown area and state the lion’s share of additional revenues will go towards funding a parking structure.

The proposed increase in parking meter fees and other rate hikes, although difficult to quantify, would substantially increase parking revenues for the DMB. The DMB believes that there is a critical need to increase parking inventory in the downtown area to better serve residents and visitors in the summer months. To this end, the DMB would like to pursue some sort of covered parking structure and in 2019 has budgeted \$150,000 for design and engineering costs for a parking structure at Lake and Division Streets. Additional parking revenues could be used to pay for debt service on a parking deck or could minimize the amount of debt service required. Although Emmet County has not formally committed to building a structure at this location, there appears to be some interest in pursuing the project in the near future. There is also potential for increasing the parking inventory at the Darling Lot or 200 East Lake Street.

**Need for Additional Parking** According to past parking studies there is a need to increase parking spaces in the downtown area. A Walker Parking Study and the Downtown Strategic Plan highlighted the need for additional parking spaces in the downtown area. According to national parking standards for downtown areas, an ideal parking ratio is between 2.75 and 3 parking spaces per 1,000 s.f. of commercial space. The current ratio in the downtown area is 1.8 spaces per 1,000 s.f. of commercial space. Overall, Walker Parking Consultants concluded there is a need for an additional 187 parking spaces in the downtown area.

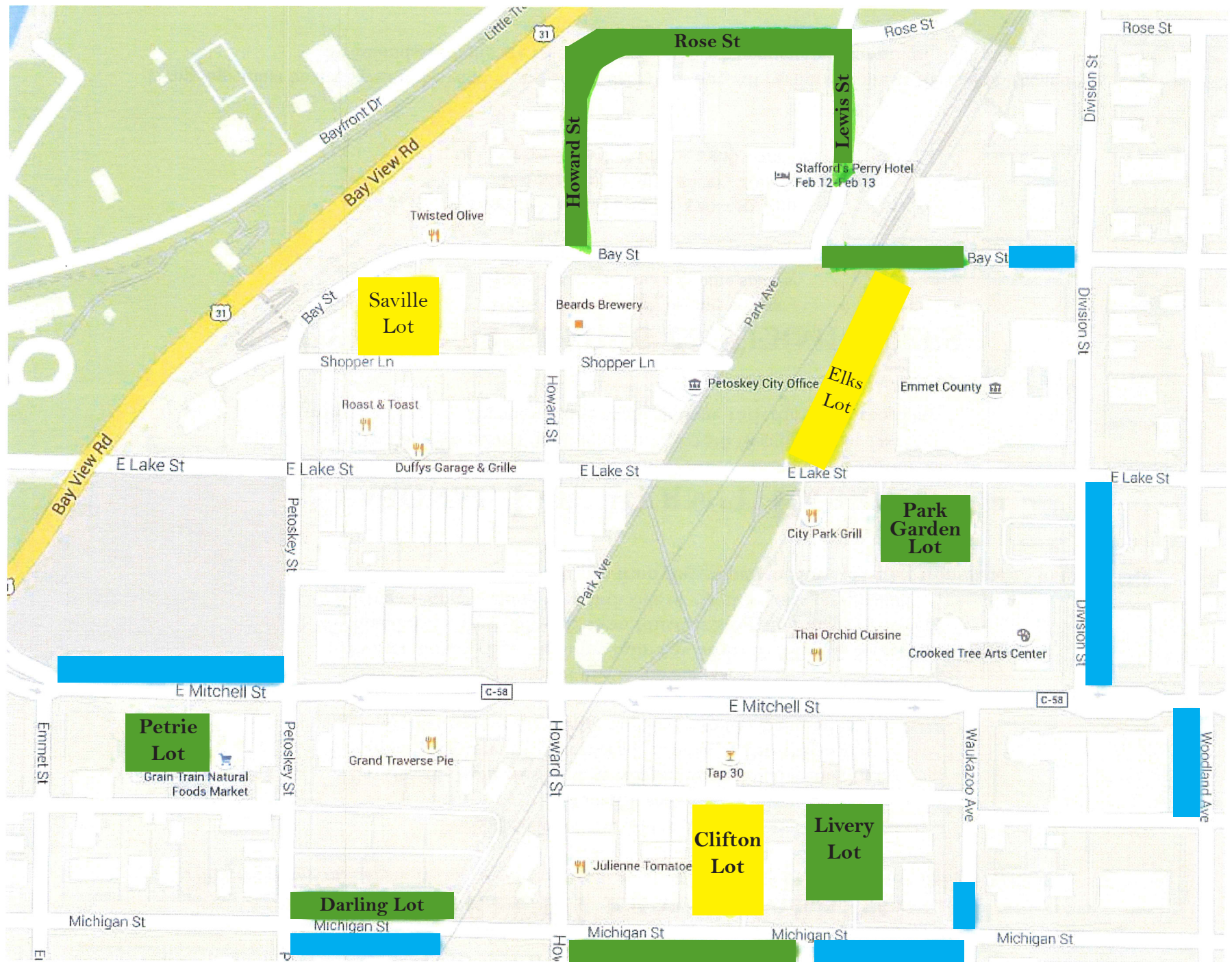


A covered parking structure could also spur additional investment in developing more residential units on second and third floors of downtown structures. Anecdotally, developers have stated that a lack of covered parking is one of the biggest impediments to increasing residential units in our downtown area.

Included in the agenda item is a two-page summary written by Board Chair Reg Smith titled "Managing Parking Benefits for All."

**Action** Staff is looking for input from City Council on the six aforementioned revisions to parking fees, fines and enforcement hours being recommended by the DMB.

As this is the first discussion on possibly increasing downtown parking fees, staff recommends no official action at this point. To allow for further public input and feedback on the fees, City staff would like to use our website to solicit further comments on the proposed changes. Further discussions will continue with possible approval by City Council/City Manager at the December 17 City Council meeting.



**Yellow Permit** - Valid in all permit areas  
PROPOSED - \$120

**Green Permit** - Valid in green & blue permit areas  
PROPOSED - \$60

**Blue Permit** - Valid in blue permit areas only  
PROPOSED - \$30

attended or not, otherwise than when obeying traffic signals or regulations, or temporarily for the purpose of, and while actually engaged in, loading or unloading passengers, or making necessary repairs.

*Parking lot.* Parking lot shall mean any space, not a street or a highway, designated for parking vehicles. It includes publicly or privately owned, leased or operated spaces.

*Parking meter.* Parking meter shall mean a mechanical device activated by U.S. government-issued coins or city-issued tokens that indicates the length of time during which a vehicle may be parked in a particular space and displays a violation signal, which shall constitute prima facie evidence that a violation occurred.

*Parking meter feeding.* Meter feeding shall mean depositing, or causing to be deposited, in a parking meter a coin or token or numbers of coins or tokens with the effect of causing the parking meter to indicate a permitted parking time beyond the parking meter's posted time limit.

*Residential property.* Residential property shall mean any real property within a residential district, as such districts are defined in the zoning ordinance for the city, including any lot, parcel or part of a lot on which there is actually existing a structure used primarily as a residence by one or more families or living units. It includes property used primarily as a residence, even though a home occupation exists on the premises. It does not include property in a residential district used primarily for commercial or other purposes such as a grocery store or church.

*Sign message.* Sign message shall mean the text displayed or a symbol depicted on any posted notice that designates or restricts the use of parking spaces, parking lots and rights-of-way.

*Vehicle.* Vehicle shall mean that which is defined in the Uniform Traffic Code for Cities, Townships and Villages of Michigan, as pub-

lished and amended from time to time by authority of the Michigan Department of State Police. (Ord. No. 677, § 1(21-31), 6-5-2000)

#### **Sec. 21-32. General supervision.**

All provisions contained in this article shall be under the general supervision and control of the city manager, or the city manager's designee. (Ord. No. 677, § 1(21-32), 6-5-2000)

#### **Sec. 21-33. Designation of parking zones and controls.**

(a) The city manager may designate the areas where parking is permitted, may set time limits within such areas, and rates to be charged in any metered parking zones or lots, metered or unmetered, within the maximum limits set by the city council. The city manager may also determine in what areas meters are to be used or removed.

(b) When the city manager designates parking areas, the city manager shall consider the general public health, welfare, and safety; the need for safely expediting through-traffic; the maximum use of available on-street and off-street parking areas; and the need to place parking meters in appropriate areas where the meters will serve to regulate and control the parking and also provide revenue for the operation and improvement of the parking system.

(c) The city manager is to recommend meter rates so as to encourage turnover of parking in those areas where rapid turnover is desired and likewise to encourage long-term parking, possibly at a lower rate, in those areas where long-term parking is desired and is to set rates for permits in city-owned lots, when such permits are deemed desirable to provide parking controls in such lots, and to help defray the cost of policing and maintaining such lots.

(d) The city manager may designate the areas where permit only parking is allowed. Areas designated as permit only parking shall be available to only those vehicles displaying a city-approved form of "permit parking only" display. (Ord. No. 677, § 1(21-33), 6-5-2000; Ord. No. 731, § 1, 10-15-2012)

#### **Sec. 21-34. Civil infraction violations.**

It shall be unlawful for any owner or operator of any vehicle to violate the following, which shall be, and hereby are, designated as civil infractions:

- (1) Disobeying any sign message;
- (2) Parking in any designated fire lane;
- (3) Obstructing any fire station entrance;
- (4) Blocking any building exit;
- (5) Blocking any fire escape;
- (6) Parking within 15 feet of any fire hydrant;
- (7) Failing to park within individually marked parking spaces;
- (8) Parking too far from any curb;
- (9) Obstructing traffic;
- (10) Parking in any designated loading zone;
- (11) Parking in an area designated as a bus stop or taxi stand;
- (12) Parking in, over or upon any sidewalk, curb lawn or parkway, unless otherwise permitted by the city;
- (13) Obstructing pedestrian traffic on sidewalk;
- (14) ~~Blocking any sidewalk;~~
- (15) Blocking any driveway;
- (16) Blocking any alley;
- (17) Blocking any crosswalk;
- (18) Parking within any intersection;
- (19) Parking within 15 feet of any intersection that is not exclusively controlled by electronic signals;
- (20) Parking within 30 feet of any intersection that is controlled by electronic signals;
- (21) Obstructing any railroad track;
- (22) Double parking;
- (23) Parking with left-side wheels to curb on any two-way street;
- (24) Parking on, driving over, or straddling any curb;
- (25) Parking or placing a vehicle in designated handicap spaces without displaying proper authorization to do so;
- (26) Parking in any space not designated for parking;
- (27) Parking in excess of three hours in residential district in front of, beside, or behind residential property, upon respective residential property owner's complaint, unless such time limit is modified by the city;
- (28) Parking on private property without respective private property owner's consent;
- (29) Parking or displaying a vehicle for the principal purpose of advertising it for sale within any street, alley or right-of-way, including sidewalks, and curb lawns and parkways;
- (30) Repairing any vehicle upon any street, alley or right-of-way, including sidewalks, curb lawns and parkways;
- (31) Selling merchandise from any vehicle upon a street, alley or right-of-way, including sidewalks, curb lawns and parkways;

- (32) Storing, parking or placing any vehicle in excess of 48 consecutive hours, subject to, however, the prohibition of parking or placement of certain vehicles and devices in excess of three hours;
  - (33) Connecting, or permitting the connection of, any motor vehicle, vehicle or device to water, sewer or electric utilities, on-going habitation in any motor vehicle, vehicle or device in any alley, street or right-of-way, including sidewalks, curb lawns and parkways;
  - (34) Parking in any nonmetered, city-owned or city-operated parking lot without a required permit;
  - (35) Parking in any metered space without depositing required coins or tokens in the parking meter;
  - (36) Parking in excess of the maximum time limit in metered spaces;
  - (37) Meter feeding;
  - (38) Parking in excess of any posted time limit in nonmetered spaces;
  - (39) Failing to pay a civil fine for any parking meter violation up to 48 hours;
  - (40) Failing to pay a civil fine for any parking meter violation up to 72 hours;
  - (41) Upon a person's failure to pay a civil fine for any civil infraction violation committed as proscribed herein, within 72 hours, and having received notice of such violation, said person shall be responsible for:
    - (a) An additional civil fine upon receipt of a second notice of such violation.
    - (b) An additional civil fine upon receipt of a third notice of such violation.
    - (c) An additional civil fine upon receipt of a fourth notice of such violation.
- (Ord. No. 677, § 1(21-34), 6-5-2000)

#### **Sec. 21-35. Notice of violation.**

The issuance of a traffic ticket or notice of violation shall be deemed an allegation of a parking violation. Such traffic ticket or notice of violation shall indicate the time limit in which the person to whom the same was issued must respond. It shall also indicate the address of where the person shall respond, the hours during which the person shall respond, the amount of the penalty scheduled for the offense for which the ticket was issued and advise that a warrant for the arrest of the person to whom the ticket was issued will be sought if such person fails to respond within the time limit.  
(Ord. No. 677, § 1(21-35), 6-5-2000)

#### **Sec. 21-36. Evidentiary presumption.**

In any proceeding for a violation of this division relating to the standing or parking of a vehicle, proof that the particular vehicle described in the traffic ticket or notice of violation was parked in violation of said division, together with proof that the person, corporation, partnership or company named in the traffic ticket or notice of violation was, at the time of such parking, the registered owner of such vehicle, shall constitute in evidence a presumption that the registered owner of such vehicle was the person, corporation, partnership or company who parked or placed such vehicle at the point where, and for the time during which, such violation occurred.  
(Ord. No. 677, § 1(21-36), 6-5-2000)

#### **Sec. 21-37. Establishment of fines.**

The city council may, from time to time, by resolution, set fines for violating any provision contained in this article.  
(Ord. No. 677, § 1(21-37), 6-5-2000)

#### **Sec. 21-38. Parking, etc., in excess of three hours.**

(1) *Prohibited vehicles and devices.* It shall be unlawful for any person to park or otherwise place the following vehicles and devices in or



## Managed Parking Benefits all

The Downtown Management Board is working to update our plan for managing public parking in the central business district in Petoskey. We welcome the opportunity to communicate our purpose, vision and goals for this effort.

Our mission is to provide convenient, affordable, parking for customers in the core of the central business district; and parking for employees, owners and residents in the periphery of the central business district. Our job is challenging due to the deficit of 100 to 200 parking spaces available to meet current demand at various times of the year. Petoskey is thriving and, thus, the demand for public parking is growing.

Our vision has been consistent for decades and that vision is to grow the inventory of available parking in the Central Business District. The DMB realizes that this growth will only happen through collaboration with public and private entities. Development at 200 E. Lake Street that includes a public parking component is a critical piece of this vision.

Managed parking provides more than simply a place to park one's car in front of a favorite store in the middle of a summer afternoon. Over the years parking revenues have helped pay for downtown enhancements such as the Greenway rail corridor right of way purchase, way finding signage, streetscape and landscaping improvements, and most recently proposed restroom facility upgrades in Pennsylvania Park. Parking revenues also cover ongoing costs for sidewalk snow removal in downtown, parking lot snow removal, maintenance and landscaping, and of course repairs and maintenance of parking meters

So what may seem to some like a yearly windfall in revenue, is also money used to make a positive impact on the downtown experience for all. Because meter rates and fines have not changed in at least 15 years, the revenue collected, although it covers current expenses, is not accumulating at a rate fast enough to grow a reserve toward the funding of future parking inventory. The costs of repairs, maintenance and new construction have simply outpaced any growth in revenue.

The reality of managing our parking inventory, where supply is short is not a perfect science. In fact "success", in many respects will be that nobody is completely satisfied with our policies and practices because everybody must, at times, yield to another interest. With our mission in mind the board sets the highest rates for the most convenient parking areas on downtown streets and parking lots surrounded by retail establishments. This practice is to facilitate "turnover" of the most convenient parking spaces. Establishing this three hour maximum is critical for maintaining a viable downtown shopping destination.

Compliance is encouraged by setting meter rates that consumers will pay as part of their downtown experience, while avoiding a more costly violation for not paying a meter or occupying a space for more than three hours. Success has been described by many experts as an 85% occupied inventory during business hours, or one or two open spaces in a block. The Downtown Management Board has long favored a visitor friendly approach which is to issue a no charge courtesy reminder to vehicles upon the first violation. In fact over one half of our citations are courtesy notices. Conversely, vehicles that receive frequent violations are classified as "chronic" and are subject to greater fines and penalties. Available parking further from the core of downtown is metered at lower rates and allows for "all day"

parking for employees and owners of downtown businesses. It is noteworthy that parking meter rates and fines in Petoskey have not changed in over 15 years. Late fees and collection penalties have increased as a means of discouraging chronic violations.

The growing trend for downtown apartments and condominiums in Petoskey has created even more demand for parking. City of Petoskey officials have embraced a **Redevelopment Ready** approach for 200 East Lake and the large Michigan Street Darling lot. We believe that some form of covered and/or decked parking will happen at either of these locations or in cooperation with Emmet County at the corner of Division and Lake Streets in the next few years. This could provide a number of sheltered spaces to best meet this demand for downtown residents.

With all of the above factors taken into account, the DMB is initializing an increase in meter rates that would take effect in the spring of 2019. The Board will also expand meter enforcement hours to 8:00 PM in the Central Business District so that parking will turnover for businesses open at night. Finally, updated meters and parking stations that accept credit cards will be purchased providing a more convenient form for all users to pay for managed parking.

The Downtown Management Board is made up of individuals who earn their living in *retail, restaurant, hospitality and professional offices* in Downtown Petoskey. The DMB realizes that increasing fees and fines is not a popular decision, but this strategy is required in order to fund the collective interest in maintaining our downtown as one of the most vibrant “up north” destinations in our state.

Sincerely,

S. Reginald Smith, DMB Chairmen



**BOARD:** City Council

**MEETING DATE:** December 17, 2018

**PREPARED:** December 11, 2018

**AGENDA SUBJECT:** Electric Rate Resolution

**RECOMMENDATION:** That the City Council adopt the enclosed proposed resolution

---

**Rate Study Recommendations** At the December 3 City Council meeting, Dawn Lund from Utility Financial Solutions (UFS) presented a summary of the electric cost of service study completed for the City of Petoskey. UFS is recommending that the City:

1. Adjust rates charged to different classes of users to more closely align customer classes with the City's actual cost of service.
2. Annually increase electric rates between 2019 and 2021 – the first such increases since 2014 – to ensure that the Electric Division has adequate revenues to operate, maintain and replace infrastructure throughout the City's distribution system.

**Summary** The City Council is being asked to consider a resolution that will modify the City's electric rate structure to better align rates for different classes of users with costs of providing electric service rates to all electric customer rate classes. The recommendation from Utility Financial Solution (UFS) calls for an annual rate increase for each of the next three years.

As proposed in this resolution, during the first year, the residential rate class would see an increase of 3.57% and the commercial class would see an increase of 2.3% in annual revenues. Rate changes are proposed for both the monthly ready to serve charge and commodity charge. This rate schedule will continue to more closely align customer rates with the City's cost of providing power and builds on the changes made following the previous rate study when seasonal rates were implemented.

In the subsequent two years, on an annual basis, the proposed resolution would authorize adjustments to the monthly ready to serve charge and per kWh use charge that will result in total annual increases in revenues from all customer classes of 1.0%.

With both the ready to serve charge (flat rate) and commodity charges (kWh Usage) changing, the effect on individual customers will vary based on usage. An average user is considered to be in the area 600 kWh's per month. Most residential customers will see an increase of less than \$2.00 per month on their electric bill in 2019 and less than \$1.00 per month in 2020 and 2021.



### Residential Electric Rate Increase

	2019			2020			2021		
Usage	Monthly	Annually	Percent	Monthly	Annually	Percent	Monthly	Annually	Percent
250	\$ 1.65	\$ 19.80	5.39%	\$ 1.21	\$ 14.52	3.74%	\$ 1.21	\$ 14.52	3.62%
500	\$ 1.81	\$ 21.72	3.38%	\$ 0.92	\$ 11.04	1.66%	\$ 0.92	\$ 11.04	1.65%
750	\$ 2.00	\$ 24.00	2.57%	\$ 0.62	\$ 7.44	0.80%	\$ 0.64	\$ 7.68	0.81%
1000	\$ 2.11	\$ 25.33	2.14%	\$ 0.33	\$ 3.96	0.33%	\$ 0.35	\$ 4.20	0.51%

**Action** Enclosed is a proposed resolution establishing electric utility rates for the three years of 2019 through 2021 for Council's consideration.

at  
Enclosures



# City of Petoskey

## Resolution

City Council - City of Petoskey  
a Michigan Municipal Corporation  
December 17, 2018

WHEREAS, Chapter 22 of the City of Petoskey Code of Ordinances, § 22-83, provides that rates and charges for electric service in the City shall be established and changed by the City Council from time to time; and

WHEREAS, at its meeting of December 3, 2018, the City Council for the City of Petoskey was presented a summary of the electric cost of service to the City from Utility Financial Solutions (UFS) and received recommendations to adjust electric utility rates annually; and

WHEREAS, the last rate change for electrical service in the City of Petoskey was established by resolution of the City Council on April 10, 2010 providing for rate increases annually through 2014; and

WHEREAS, based on the summary presented to the City, the City now wishes to adopt the recommendations of UFS for electric rates:

NOW, THEREFORE, BE IT RESOLVED that the City Council for the City of Petoskey does and hereby approves the following resolution:

1. Electric Utility Rates. The rates for electric utility service in the City of Petoskey shall be as follows beginning with the January utility bill of each year:

**CITY OF PETOSKEY**  
Electric Utility Rate Schedule

Electric Rate Class	Current	2019	2020	2021
<b>Residential (RE) &amp; (REM)</b>				
Customer Charge - monthly	\$ 7.95	\$ 9.45	\$ 10.95	\$ 12.45
Energy Charge/ kWh:				
Winter Charge	\$ 0.08400	\$ 0.08461	\$ 0.08344	\$ 0.08229
Summer Charge	\$ 0.11250	\$ 0.11311	\$ 0.11194	\$ 0.11079
<b>Commercial (Com)</b>				
Customer Charge - monthly	\$ 17.00	\$ 19.00	\$ 21.00	\$ 23.00
Energy Charge/ kWh:				
Winter Charge	\$ 0.10250	\$ 0.10427	\$ 0.10478	\$ 0.10532
Summer Charge	\$ 0.11900	\$ 0.12077	\$ 0.12077	\$ 0.12077
<b>School/City (Sch)</b>				
Customer Charge - monthly	\$ 15.50	\$ 17.50	\$ 19.50	\$ 21.50
Energy Charge/ kWh:				
Winter Charge	\$ 0.10080	\$ 0.10290	\$ 0.10448	\$ 0.10610
Summer Charge	\$ 0.10880	\$ 0.11090	\$ 0.11090	\$ 0.11090

**Medium Secondary Power (MSPR)**

Customer Charge - monthly	\$ 65.00	\$ 70.00	\$ 75.00	\$ 80.00
Energy Charge/ kWh:	\$ 0.05550	\$ 0.05664	\$ 0.05685	\$ 0.05706
Demand Charge/kW:				
Winter Demand	\$ 13.20	\$ 13.50	\$ 13.80	\$ 14.10
Summer Demand	\$ 14.30	\$ 14.60	\$ 14.90	\$ 15.20

**Large Secondary Power (LSPR)**

Customer Charge - monthly	\$ 160.00	\$ 170.00	\$ 180.00	\$ 190.00
Energy Charge/ kWh:	\$ 0.05450	\$ 0.05466	\$ 0.05435	\$ 0.05404
Demand Charge/kW:				
Winter Demand	\$ 13.20	\$ 13.50	\$ 13.80	\$ 14.10
Summer Demand	\$ 14.35	\$ 15.10	\$ 15.40	\$ 15.70

**Large Primary Power (LPPR)**

Customer Charge - monthly	\$ 120.00	\$ 140.00	\$ 160.00	\$ 180.00
Energy Charge/ kWh:	\$ 0.05720	\$ 0.05657	\$ 0.05584	\$ 0.05511
Demand Charge/kW:				
Winter Demand	\$ 13.10	\$ 13.40	\$ 13.70	\$ 14.00
Summer Demand	\$ 14.10	\$ 15.35	\$ 15.65	\$ 15.95

**Yard Lighting (YL/OYL)**

Customer Charge - monthly				
175-250 Watt (YL)	\$ 7.08	\$ 7.24	\$ 7.32	\$ 7.39
400 Watt (YL)	\$ 11.23	\$ 11.49	\$ 11.60	\$ 11.72
Ornamental (OYL)	\$ 12.20	\$ 12.48	\$ 12.61	\$ 12.73
Ornamental - BV	\$ 12.20	\$ 12.48	\$ 12.61	\$ 12.73

**City of Petoskey**  
**Rate Design**

**11/29/2018**

**Utility Financial Solutions, LLC**  
**185 Sun Meadow Court**  
**Holland, MI 49424**  
**608 230 5849**

**Email: [mjohnson@utilityfinancialsolutions.com](mailto:mjohnson@utilityfinancialsolutions.com)**

Submitted Respectfully by:  
Mike Johnson  
Manager, Utility Financial Solutions



**City of Petoskey**  
**Rate Design**  
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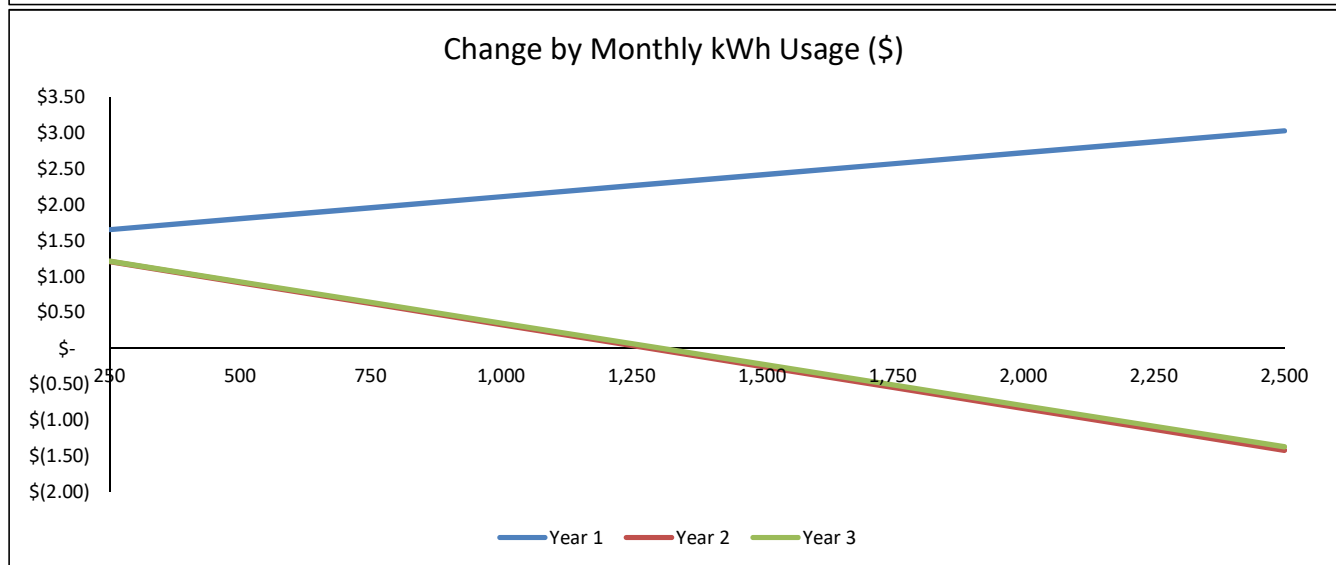
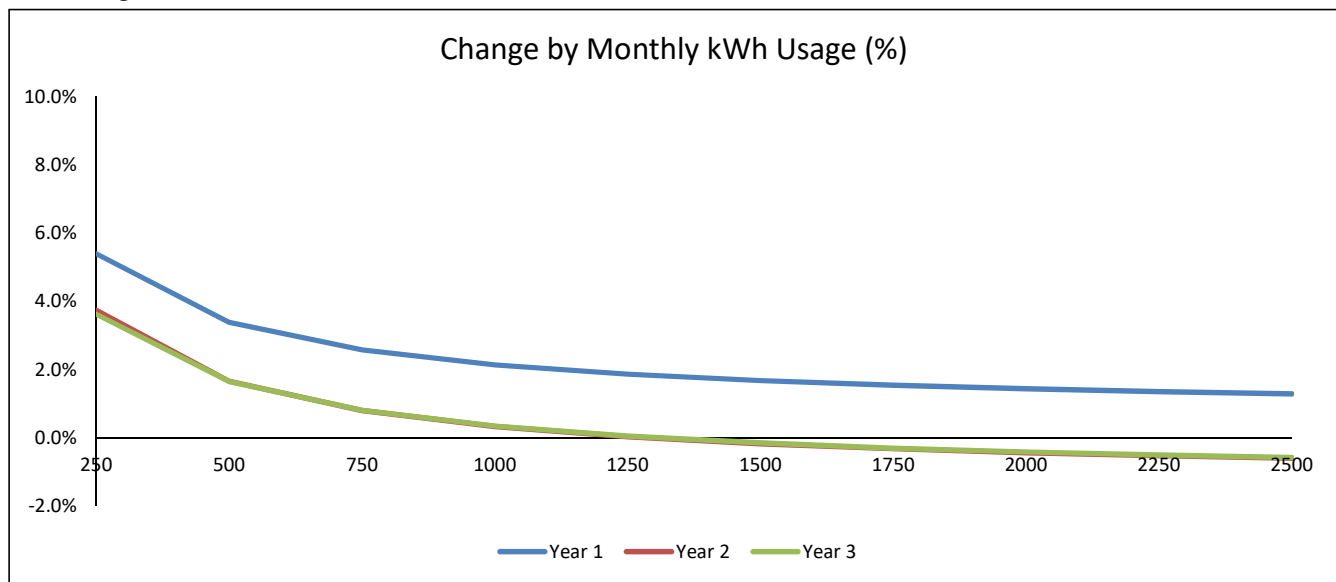
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City of Petoskey  
Rate Design  
Rate Design Summary

Customer Class	Projected Revenues Under Current Rates	Projected Revenues Under Proposed Rates Year 1	Projected Revenues Under Proposed Rates Year 2	Projected Revenues Under Proposed Rates Year 3	Projected Percentage Change Year 1	Projected Percentage Change Year 2	Projected Percentage Change Year 3
Residential (RE)	\$ 2,690,312	\$ 2,786,342	\$ 2,838,030	\$ 2,890,201	3.57%	1.86%	1.84%
Residential (REM)	894	952	999	1,045	6.48%	4.87%	4.66%
Commercial (COM)	2,979,463	3,047,991	3,078,471	3,109,256	2.30%	1.00%	1.00%
School (SCH)	473,634	485,475	492,757	500,148	2.50%	1.50%	1.50%
Traffic Lights (606, 801)	7,309	7,331	7,331	7,331	0.30%	0.00%	0.00%
Yard Lighting (YL/OYL)	12,291	12,574	12,700	12,827	2.30%	1.00%	1.00%
Street Lighting	46,200	48,187	49,391	50,626	4.30%	2.50%	2.50%
Medium Secondary Power (MSPR)	822,770	841,693	850,110	858,611	2.30%	1.00%	1.00%
Large Secondary Power (LSPR)	853,915	866,724	871,058	875,413	1.50%	0.50%	0.50%
Large Primary Power (LPPR)	2,236,486	2,258,851	2,258,851	2,258,851	1.00%	0.00%	0.00%
Totals	\$ 10,123,274	\$ 10,356,120	\$ 10,459,697	\$ 10,564,308	2.30%	1.00%	1.00%

**City of Petoskey**  
**Rate Design**  
*Projected Residential (RE) Rates*

Rates	Current	Year 1	Year 2	Year 3
Customer Charge:				
All Customers	\$ 7.95	\$ 9.45	\$ 10.95	\$ 12.45
Energy Charge:				
Winter Energy	\$ 0.08400	\$ 0.08461	\$ 0.08344	\$ 0.08229
Summer Energy	\$ 0.11250	\$ 0.11311	\$ 0.11194	\$ 0.11079
Power Cost Adjustment:				
All Energy	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)
Revenue from Rate	\$ 2,690,312	\$ 2,786,342	\$ 2,838,030	\$ 2,890,201
Change from Previous	-	3.6%	1.9%	1.8%



**City of Petoskey**  
**Rate Design**  
*Projected Residential (RE) Rates*

Annual Bill by Usage					
Energy		Current \$	Year 1 \$	Year 2 \$	Year 3 \$
250	\$	368	\$ 388	\$ 402	\$ 417
500	\$	640	\$ 662	\$ 673	\$ 684
750	\$	913	\$ 936	\$ 944	\$ 951
1000	\$	1,185	\$ 1,210	\$ 1,214	\$ 1,218
1250	\$	1,457	\$ 1,485	\$ 1,485	\$ 1,486
1500	\$	1,730	\$ 1,759	\$ 1,756	\$ 1,753
1750	\$	2,002	\$ 2,033	\$ 2,026	\$ 2,020
2000	\$	2,275	\$ 2,307	\$ 2,297	\$ 2,288
2250	\$	2,547	\$ 2,581	\$ 2,568	\$ 2,555
2500	\$	2,819	\$ 2,856	\$ 2,839	\$ 2,822

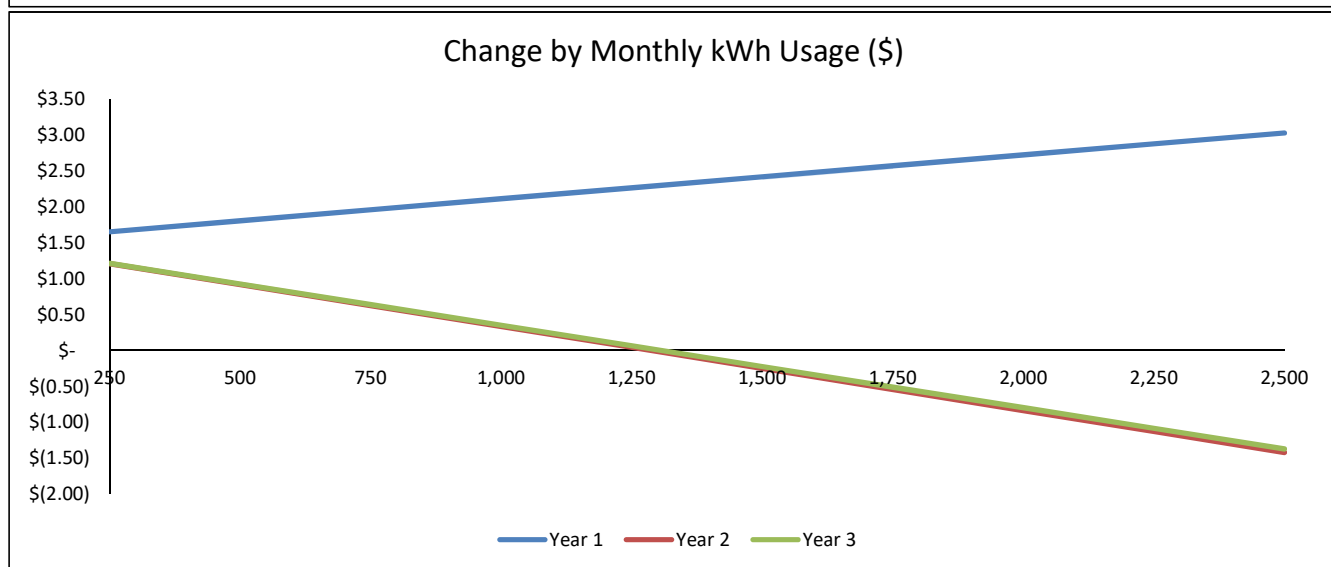
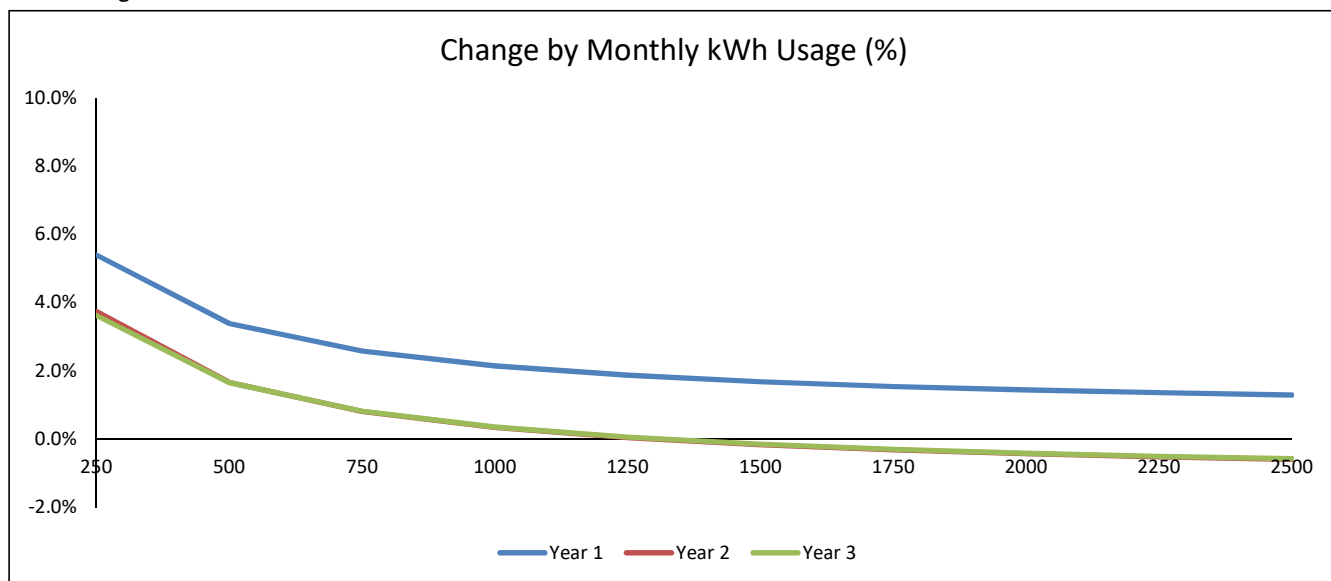
Change by Monthly kWh Usage (%)				
Energy	Summer Energy	Year 1	Year 2	Year 3
250	250	5.4%	3.7%	3.6%
500	500	3.4%	1.7%	1.7%
750	750	2.6%	0.8%	0.8%
1000	1,000	2.1%	0.3%	0.3%
1250	1,250	1.9%	0.0%	0.1%
1500	1,500	1.7%	-0.2%	-0.2%
1750	1,750	1.5%	-0.3%	-0.3%
2000	2,000	1.4%	-0.4%	-0.4%
2250	2,250	1.4%	-0.5%	-0.5%
2500	2,500	1.3%	-0.6%	-0.6%

Change by Monthly kWh Usage (\$)				
Energy	Summer Energy	Year 1	Year 2	Year 3
250	250	\$ 1.65	\$ 1.21	\$ 1.21
500	500	\$ 1.81	\$ 0.92	\$ 0.93
750	750	\$ 1.96	\$ 0.62	\$ 0.64
1,000	1,000	\$ 2.11	\$ 0.33	\$ 0.35
1,250	1,250	\$ 2.26	\$ 0.04	\$ 0.06
1,500	1,500	\$ 2.42	\$ (0.25)	\$ (0.22)
1,750	1,750	\$ 2.57	\$ (0.54)	\$ (0.51)
2,000	2,000	\$ 2.72	\$ (0.84)	\$ (0.80)
2,250	2,250	\$ 2.87	\$ (1.13)	\$ (1.08)
2,500	2,500	\$ 3.03	\$ (1.42)	\$ (1.37)



**City of Petoskey**  
**Rate Design**  
*Projected Residential (REM) Rates*

Rates	Current	Year 1	Year 2	Year 3
Customer Charge:				
All Customers	\$ 7.95	\$ 9.45	\$ 10.95	\$ 12.45
Energy Charge:				
Winter Energy	\$ 0.08400	\$ 0.08461	\$ 0.08344	\$ 0.08229
Summer Energy	\$ 0.11250	\$ 0.11311	\$ 0.11194	\$ 0.11079
Power Cost Adjustment:				
All Energy	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)
Revenue from Rate	\$ 894	\$ 952	\$ 999	\$ 1,045
Change from Previous	-	6.5%	4.9%	4.7%



**City of Petoskey**  
**Rate Design**  
*Projected Residential (REM) Rates*

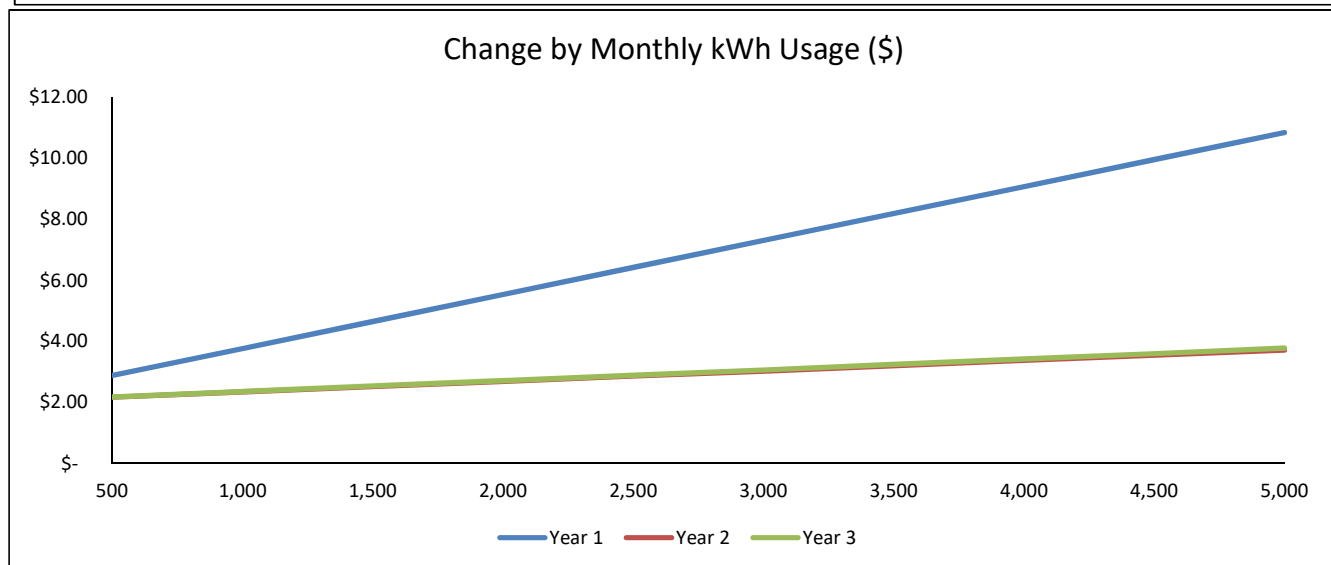
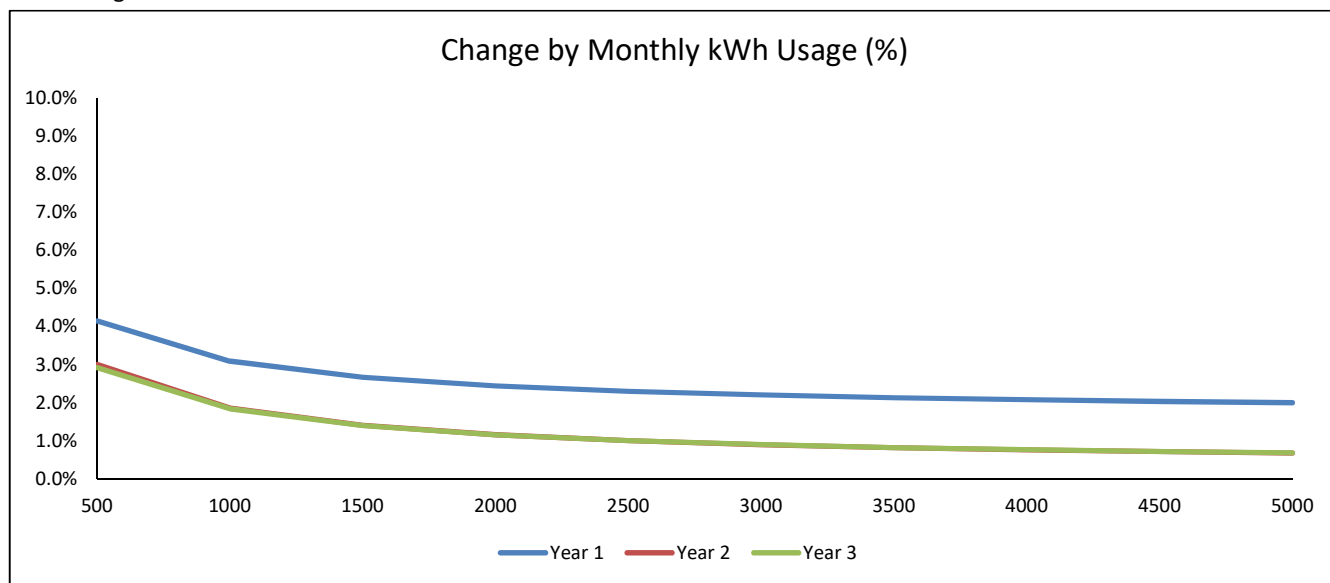
Annual Bill by Usage									
Energy		Current \$		Year 1 \$		Year 2 \$		Year 3 \$	
	250	\$	368	\$	388	\$	402	\$	417
	500	\$	640	\$	662	\$	673	\$	684
	750	\$	913	\$	936	\$	944	\$	951
	1000	\$	1,185	\$	1,210	\$	1,214	\$	1,218
	1250	\$	1,457	\$	1,485	\$	1,485	\$	1,486
	1500	\$	1,730	\$	1,759	\$	1,756	\$	1,753
	1750	\$	2,002	\$	2,033	\$	2,026	\$	2,020
	2000	\$	2,275	\$	2,307	\$	2,297	\$	2,288
	2250	\$	2,547	\$	2,581	\$	2,568	\$	2,555
	2500	\$	2,819	\$	2,856	\$	2,839	\$	2,822

Change by Monthly kWh Usage (%)					
Energy		Summer Energy	Year 1	Year 2	Year 3
	250	250	5.4%	3.7%	3.6%
	500	500	3.4%	1.7%	1.7%
	750	750	2.6%	0.8%	0.8%
	1000	1,000	2.1%	0.3%	0.3%
	1250	1,250	1.9%	0.0%	0.1%
	1500	1,500	1.7%	-0.2%	-0.2%
	1750	1,750	1.5%	-0.3%	-0.3%
	2000	2,000	1.4%	-0.4%	-0.4%
	2250	2,250	1.4%	-0.5%	-0.5%
	2500	2,500	1.3%	-0.6%	-0.6%

Change by Monthly kWh Usage (\$)					
Energy		Summer Energy	Year 1	Year 2	Year 3
	250	250	\$ 1.65	\$ 1.21	\$ 1.21
	500	500	\$ 1.81	\$ 0.92	\$ 0.93
	750	750	\$ 1.96	\$ 0.62	\$ 0.64
	1,000	1,000	\$ 2.11	\$ 0.33	\$ 0.35
	1,250	1,250	\$ 2.26	\$ 0.04	\$ 0.06
	1,500	1,500	\$ 2.42	\$ (0.25)	\$ (0.22)
	1,750	1,750	\$ 2.57	\$ (0.54)	\$ (0.51)
	2,000	2,000	\$ 2.72	\$ (0.84)	\$ (0.80)
	2,250	2,250	\$ 2.87	\$ (1.13)	\$ (1.08)
	2,500	2,500	\$ 3.03	\$ (1.42)	\$ (1.37)

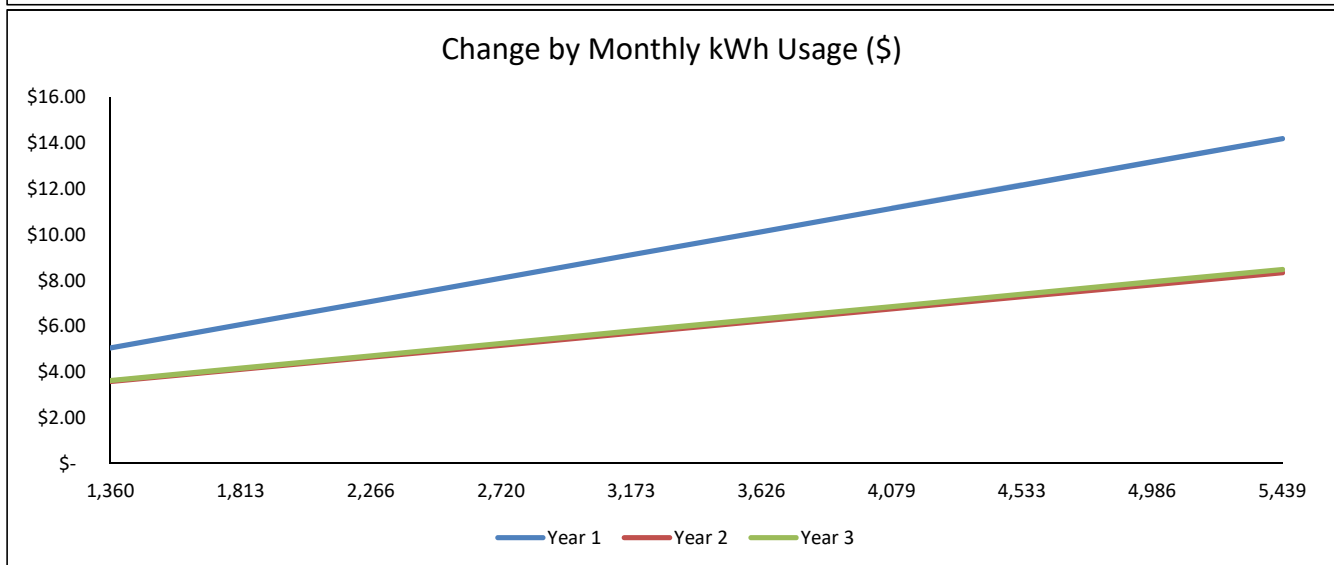
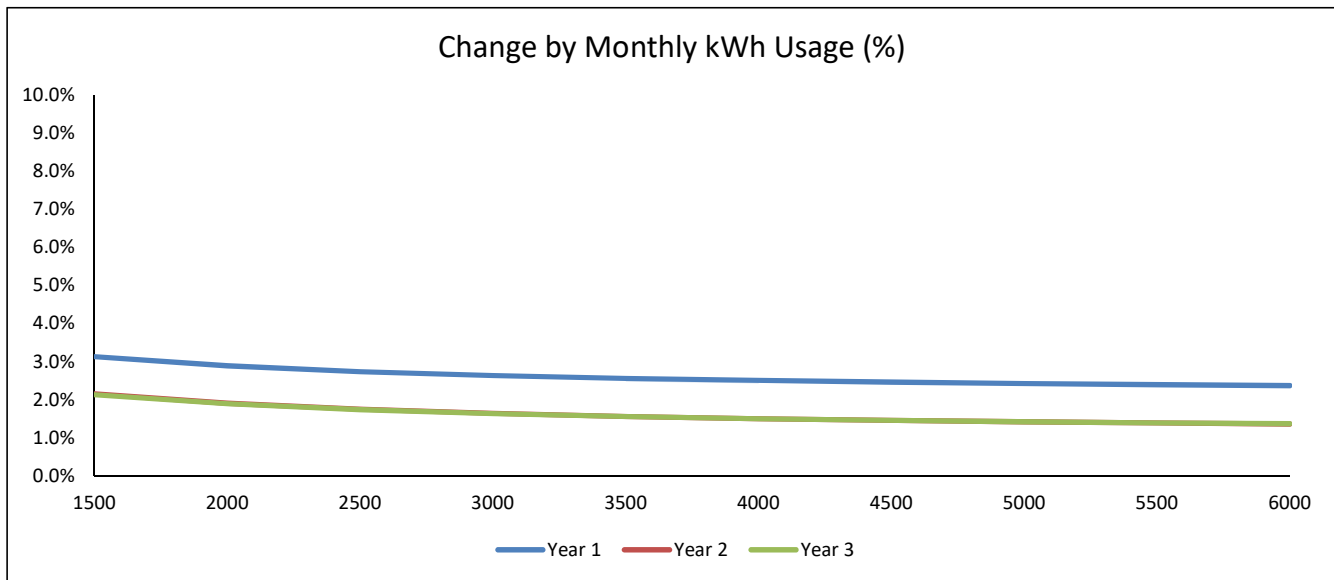
**City of Petoskey**  
**Rate Design**  
*Projected Commercial (COM) Rates*

Rates	Current	Year 1	Year 2	Year 3
Customer Charge:				
All Customers	\$ 17.00	\$ 19.00	\$ 21.00	\$ 23.00
Energy Charge:				
Winter Energy	\$ 0.10250	\$ 0.10427	\$ 0.10478	\$ 0.10532
Summer Energy	\$ 0.11900	\$ 0.12077	\$ 0.12077	\$ 0.12077
Power Cost Adjustment:				
All Energy	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)
Revenue from Rate	\$ 2,979,463	\$ 3,047,991	\$ 3,078,471	\$ 3,109,256
Change from Previous	-	2.3%	1.0%	1.0%



**City of Petoskey**  
**Rate Design**  
*Projected School (SCH) Rates*

Rates	Current	Year 1	Year 2	Year 3
Customer Charge:				
All Customers	\$ 15.50	\$ 17.50	\$ 19.50	\$ 21.50
Energy Charge:				
Winter Energy	\$ 0.10080	\$ 0.10290	\$ 0.10448	\$ 0.10610
Summer Energy	\$ 0.10880	\$ 0.11090	\$ 0.11090	\$ 0.11090
Power Cost Adjustment:				
All Energy	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)
Revenue from Rate	\$ 473,634	\$ 485,475	\$ 492,757	\$ 500,148
Change from Previous	-	2.5%	1.5%	1.5%



## City of Petoskey

### Rate Design

#### Projected Traffic Lights (606, 801) Rates

Rates	Current		Year 1		Year 2		Year 3	
Customer Charge:								
Solar Powered	\$	-	\$	-	\$	-	\$	-
Other	\$	15.50	\$	17.50	\$	19.50	\$	21.50
All Customers	\$	15.50	\$	17.50	\$	19.50	\$	21.50
Energy Charge:								
All Energy	\$	0.10480	\$	0.09998	\$	0.09472	\$	0.08947
Power Cost Adjustment:								
All Energy	\$	-	\$	-	\$	-	\$	-
Revenue from Rate	\$	7,309	\$	7,331	\$	7,331	\$	7,331
Change from Previous		-		0.3%		0.0%		0.0%

## City of Petoskey

### Rate Design

#### Projected Yard Lighting (YL/OYL) Rates

Rates	Current	Year 1	Year 2	Year 3
Monthly Facilities Charge:				
175-250 Watt lamps (Schedule YL)	\$ 7.08	\$ 7.24	\$ 7.32	\$ 7.39
400 Watt lamps (Schedule YL)	\$ 11.23	\$ 11.49	\$ 11.60	\$ 11.72
Fixture (Schedule OYL)	\$ 12.20	\$ 12.48	\$ 12.61	\$ 12.73
Bay View	\$ 12.20	\$ 12.48	\$ 12.61	\$ 12.73
Revenue from Rate	\$ 12,291	\$ 12,574	\$ 12,700	\$ 12,827
Change from Previous	-	2.3%	1.0%	1.0%



**City of Petoskey**  
**Rate Design**  
*Projected Street Lighting Rates*

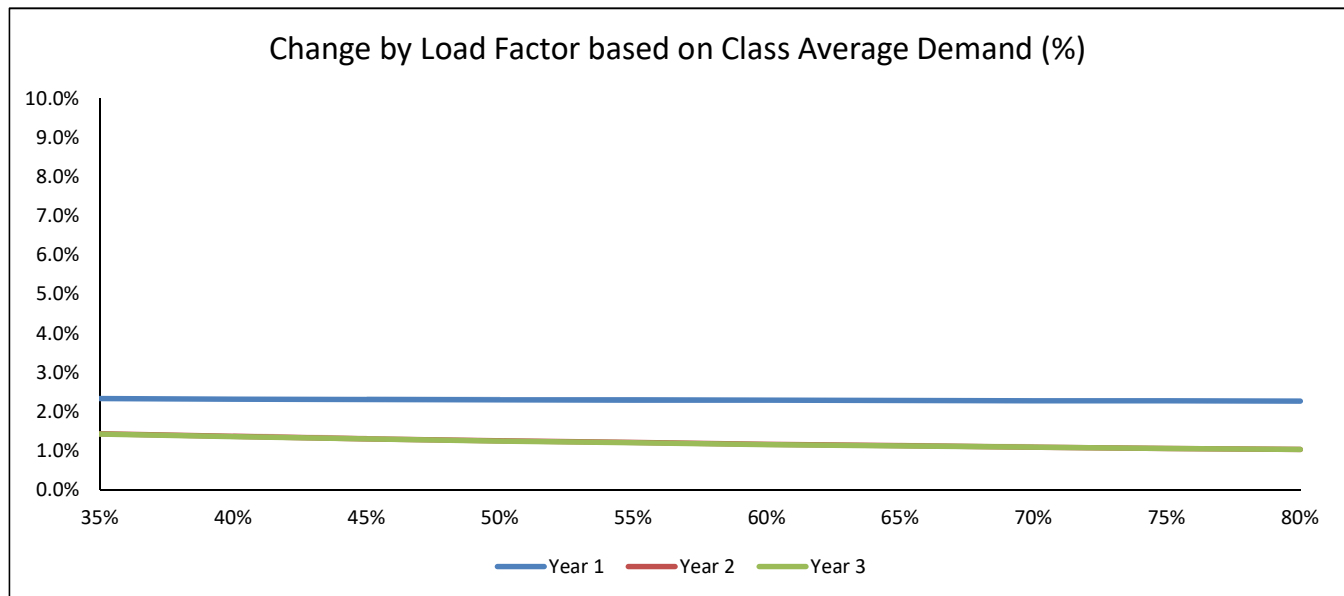
Rates	Current	Year 1	Year 2	Year 3
Monthly Facilities Charge:				
All Customers	\$ 3,850.00	\$ 4,015.55	\$ 4,115.94	\$ 4,218.84
Revenue from Rate	\$ 46,200	\$ 48,187	\$ 49,391	\$ 50,626
Change from Previous	-	4.3%	2.5%	2.5%

## City of Petoskey

### Rate Design

#### Projected Medium Secondary Power (MSPR) Rates

Rates	Current	Year 1	Year 2	Year 3
Monthly Facilities Charge:				
All Customers	\$ 65.00	\$ 70.00	\$ 75.00	\$ 80.00
Energy Charge:				
All Energy	\$ 0.05550	\$ 0.05664	\$ 0.05685	\$ 0.05706
Demand Charge:				
Winter Demand	\$ 13.20	\$ 13.50	\$ 13.80	\$ 14.10
Summer Demand	\$ 14.30	\$ 14.60	\$ 14.90	\$ 15.20
Power Cost Adjustment:				
All Energy	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)
Revenue from Rate	\$ 822,770	\$ 841,693	\$ 850,110	\$ 858,611
Change from Previous	\$ -	2.3%	1.0%	1.0%

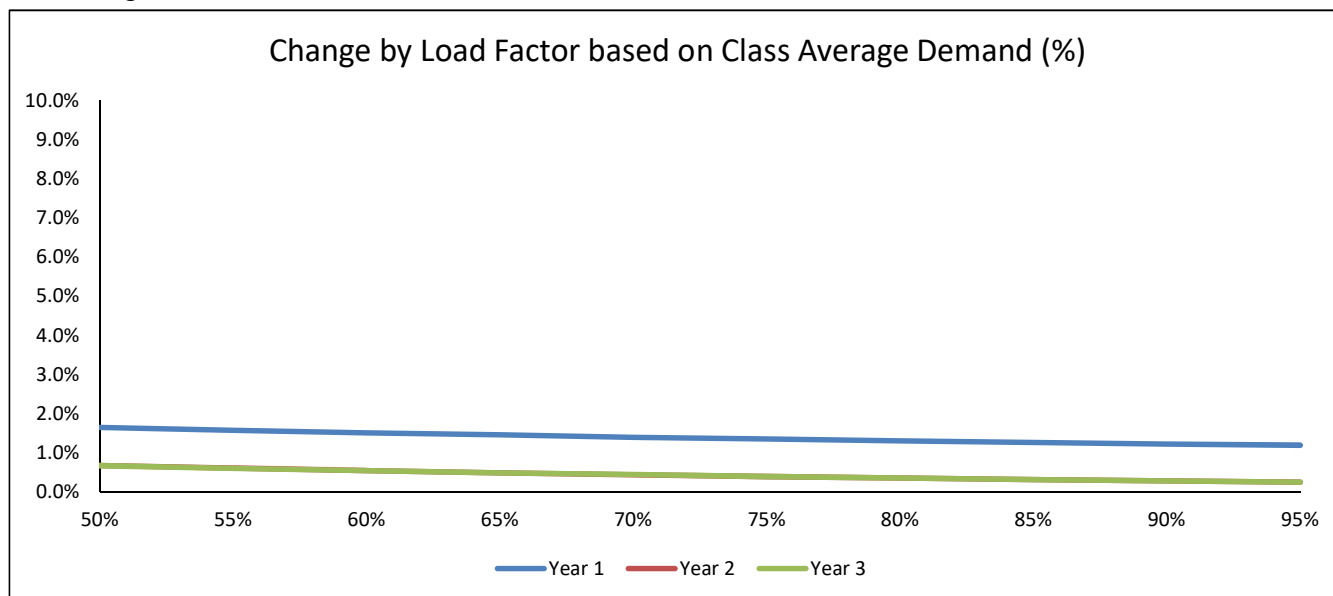


## City of Petoskey

### Rate Design

#### Projected Large Secondary Power (LSPR) Rates

Rates	Current	Year 1	Year 2	Year 3
Monthly Facilities Charge:				
All Customers	\$ 160.00	\$ 170.00	\$ 180.00	\$ 190.00
Energy Charge:				
All Energy	\$ 0.05450	\$ 0.05466	\$ 0.05435	\$ 0.05404
Demand Charge:				
Winter Demand	\$ 13.20	\$ 13.50	\$ 13.80	\$ 14.10
Summer Demand	\$ 14.35	\$ 15.10	\$ 15.40	\$ 15.70
Power Cost Adjustment:				
All Energy	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)
Revenue from Rate	\$ 853,915	\$ 866,724	\$ 871,058	\$ 875,413
Change from Previous	\$ -	1.5%	0.5%	0.5%

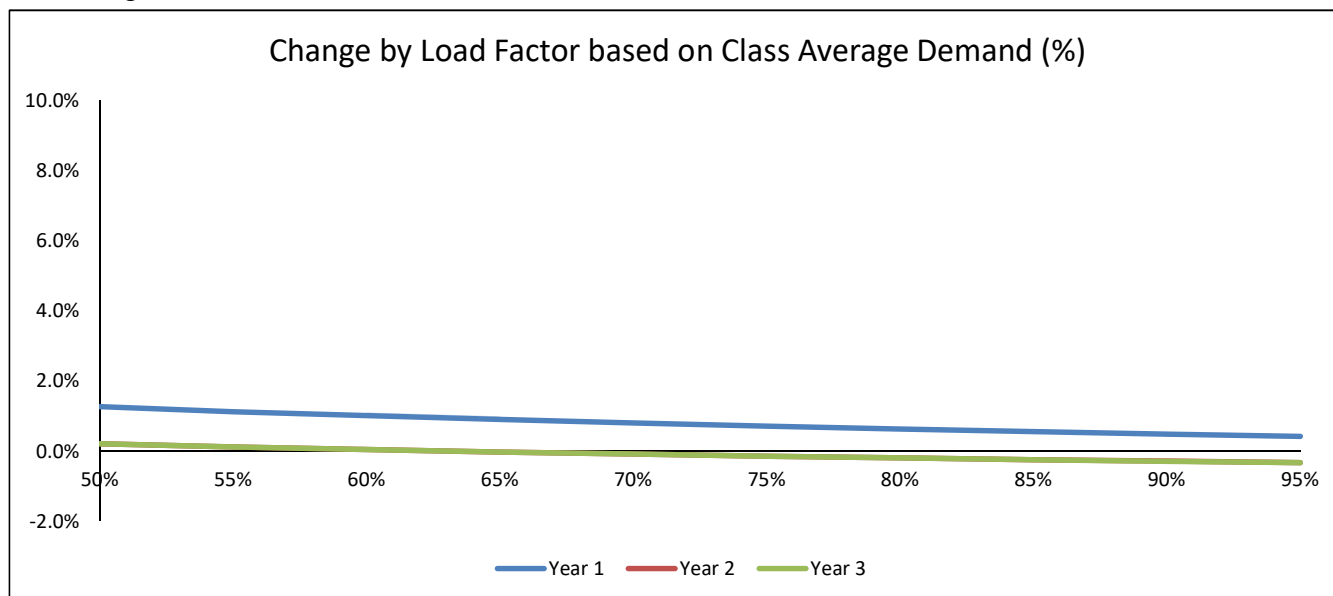


## City of Petoskey

### Rate Design

#### Projected Large Primary Power (LPPR) Rates

Rates	Current	Year 1	Year 2	Year 3
Monthly Facilities Charge:				
All Customers	\$ 120.00	\$ 140.00	\$ 160.00	\$ 180.00
Energy Charge:				
All Energy	\$ 0.05720	\$ 0.05657	\$ 0.05584	\$ 0.05511
Demand Charge:				
Winter Demand	\$ 13.10	\$ 13.40	\$ 13.70	\$ 14.00
Summer Demand	\$ 14.10	\$ 15.35	\$ 15.65	\$ 15.95
Power Cost Adjustment:				
All Energy	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)	\$ (0.00270)
Revenue from Rate	\$ 2,236,486	\$ 2,258,851	\$ 2,258,851	\$ 2,258,851
Change from Previous	\$ -	1.0%	0.0%	0.0%





# City of Petoskey

## Agenda Memo

**BOARD:** City Council

**MEETING DATE:** December 17, 2018      **PREPARED:** December 13, 2018

**AGENDA SUBJECT:** Water and Sewer Utility Rates

**RECOMMENDATION:** That the City Council adopt the enclosed proposed resolution

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**Background** The City last performed a water and sewer system rate study in 2010 and based on the results of the report passed a resolution to adjust water and sewer rates each year for the next four years with the last adjustment in 2014. Since the last rate study the City has paid off one bond issue, entered into a new bond issue and has experienced a reduction in sewer use by a large customer, along with the regular changes that affect rates.

The study will recommend rate adjustments each year for the next five years based on revenue requirements including capital improvement projects. Monthly ready to serve charges for the Water system will be reduced due to the final payment made in 2017 on bonds originally issued in 1996 for water system improvements. While, monthly ready to serve charges for the sewer system will be increased due to the 2017 bond issuance to fund wastewater treatment plant improvements.

In 2012 the City experienced the loss of nearly 9,000,000 gallons in sewer flows annually when the Springvale Bear Creek Sewage Disposal Authority diverted flows to the Harbor Springs Area Sewage Disposal Authority for treatment purposes. This reduction in flows results in an increase in fixed costs to be covered by the remaining flows of the sewer system. Adjustments to the rates are also affected by annual operating, maintenance and capital improvement costs for the water and sewer systems.

**Rate Study** In June 2018 Tetra Tech, Ann Arbor, was asked to again perform a study of the City's water and sewer use rates, along with System Development Charges (SDC). System Development Charges are a one-time charge billed to new customers to recover a proportional share of costs incurred in constructing the existing water and sewer systems. Vic Cooperwasser of Tetra Tech performed an in-depth study of the City's water and sewer system's costs, customer base, usage, franchise agreements and capital improvements. A copy of the rate study is enclosed for your review and a power point presentation will be provided by Mr. Cooperwasser further explaining the report.

The study takes into account current methodology used in establishing utility rates along with City needs in meeting operating costs, bond debt requirements and capital improvements over the next five years. The City's financial information is entered into an excel spreadsheet program to compute water and sewer rates broken down into the following three components; a billing charge (cost to prepare a monthly bill), ready to serve charge (monthly charge based on meter size) and commodity charge (monthly usage).

**Water and Sewer Rates** The study recommends an annual increase in charges for both water and sewer rates for the five year period of 2019 through 2023, except for the water ready to serve charge in 2019. The rates will provide \$500,000 each year for ongoing capital improvement projects in both the water and sewer systems.

Below is a schedule listing the increase in water and sewer rates for a customer with a 5/8" meter, which is standard for residential customers and small commercial customers. An average customer uses between 4 and 6 units per month.

Water and Sewer Rate Monthly Increase

Units	2019				2020				2021			
	Water	Sewer	Total	Percent	Water	Sewer	Total	Percent	Water	Sewer	Total	Percent
2	\$ (2.99)	\$ 7.95	\$ 4.96	8.34%	\$ 0.42	\$ 0.46	\$ 0.88	1.04%	\$ 0.46	\$ 1.73	\$ 2.19	3.37%
4	\$ (2.19)	\$ 8.55	\$ 6.36	9.35%	\$ 0.54	\$ 0.60	\$ 1.14	1.36%	\$ 0.60	\$ 1.99	\$ 2.59	3.43%
6	\$ (1.39)	\$ 9.15	\$ 7.76	10.12%	\$ 0.66	\$ 0.74	\$ 1.40	1.60%	\$ 0.74	\$ 2.25	\$ 2.99	3.49%
8	\$ (0.59)	\$ 9.75	\$ 9.16	10.74%	\$ 0.78	\$ 0.88	\$ 1.66	1.79%	\$ 0.88	\$ 2.51	\$ 3.39	3.53%

Units	2022				2023			
	Water	Sewer	Total	Percent	Water	Sewer	Total	Percent
2	\$ 0.49	\$ 0.34	\$ 0.83	1.23%	\$ 0.53	\$ 1.37	\$ 1.90	3.29%
4	\$ 0.63	\$ 0.64	\$ 1.27	1.63%	\$ 0.69	\$ 2.01	\$ 2.70	3.41%
6	\$ 0.77	\$ 0.94	\$ 1.71	1.93%	\$ 0.85	\$ 2.31	\$ 3.16	3.49%
8	\$ 0.91	\$ 1.24	\$ 2.15	2.16%	\$ 1.01	\$ 2.61	\$ 3.62	3.56%

The proposed rate increases are less than those approved in 2010 when the same customer using 4 units received increases of 11.41% in year 1, 8.55% in year 2, 5.47% in year 3 and 2.86% in year 4. The rates catch up the first year followed by a much smaller increase in the following years.

**Action** The City staff recommends the City Council review the enclosed rate study, hears the consultant's presentation and considers adoption of the proposed resolution adjusting water and sewer rates for each of the five years beginning in 2019 through 2023.

at  
Enclosures





CITY OF PETOSKEY  
EMMET COUNTY, MICHIGAN

RESOLUTION NO. \_\_\_\_\_

**RESOLUTION ESTABLISHING WATER SYSTEM AND SANITARY SEWER  
SYSTEM CHARGES**

Councilmember \_\_\_\_\_, supported by Councilmember \_\_\_\_\_, moved the adoption of the following resolution:

WHEREAS, Section 22-68 of the Code of Ordinances of the City of Petoskey (the "Code") authorizes the City Council to establish water system and sanitary sewer system services charges from time to time by resolution; and

WHEREAS, the City engaged the services of Tetra Tech to perform a water system and sanitary sewer system rate study which recommended water and sewer billing charges, readiness-to-serve charges, commodity charges, extra strength sanitary sewer surcharges and system development charges (collectively, the "User Charges") for each of the next five fiscal years; and

WHEREAS, the City Council has determined to adopt such User Charges:

NOW, THEREFORE, BE IT HEREBY RESOLVED AS FOLLOWS:

1. That the retail water system User Charges for water service both within and outside the City limits for each of the next five fiscal years of the City shall be as set forth on Exhibit A attached hereto.
2. That the retail sanitary sewer system User Charges for sanitary sewer service both within and outside the City limits for each of the next five fiscal years of the City shall be as set forth on Exhibit B attached hereto.
3. The User Charges set forth in Exhibits A and B shall be effective for bills issued to users as of the dates indicated in such Exhibits.
4. That all resolutions and parts of resolutions to the extent of any conflict herewith are hereby rescinded.

YEAS: Councilmembers \_\_\_\_\_  
\_\_\_\_\_

NAYS: Councilmembers \_\_\_\_\_

ABSTAIN: Councilmembers \_\_\_\_\_

ABSENT: Councilmembers \_\_\_\_\_

**RESOLUTION DECLARED ADOPTED.**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Alan Terry, City Clerk

**CERTIFICATION**

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Petoskey at a regular meeting held on the \_\_\_\_\_ day of \_\_\_\_\_, 2018 and that public notice of said meeting was given pursuant to, and in compliance with, Act 267 of the Public Acts of Michigan of 1976, as amended.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Alan Terry, City Clerk

**Exhibit A**

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
<b>WATER</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
<b>INSIDE-CITY</b>	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
Billing Charge, per Month	\$ 2.47	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78
Lawn Meter Billing Charge, Twice per Year	\$ 2.47	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78
Readiness to Serve Charge, per Meter Size, per Month					
5/8"	\$ 13.90	\$ 14.13	\$ 14.37	\$ 14.64	\$ 14.93
3/4"	\$ 20.85	\$ 21.20	\$ 21.56	\$ 21.96	\$ 22.40
1"	\$ 34.75	\$ 35.33	\$ 35.93	\$ 36.60	\$ 37.33
1 1/2"	\$ 69.50	\$ 70.65	\$ 71.85	\$ 73.20	\$ 74.65
2"	\$ 111.20	\$ 113.04	\$ 114.96	\$ 117.12	\$ 119.44
3"	\$ 243.25	\$ 247.28	\$ 251.48	\$ 256.20	\$ 261.28
4"	\$ 417.00	\$ 423.90	\$ 431.10	\$ 439.20	\$ 447.90
6"	\$ 868.75	\$ 883.13	\$ 898.13	\$ 915.00	\$ 933.13
Commodity Charge, per 100 Cubic Feet	\$ 1.85	\$ 1.91	\$ 1.98	\$ 2.05	\$ 2.13
Water System Development Charge ("Capital" Charge)	Maximum Calculated				
Water Service Meter Size:	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
5/8"	\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400
3/4"	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100
1"	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
1 1/2"	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
2"	\$ 11,200	\$ 11,200	\$ 11,200	\$ 11,200	\$ 11,200
3"	\$ 24,500	\$ 24,500	\$ 24,500	\$ 24,500	\$ 24,500
4"	\$ 42,000	\$ 42,000	\$ 42,000	\$ 42,000	\$ 42,000
6"	\$ 87,500	\$ 87,500	\$ 87,500	\$ 87,500	\$ 87,500
<b>OUTSIDE-CITY</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
<b>Resort and Bear Creek Twp Rates = 1.5 x City (per contract)</b>	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
Billing Charge, per Month	\$ 3.71	\$ 3.81	\$ 3.93	\$ 4.05	\$ 4.17
Lawn Meter Billing Charge, Twice per Year	\$ 3.71	\$ 3.81	\$ 3.93	\$ 4.05	\$ 4.17
Readiness to Serve Charge, per Meter Size, per Month					
5/8"	\$ 20.85	\$ 21.20	\$ 21.56	\$ 21.96	\$ 22.40
3/4"	\$ 31.28	\$ 31.80	\$ 32.34	\$ 32.94	\$ 33.60
1"	\$ 52.13	\$ 53.00	\$ 53.90	\$ 54.90	\$ 56.00
1 1/2"	\$ 104.25	\$ 106.00	\$ 107.80	\$ 109.80	\$ 112.00
2"	\$ 166.80	\$ 169.60	\$ 172.48	\$ 175.68	\$ 179.20
3"	\$ 364.88	\$ 371.00	\$ 377.30	\$ 384.30	\$ 392.00
4"	\$ 625.50	\$ 636.00	\$ 646.80	\$ 658.80	\$ 672.00
6"	\$ 1,303.13	\$ 1,325.00	\$ 1,347.50	\$ 1,372.50	\$ 1,400.00
Commodity Charge, per 100 Cubic Feet	\$ 2.78	\$ 2.87	\$ 2.97	\$ 3.08	\$ 3.20
Water System Development Charge ("Capital" Charge)	Maximum Calculated				
Water Service Meter Size:	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
5/8"	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100
3/4"	\$ 3,150	\$ 3,150	\$ 3,150	\$ 3,150	\$ 3,150
1"	\$ 5,250	\$ 5,250	\$ 5,250	\$ 5,250	\$ 5,250
1 1/2"	\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500
2"	\$ 16,800	\$ 16,800	\$ 16,800	\$ 16,800	\$ 16,800
3"	\$ 36,750	\$ 36,750	\$ 36,750	\$ 36,750	\$ 36,750
4"	\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000
6"	\$ 131,250	\$ 131,250	\$ 131,250	\$ 131,250	\$ 131,250
Bay View rates = 1.25 x City (per contract)					
Readiness to Serve Charge, per Meter Size, per Month					
6"	\$ 1,086.25	\$ 1,104.38	\$ 1,123.13	\$ 1,143.75	\$ 1,166.88
Commodity Charge, per 100 Cubic Feet	\$ 2.32	\$ 2.39	\$ 2.48	\$ 2.57	\$ 2.67

**Exhibit B**

<b>SEWER</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<b>INSIDE-CITY</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
Billing Charge, per Month	\$ 2.72	\$ 2.75	\$ 2.78	\$ 2.81	\$ 2.83
Readiness to Serve Charge, per Meter Size, per					
5/8"	\$ 35.32	\$ 35.32	\$ 36.76	\$ 36.77	\$ 38.16
3/4"	\$ 52.98	\$ 52.98	\$ 55.14	\$ 55.16	\$ 57.24
1"	\$ 88.30	\$ 88.30	\$ 91.90	\$ 91.93	\$ 95.40
1 1/2"	\$ 176.60	\$ 176.60	\$ 183.80	\$ 183.85	\$ 190.80
2"	\$ 282.56	\$ 282.56	\$ 294.08	\$ 294.16	\$ 305.28
3"	\$ 618.10	\$ 618.10	\$ 643.30	\$ 643.48	\$ 667.80
4"	\$ 1,059.60	\$ 1,059.60	\$ 1,102.80	\$ 1,103.10	\$ 1,144.80
6"	\$ 2,207.50	\$ 2,207.50	\$ 2,297.50	\$ 2,298.13	\$ 2,385.00
Commodity Charge, per 100 Cubic Feet	\$ 3.15	\$ 3.26	\$ 3.39	\$ 3.54	\$ 3.69
Sewer System Development Charge ("Capital")	<b>Maximum Calculated</b>				
<b>Water Service Meter Size:</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
5/8"	\$ 4,600	\$ 4,600	\$ 4,600	\$ 4,600	\$ 4,600
3/4"	\$ 6,900	\$ 6,900	\$ 6,900	\$ 6,900	\$ 6,900
1"	\$ 11,500	\$ 11,500	\$ 11,500	\$ 11,500	\$ 11,500
1 1/2"	\$ 23,000	\$ 23,000	\$ 23,000	\$ 23,000	\$ 23,000
2"	\$ 36,800	\$ 36,800	\$ 36,800	\$ 36,800	\$ 36,800
3"	\$ 80,500	\$ 80,500	\$ 80,500	\$ 80,500	\$ 80,500
4"	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000
6"	\$ 287,500	\$ 287,500	\$ 287,500	\$ 287,500	\$ 287,500
<b>OUTSIDE-CITY</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<b>Resort Township</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
Billing Charge, per Month = City	\$ 2.72	\$ 2.75	\$ 2.78	\$ 2.81	\$ 2.83
Readiness to Serve Charge, per Meter Size, per					
5/8"	\$ 61.81	\$ 61.81	\$ 64.33	\$ 64.35	\$ 66.78
3/4"	\$ 92.72	\$ 92.72	\$ 96.50	\$ 96.53	\$ 100.17
1"	\$ 154.53	\$ 154.53	\$ 160.83	\$ 160.88	\$ 166.95
1 1/2"	\$ 309.05	\$ 309.05	\$ 321.65	\$ 321.75	\$ 333.90
2"	\$ 494.48	\$ 494.48	\$ 514.64	\$ 514.80	\$ 534.24
3"	\$ 1,081.68	\$ 1,081.68	\$ 1,125.78	\$ 1,126.13	\$ 1,168.65
4"	\$ 1,854.30	\$ 1,854.30	\$ 1,929.90	\$ 1,930.50	\$ 2,003.40
6"	\$ 3,863.13	\$ 3,863.13	\$ 4,020.63	\$ 4,021.88	\$ 4,173.75
Commodity Charge, per 100 Cubic Feet = City	\$ 3.15	\$ 3.26	\$ 3.39	\$ 3.54	\$ 3.69
Sewer System Development Charge ("Capital")	<b>Maximum Calculated</b>				
<b>Water Service Meter Size:</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
5/8"	\$ 4,600	\$ 4,600	\$ 4,600	\$ 4,600	\$ 4,600
3/4"	\$ 6,900	\$ 6,900	\$ 6,900	\$ 6,900	\$ 6,900
1"	\$ 11,500	\$ 11,500	\$ 11,500	\$ 11,500	\$ 11,500
1 1/2"	\$ 23,000	\$ 23,000	\$ 23,000	\$ 23,000	\$ 23,000
2"	\$ 36,800	\$ 36,800	\$ 36,800	\$ 36,800	\$ 36,800
3"	\$ 80,500	\$ 80,500	\$ 80,500	\$ 80,500	\$ 80,500
4"	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000
6"	\$ 287,500	\$ 287,500	\$ 287,500	\$ 287,500	\$ 287,500
(By Contract, per Restated Agreement, March 19, 2018)	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>	<b>Effective</b>
	<b>January 1, 2019</b>	<b>January 1, 2020</b>	<b>January 1, 2021</b>	<b>January 1, 2022</b>	<b>January 1, 2023</b>
Monthly Commodity Charge: 95% of City Commodity	\$ 3.00	\$ 3.10	\$ 3.23	\$ 3.37	\$ 3.51
Monthly Capital Charge: SVBC Share of Outstanding	\$ 14,928.00	\$ 14,705.66	\$ 15,779.17	\$ 15,542.43	\$ 16,529.79
Bay View rates = 1.25 x City (per contract)					
Readiness to Serve Charge, per Meter Size, per					
Sewage pumped via 8" FM, RTS charge billed as	\$ 1,324.50	\$ 1,324.50	\$ 1,378.50	\$ 1,379.10	\$ 1,431.00
Commodity Charge, per 100 Cubic Feet	\$ 3.94	\$ 4.08	\$ 4.24	\$ 4.43	\$ 4.62
<b>EXTRA STRENGTH SURCHARGES - ALL CUSTOMERS</b>					
Biochemical Oxygen Demand: Above 300 mg/l (per po	\$ 0.23	\$ 0.24	\$ 0.25	\$ 0.26	\$ 0.28
Suspended Solids: Above 300 mg/l (per pound)	\$ 0.22	\$ 0.23	\$ 0.24	\$ 0.25	\$ 0.26
Phosphorus: Above 7 mg/l (per pound)	\$ 2.17	\$ 2.25	\$ 2.35	\$ 2.45	\$ 2.58
Total Kjeldahl Nitrogen: Above 40 mg/l (per pound)	\$ 0.55	\$ 0.57	\$ 0.60	\$ 0.62	\$ 0.66



December 12, 2018

Mr. Alan Terry  
Director of Finance  
City of Petoskey  
101 East Lake Street  
Petoskey, MI 49770

**Re: City of Petoskey, Michigan  
Water and Sewer Rate and System Development Charge Study  
"SmartRate" Report**

Dear Mr. Terry:

Attached are the final financial spreadsheets (**SmartRate** tables) that calculate water and sewer rates and maximum system development charges (SDCs) for the City of Petoskey ("Inside-City"), Resort Township, Bear Creek Township, the Springvale-Bear Creek Sewage Disposal Authority (SVBC) and Bayview. The findings of our study are presented in this letter report.

Water and sewer rates are intended to recover the City's annual expenses to sustain its water and sewer infrastructure. These expenses typically include: operation and maintenance, administration, payments in lieu of taxes, debt service, capital improvements not debt-financed, and contributions to equipment replacement and capital reserve funds.

An SDC is a one-time charge to new water or sewer customers to recover a proportional share of the City's net investment in the water and sewer infrastructure. SDCs are also assessed to current customers that increase the capacity required to serve them. SDCs go by several other common names, such as "connection fee", "tap-in fee", "capacity fee", "benefit fee", etc. SDCs do not include any of the costs incurred by the City to physically connect the customer to the City's water and sewer infrastructure, purchase and install a water meter or inspect the connections. These types of costs are in addition to the SDCs.

The proposed rates and SDCs are based on mathematical formulas that:

- Generate revenue sufficient to meet the City's water and sewer system's operation, maintenance, administrative, debt service and reserve requirements.
- Comply with the intent of the December 1998 Michigan Supreme Court decision in the case of *Bolt v. City of Lansing*. Water and sewer rates and SDCs should be calculated proportionate to the necessary cost of the service.
- Conform to the terms of the City's current inter-municipal water and sewer service agreements.

All projected water and sewer rates and SDCs are based on financial and usage projections. The estimates, projections, assumptions, and conclusions outlined in this report reflect expectations as to future activities and events. The expectations are based on our understanding of the data from the City. To the extent that actual future conditions vary from those assumed herein or provided to us, actual

results will vary from those forecast. Some of the assumptions inevitably will not materialize and unanticipated events could occur which might significantly change the results shown herein.

**Tetra Tech recommends that actual water and sewer revenues generated by new rates adopted by the City be compared to projected revenues regularly. If actual revenues do not meet projected revenues because of either usage reductions or expense increases, the water and sewer rates should be recalculated and adjusted if necessary to help ensure revenue adequacy.**

## **RATE STRUCTURE**

The current rate structure is maintained in this rate study which consists of the following rates billed monthly:

- Billing: A fixed charge that is the same amount for each meter(s) for each customer.
- Readiness to Serve: A fixed charge that increases with meter size.
- Commodity Charge: A fixed charge per 100 cubic feet (CF) usage.

## **WATER RATE TABLES**

**Table W1:** This table compares the current water rates and SDCs to a series of calculated rates and SDCs to go into effect each year for the next five years of the study period of this report (FY 2019 to FY 2023). The water rates are based on calculations prepared in subsequent water rate tables.

The calculated billing charge is a fixed amount to be billed each month to each customer based on the number of meters serving that customer. The water billing charge recovers water billing services.

The calculated readiness-to-serve charges are fixed amounts to be billed each month to each customer based on meter size, regardless of the amount of water used. These charges do not include any flow. The fixed amounts increase with increasing meter size. The readiness-to-serve charges recover 100% of payment in lieu of taxes, debt service and capital expenses not debt-financed. It also recovers 40% of the administrative expenses (net of water billing expenses).

The proposed commodity charge recovers the remaining water system operation and maintenance expenses on a uniform cost per 100 CF basis for all water used.

**Table W2:** This table analyzes the revenue generated by each water rate under the City's current water rates.

**Table W3:** This table calculates the billing units for calculating the Billing charge, Readiness to Serve charge and the Commodity charge.

Billing units are determined by the number of meters multiplied by the number of bills issued per year for that particular meter.

Each water meter size in the Petoskey water system is converted to a 5/8-inch meter equivalent based on the rated maximum capacity (in gallons per minute) of each water meter. For example, the base 5/8-inch meter capacity is 20 gallons per minute. The rated maximum capacity of a 4-inch meter is 600 gallons per minute; therefore, the meter ratio for a 4-inch meter is equal to  $600/20 = 30$ . The number of meters of each size is multiplied by their meter ratios and then by their billing frequencies to determine the total number of equivalent 5/8-inch meters.





The commodity charge is based on the amount of water used by each customer. This is known as the customer's "water billable flow." The total amount of metered usage, in 100 CF units, is presented.

All of these amounts are projected each year based on the projected growth rate for that billing unit. In addition, at the bottom of the table the outside-City billing units are converted to "equivalent" billing units based on the terms of the City's municipal service agreements.

**Table W4:** This table projects water system expenses each year for the next five years and compares these to the revenue projected by the current water rates, showing that the current water rates are not adequate to sustain the water system's financial needs over this period. Budgets were projected based on annual escalation factors provided by the City to account for inflation, wage adjustments and defined expenses. Over the entire study period there will be no funding support from the unrestricted water fund balance. Water capital improvements will be paid entirely from water operating revenue. No water capital improvements will be debt financed.

**Table W5:** This table allocates the expenses from Table W4 to one of the three water rates: Billing, Readiness-to-Serve or Commodity. Offsetting water revenues are also credited to the three water rates as appropriate. The difference between the total expenses and the total offsetting revenues determines the net amount that needs to be recovered by that rate. These amounts are divided by the equivalent billing units calculated in Table W3 to determine the rates for each user class. Equivalent billing units consider the impact of outside City user contract times.

The net billing expenses are divided by the number of equivalent bills issued per year to determine the monthly fixed billing charge.

The net readiness-to-serve expenses are divided by the number of 5/8-inch meter equivalents to determine the monthly fixed readiness-to-serve charge for each meter size.

The net commodity expenses are divided by the total annual equivalent billable flow to determine the uniform commodity charge, expressed in dollars per 100 CF.

**Table W6:** This table compares current monthly water bills to projected water bills for each year of the study period for the combinations of usage and meter sizes, for inside-City and outside-City customers. Year-over-year changes are expressed in terms of percentages as well as dollars:

Monthly Usage, 100CF Units	Meter Size
0	5/8"
5	5/8"
10	5/8"
50	3/4"
200	1"
600	2"
1,200	3"
7,000	1 @ 5/8"; 4 @ 2"; 2 @ 4"
2,800	6"





**Table W6 Residential:** This table compares current monthly water bills to projected water bills for each year of the study period for residential customers with a 5/8" meter and monthly usages ranging from 0 CF per month to 10 CF per month. Year-over-year changes are expressed in terms of percentages as well as dollars.

**Table W7:** This table "closes the loop" to confirm that the calculated water rates will generate enough revenue to fund the water system over the entire study period. Revenue for each rate category is projected. There are eight water rate categories as follows:

1. Billing - Inside City
2. RTS - Inside City
3. Commodity - Inside City
4. Billing - Outside City
5. RTS - Outside City
6. Commodity - Outside City
7. RTS - Bayview
8. Commodity - Bayview

#### **SEWER RATE TABLES**

**Tables S1 through S7:** These tables are similar in concept to Tables W1 through W7.

#### **TOTAL WATER AND SEWER RATE TABLES**

**Table T1:** This table totals the water rates and sewer rates from Table W1 and S1, respectively.

**Table T2:** This table calculates total monthly water and sewer bills for the usage and meter size combinations given in Tables W6 and S6. Year-to-year changes are expressed in terms of percentages and dollars.

**Table T2 Residential:** This table calculates total monthly water and sewer bills for residential customers with a 5/8" meter and monthly usages ranging from 0 CF per month to 10 CF per month based on the total of the bills shown in Tables W6 Residential and S6 Residential. Year-to-year changes are expressed in terms of percentages and dollars.

**Table T3:** This table summarizes the total projected water and sewer revenue under the calculated rates over the entire study period.

#### **WATER SYSTEM DEVELOPMENT CHARGE (SDC) TABLES**

**Table W8:** This table lists all of the assets in the water system, their account numbers, when they were installed, the original cost and the cost to replace them at current prices (labeled the "local replacement value").

**Table W9:** This table takes the current (FY 2018) local replacement value of the water system and projects it for five years based on the City's five-year capital improvement program (FY 2019 to FY 2023). Projected annual outstanding bond principal amounts, if any, are deducted from each total to determine the net local replacement value. The design capacity of the water system in gallons per day



**TETRA TECH**

is divided into the net local replacement value to determine the SDC per gallon of capacity. This amount is multiplied by the gallons per day usage of a typical single family residential customer (the "residential equivalent unit" or "REU") to determine the SDC per REU. The calculated SDC is a maximum rounded amount. It is recommended that the City not set the SDC higher than the maximum calculated amount. The City can choose to set the SDC less than the maximum. This table also calculates maximum SDCs per water meter size.

#### **SEWER SYSTEM DEVELOPMENT CHARGE (SDC) TABLES**

**Tables S8 and S9:** These tables are similar in concept to Tables W8 and W9.

#### **WASTEWATER EXTRA STRENGTH SURCHARGES**

**Table S10:** This table allocates wastewater treatment operation and maintenance costs to removing biochemical oxygen demand, suspended solids, phosphorus and total Kjeldahl nitrogen and then divides these expenses by the annual influent loadings of these conventional pollutants to calculate wastewater extra strength surcharges for each year of the study period.

It has been a pleasure to work with City staff on this study. We appreciate the thought and effort that City staff provided to us.

Sincerely,

Vic Cooperwasser, P.E.  
Senior Project Manager

Encl.



Table W1  
Current FY 2018 and Proposed FY 2019 to FY 2023 Water Rates and System Development Charges

W&S rate study 2018 - final

	A	B	C	D	E	F	G
1		Current		Proposed			
2	<b>WATER</b>	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	<b>INSIDE-CITY</b>	Effective January 1, 2014	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
4	Billing Charge, per Month	\$ 2.16	\$ 2.47	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78
5	Lawn Meter Billing Charge, Twice per Year	\$ 3.00	\$ 2.47	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78
6	Readiness to Serve Charge, per Meter Size, per Month						
7	5/8"	\$ 18.00	\$ 13.90	\$ 14.13	\$ 14.37	\$ 14.64	\$ 14.93
8	3/4"	\$ 27.00	\$ 20.85	\$ 21.20	\$ 21.56	\$ 21.96	\$ 22.40
9	1"	\$ 45.00	\$ 34.75	\$ 35.33	\$ 35.93	\$ 36.60	\$ 37.33
10	1 1/2"	\$ 90.00	\$ 69.50	\$ 70.65	\$ 71.85	\$ 73.20	\$ 74.65
11	2"	\$ 144.00	\$ 111.20	\$ 113.04	\$ 114.96	\$ 117.12	\$ 119.44
12	3"	\$ 315.00	\$ 243.25	\$ 247.28	\$ 251.48	\$ 256.20	\$ 261.28
13	4"	\$ 540.00	\$ 417.00	\$ 423.90	\$ 431.10	\$ 439.20	\$ 447.90
14	6"	\$ 1,125.00	\$ 868.75	\$ 883.13	\$ 898.13	\$ 915.00	\$ 933.13
15	Commodity Charge, per 100 Cubic Feet	\$ 1.45	\$ 1.85	\$ 1.91	\$ 1.98	\$ 2.05	\$ 2.13
16	Water System Development Charge ("Capital" Charge)	Current		Maximum Calculated			
17	Water Service Meter Size:	Effective January 1, 2011	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
18	5/8"	\$ 900	\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400
19	3/4"	\$ 1,350	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100
20	1"	\$ 2,250	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
21	1 1/2"	\$ 4,500	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
22	2"	\$ 7,200	\$ 11,200	\$ 11,200	\$ 11,200	\$ 11,200	\$ 11,200
23	3"	\$ 15,750	\$ 24,500	\$ 24,500	\$ 24,500	\$ 24,500	\$ 24,500
24	4"	\$ 27,000	\$ 42,000	\$ 42,000	\$ 42,000	\$ 42,000	\$ 42,000
25	6"	\$ 56,250	\$ 87,500	\$ 87,500	\$ 87,500	\$ 87,500	\$ 87,500
26		Current		Proposed			
27	<b>OUTSIDE-CITY</b>	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
28	Resort and Bear Creek Twp Rates = 1.5 x City (per contract)	Effective January 1, 2014	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
29	Billing Charge, per Month	\$ 3.24	\$ 3.71	\$ 3.81	\$ 3.93	\$ 4.05	\$ 4.17
30	Lawn Meter Billing Charge, Twice per Year	\$ 4.50	\$ 3.71	\$ 3.81	\$ 3.93	\$ 4.05	\$ 4.17
31	Readiness to Serve Charge, per Meter Size, per Month						
32	5/8"	\$ 27.00	\$ 20.85	\$ 21.20	\$ 21.56	\$ 21.96	\$ 22.40
33	3/4"	\$ 40.50	\$ 31.28	\$ 31.80	\$ 32.34	\$ 32.94	\$ 33.60
34	1"	\$ 67.50	\$ 52.13	\$ 53.00	\$ 53.90	\$ 54.90	\$ 56.00
35	1 1/2"	\$ 135.00	\$ 104.25	\$ 106.00	\$ 107.80	\$ 109.80	\$ 112.00
36	2"	\$ 216.00	\$ 166.80	\$ 169.60	\$ 172.48	\$ 175.68	\$ 179.20
37	3"	\$ 472.50	\$ 364.88	\$ 371.00	\$ 377.30	\$ 384.30	\$ 392.00
38	4"	\$ 810.00	\$ 625.50	\$ 636.00	\$ 646.80	\$ 658.80	\$ 672.00
39	6"	\$ 1,687.50	\$ 1,303.13	\$ 1,325.00	\$ 1,347.50	\$ 1,372.50	\$ 1,400.00
40	Commodity Charge, per 100 Cubic Feet	\$ 2.18	\$ 2.78	\$ 2.87	\$ 2.97	\$ 3.08	\$ 3.20
41	Water System Development Charge ("Capital" Charge)	Current		Maximum Calculated			
42	Water Service Meter Size:	Effective January 1, 2011	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
43	5/8"	\$ 1,350	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100
44	3/4"	\$ 2,025	\$ 3,150	\$ 3,150	\$ 3,150	\$ 3,150	\$ 3,150
45	1"	\$ 3,375	\$ 5,250	\$ 5,250	\$ 5,250	\$ 5,250	\$ 5,250
46	1 1/2"	\$ 6,750	\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500
47	2"	\$ 10,800	\$ 16,800	\$ 16,800	\$ 16,800	\$ 16,800	\$ 16,800
48	3"	\$ 23,625	\$ 36,750	\$ 36,750	\$ 36,750	\$ 36,750	\$ 36,750
49	4"	\$ 40,500	\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000
50	6"	\$ 84,375	\$ 131,250	\$ 131,250	\$ 131,250	\$ 131,250	\$ 131,250
51	Bay View rates = 1.25 x City (per contract)						
52	Readiness to Serve Charge, per Meter Size, per Month						
53	Water provided thru a 6" and a 12" main. RTS billed as 6"	\$ 1,406.25	\$ 1,086.25	\$ 1,104.38	\$ 1,123.13	\$ 1,143.75	\$ 1,166.88
54	Commodity Charge, per 100 Cubic Feet	\$ 1.82	\$ 2.32	\$ 2.39	\$ 2.48	\$ 2.57	\$ 2.67

**Table W2**  
**Projected FY 2019 Water Billings Using FY 2018 Water Rates and Projected FY 2019 Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
1	Class	<b>PROJECTED BILLINGS USING CURRENT RATES</b>	Number of Meters Used for Billing for Water and Sewer Service (Active Customers)	Number of Meters Used for Billing for Lawn Service (Active Customers)	Current Equivalent Annual Billing Units for Meters Used for Water and Sewer Billing (Billing Charge and RTS Charge Based on 12 Meter Readings per Year)	Billing Units for Lawn Meters (Billing Charge Based on Two Meter Readings per Year)	FY 2018 Water Rates Effective January 1, 2014	Projected FY 2019 Water Billings Using FY 2018 Water Rates
2		Billing Charges						
3	INSIDE-CITY							
4		Billing Charges			3,000		\$ 2.16	\$ 77,760
5		Lawn Billing Charges				212	\$ 3.00	\$ 1,272
6		Billing Charges, Total Inside-City			3,000	212		\$ 79,032
7	OUTSIDE-CITY							
8		Billing Charges			375		\$ 3.24	\$ 14,580
9		Lawn Billing Charges				11	\$ 4.50	\$ 99
10		Billing Charges, Total Outside-City			375	11		\$ 14,679
11		Billing Charges, Total Inside and Outside-City						\$ 93,711
12								
13		Readiness to Serve Charge Billings, by Meter Size	Active Meters as of May, 2018					
14	INSIDE-CITY							
15	Water/Inside/Residential	5/8"	2,313				\$ 18.00	\$ 499,608
16	Water/Inside/Residential	3/4"	39				\$ 27.00	\$ 12,636
17	Water/Inside/Residential	1"	138				\$ 45.00	\$ 74,520
18	Water/Inside/Residential	1 1/2"	29				\$ 90.00	\$ 31,320
19	Water/Inside/Residential	2"	2				\$ 144.00	\$ 3,456
20	Water/Inside/Residential	3"	0				\$ 315.00	\$ -
21	Water/Inside/Residential	4"	0				\$ 540.00	\$ -
22	Water/Inside/Residential	6"	0				\$ 1,125.00	\$ -
23		Residential Readiness to Serve Charge Billings, Total	2,521					\$ 621,540
24	Water/Inside/Commercial	5/8"	267				\$ 18.00	\$ 57,672
25	Water/Inside/Commercial	3/4"	16				\$ 27.00	\$ 5,184
26	Water/Inside/Commercial	1"	41				\$ 45.00	\$ 22,140
27	Water/Inside/Commercial	1 1/2"	14				\$ 90.00	\$ 15,120
28	Water/Inside/Commercial	2"	23				\$ 144.00	\$ 39,744
29	Water/Inside/Commercial	3"	1				\$ 315.00	\$ 3,780
30	Water/Inside/Commercial	4"	4				\$ 540.00	\$ 25,920
31	Water/Inside/Commercial	6"	0				\$ 1,125.00	\$ -
32		Commercial Readiness to Serve Charge Billings, Total	366					\$ 169,560
33	Water/Inside/Industrial	5/8"	10				\$ 18.00	\$ 2,160
34	Water/Inside/Industrial	3/4"	0				\$ 27.00	\$ -
35	Water/Inside/Industrial	1"	0				\$ 45.00	\$ -
36	Water/Inside/Industrial	1 1/2"	1				\$ 90.00	\$ 1,080
37	Water/Inside/Industrial	2"	0				\$ 144.00	\$ -
38	Water/Inside/Industrial	3"	0				\$ 315.00	\$ -
39	Water/Inside/Industrial	4"	0				\$ 540.00	\$ -
40	Water/Inside/Industrial	6"	0				\$ 1,125.00	\$ -
41		Industrial Readiness to Serve Charge Billings, Total	11					\$ 3,240
42	Water/Inside/Non-Profit	5/8"	48				\$ 18.00	\$ 10,368
43	Water/Inside/Non-Profit	3/4"	6				\$ 27.00	\$ 1,944
44	Water/Inside/Non-Profit	1"	22				\$ 45.00	\$ 11,880
45	Water/Inside/Non-Profit	1 1/2"	5				\$ 90.00	\$ 5,400
46	Water/Inside/Non-Profit	2"	17				\$ 144.00	\$ 29,376
47	Water/Inside/Non-Profit	3"	2				\$ 315.00	\$ 7,560
48	Water/Inside/Non-Profit	4"	2				\$ 540.00	\$ 12,960
49	Water/Inside/Non-Profit	6"	0				\$ 1,125.00	\$ -
50		Non-Profit Readiness to Serve Charge Billings, Total	102					\$ 79,488
51	WA Bay View 6"	Water provided thru a 6" and a 12" main. RTS billed as 6"	1				\$ 1,406.25	\$ 16,875
52		Bay View Readiness to Serve Charge Billings, Total	1					\$ 16,875
53	Second Water Meter/Inside/Residential	Only billed commodity, not a billing or RTS charge		158				
54	Second Water Meter/Inside/Residential	Only billed for Commodity, and 2 billing charges per year, no RTS charge						
55	Second Water Meter/Inside/Residential/Lawn			169				

**Table W2**  
**Projected FY 2019 Water Billings Using FY 2018 Water Rates and Projected FY 2019 Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
56		Second Water Meter/Inside/Residential/Lawn		169				
57	Second Water Meter/Inside/Commercial	Only billed commodity, not a billing or RTS charge		26				
58		Second Water Meter/Inside/Commercial		26				
59	Second Water Meter/Inside/Commercial/Lawn	Only billed for Commodity, and 2 billing charges per year, no RTS charge		26				
60		Second Water Meter/Inside/Commercial/Lawn		26				
61	Second Water Meter/Inside/Non-Profit	Only billed commodity, not a billing or RTS charge		46				
62		Second Water Meter/Inside/Non-Profit		46				
63	Second Water Meter/Inside/Non-Profit/Lawn	Only billed for Commodity, and 2 billing charges per year, no RTS charge		17				
64		Second Water Meter/Inside/Non-Profit/Lawn		17				
65	Second Water/Inside/5/8" (Garages)	Only Billed Commodity (Not Billing or RTS)		19				
66		Second Water Meter/Inside/5/8" (Garages)		19				
67		Readiness to Serve Charge Billings, Total Inside City						\$ 873,828
68	<b>OUTSIDE-CITY</b>							
69	Water/Outside/Resort & Bear Creek Twps/Residential	5/8"	246				\$ 27.00	\$ 79,704
70	Water/Outside/Resort & Bear Creek Twps/Residential	3/4"	3				\$ 40.50	\$ 1,458
71	Water/Outside/Resort & Bear Creek Twps/Residential	1"	13				\$ 67.50	\$ 10,530
72	Water/Outside/Resort & Bear Creek Twps/Residential	1 1/2"	3				\$ 135.00	\$ 4,860
73	Water/Outside/Resort & Bear Creek Twps/Residential	2"	21				\$ 216.00	\$ 54,432
74	Water/Outside/Resort & Bear Creek Twps/Residential	3"	0				\$ 472.50	\$ -
75	Water/Outside/Resort & Bear Creek Twps/Residential	4"	0				\$ 810.00	\$ -
76	Water/Outside/Resort & Bear Creek Twps/Residential	6"	0				\$ 1,687.50	\$ -
77		Resort & Bear Creek Twps Residential Readiness to Serve Charge Billings, Total	286					\$ 150,984
78	Water/Outside/Resort & Bear Creek Twps/Commercial	5/8"	13				\$ 27.00	\$ 4,212
79	Water/Outside/Resort & Bear Creek Twps/Commercial	3/4"	7				\$ 40.50	\$ 3,402
80	Water/Outside/Resort & Bear Creek Twps/Commercial	1"	17				\$ 67.50	\$ 13,770
81	Water/Outside/Resort & Bear Creek Twps/Commercial	1 1/2"	9				\$ 135.00	\$ 14,580
82	Water/Outside/Resort & Bear Creek Twps/Commercial	2"	31				\$ 216.00	\$ 80,352
83	Water/Outside/Resort & Bear Creek Twps/Commercial	3"	1				\$ 472.50	\$ 5,670
84	Water/Outside/Resort & Bear Creek Twps/Commercial	4"	0				\$ 810.00	\$ -
85	Water/Outside/Resort & Bear Creek Twps/Commercial	6"	0				\$ 1,687.50	\$ -
86		Resort & Bear Creek Twps Commercial Readiness to Serve Charge Billings, Total	78					\$ 121,986
87	Water/Outside/Resort & Bear Creek Twps/Industrial	5/8"	0				\$ 27.00	\$ -
88	Water/Outside/Resort & Bear Creek Twps/Industrial	3/4"	0				\$ 40.50	\$ -
89	Water/Outside/Resort & Bear Creek Twps/Industrial	1"	1				\$ 67.50	\$ 810
90	Water/Outside/Resort & Bear Creek Twps/Industrial	1 1/2"	0				\$ 135.00	\$ -
91	Water/Outside/Resort & Bear Creek Twps/Industrial	2"					\$ 216.00	\$ -
92	Water/Outside/Resort & Bear Creek Twps/Industrial	3"	0				\$ 472.50	\$ -

**Table W2**  
**Projected FY 2019 Water Billings Using FY 2018 Water Rates and Projected FY 2019 Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
93	Water/Outside/Resort & Bear Creek Twps/Industrial	4"	0				\$ 810.00	\$ -
94	Water/Outside/Resort & Bear Creek Twps/Industrial	6"	0				\$ 1,687.50	\$ -
95		Resort & Bear Creek Twps Industrial Readiness to Serve Charge Billings, Total	1					\$ 810
96	Water/Outside/Resort & Bear Creek Twps/Non-Profit	5/8"	1				\$ 27.00	\$ 324
97	Water/Outside/Resort & Bear Creek Twps/Non-Profit	3/4"	2				\$ 40.50	\$ 972
98	Water/Outside/Resort & Bear Creek Twps/Non-Profit	1"	3				\$ 67.50	\$ 2,430
99	Water/Outside/Resort & Bear Creek Twps/Non-Profit	1 1/2"	1				\$ 135.00	\$ 1,620
100	Water/Outside/Resort & Bear Creek Twps/Non-Profit	2"	3				\$ 216.00	\$ 7,776
101	Water/Outside/Resort & Bear Creek Twps/Non-Profit	3"	0				\$ 472.50	\$ -
102	Water/Outside/Resort & Bear Creek Twps/Non-Profit	4"	0				\$ 810.00	\$ -
103	Water/Outside/Resort & Bear Creek Twps/Non-Profit	6"	0				\$ 1,687.50	\$ -
104		Resort & Bear Creek Twps Non-Profit Readiness to Serve Charge Billings, Total	10					\$ 13,122
105	Second Water/Outside/Resort & Bear Creek Twps/Residential	Only billed commodity, not a billing or RTS charge		19				
106		Resort & Bear Creek Twps Second Water/Residential	0	19				
107	Second Water/Outside/Resort & Bear Creek Twps/Residential/Lawn	Only billed for Commodity, and 2 billing charges per year, no RTS charge		6				
108		Resort & Bear Creek Twps Second Water/Residential/Lawn		6				
109	Second Water/Outside/Resort & Bear Creek Twps/Commercial	Only billed commodity, not a billing or RTS charge		26				
110		Resort & Bear Creek Twps Second Water/Commercial		26				
111	Second Water/Outside/Resort & Bear Creek Twps/Commercial/Lawn	Only billed for Commodity, and 2 billing charges per year, no RTS charge		5				
112		Resort & Bear Creek Twps Second Water/Commercial/Lawn		5				
113	Second Water/Outside/Resort & Bear Creek Twps/Industrial	Only billed commodity, not a billing or RTS charge		0				
114		Resort & Bear Creek Twps Second Water/Industrial		0				
115	Second Water/Outside/Resort & Bear Creek Twps/Industrial/Lawn	Only billed for Commodity, and 2 billing charges per year, no RTS charge		0				
116		Resort & Bear Creek Twps Second Water/Industrial/Lawn		0				
117	Second Water/Outside/Resort & Bear Creek Twps/Non-Profit	Only billed commodity, not a billing or RTS charge		2				
118		Resort & Bear Creek Twps Second Water/Non-Profit/Readiness to Serve Charge Billings, Total		2				
119	Second Water/Outside/Resort & Bear Creek Twps/Non-Profit/Lawn	Only billed for Commodity, and 2 billing charges per year, no RTS charge		0				
120		Resort & Bear Creek Twps Second Water/Non-Profit/Lawn		0				
121		Readiness to Serve Charge Billings, Total Outside City	Potoskey Water Tetra Tech SmartRate	Rate Study				12/12/2018 1:36 PM \$ 285,902

**Table W2**  
**Projected FY 2019 Water Billings Using FY 2018 Water Rates and Projected FY 2019 Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
122		Readiness to Serve Charge Billings, Total Inside, Outside City and Bay View						\$ 1,177,605
123								
124		Commodity Charge Billings, by Meter Size		Actual Calendar 2016 Billable Flow (100 CF Units)	Actual Calendar 2017 Billable Flow (100 CF Units)	Projected Calendar 2019 Billable Flow (100 CF Units)		
125	Calendar 2019 Projected Billable Flow Multiplier Above Calendar 2017					1.00		
126	INSIDE-CITY							
127	Water/Inside/Residential	5/8"		125,861	118,837	118,837	\$ 1.45	\$ 172,314
128	Water/Inside/Residential	3/4"		3,253	3,265	3,265	\$ 1.45	\$ 4,734
129	Water/Inside/Residential	1"		24,656	18,517	18,517	\$ 1.45	\$ 26,850
130	Water/Inside/Residential	1 1/2"		15,295	16,567	16,567	\$ 1.45	\$ 24,022
131	Water/Inside/Residential	2"		1,523	1,382	1,382	\$ 1.45	\$ 2,004
132	Water/Inside/Residential	3"		0	0	-	\$ 1.45	\$ -
133	Water/Inside/Residential	4"		0	0	-	\$ 1.45	\$ -
134	Water/Inside/Residential	6"		0	0	-	\$ 1.45	\$ -
135		Residential Commodity Charge Billings, Total		170,588	158,568	158,568		\$ 229,924
136	Water/Inside/Commercial	5/8"		24,745	26,236	26,236	\$ 1.45	\$ 38,042
137	Water/Inside/Commercial	3/4"		4,394	4,546	4,546	\$ 1.45	\$ 6,591
138	Water/Inside/Commercial	1"		8,428	8,747	8,747	\$ 1.45	\$ 12,683
139	Water/Inside/Commercial	1 1/2"		10,987	12,624	12,624	\$ 1.45	\$ 18,304
140	Water/Inside/Commercial	2"		38,000	31,843	31,843	\$ 1.45	\$ 46,172
141	Water/Inside/Commercial	3"		247	639	639	\$ 1.45	\$ 926
142	Water/Inside/Commercial	4"		25,914	25,193	25,193	\$ 1.45	\$ 36,529
143	Water/Inside/Commercial	6"		0	0	0	\$ 1.45	\$ -
144		Commercial Commodity Charge Billings, Total		112,715	109,828	109,828		\$ 159,247
145	Water/Inside/Industrial	5/8"		539	1,154	1,154	\$ 1.45	\$ 1,673
146	Water/Inside/Industrial	3/4"		0	0	0	\$ 1.45	\$ -
147	Water/Inside/Industrial	1"		0	0	0	\$ 1.45	\$ -
148	Water/Inside/Industrial	1 1/2"		2,219	1,860	1,860	\$ 1.45	\$ 2,697
149	Water/Inside/Industrial	2"		0	0	0	\$ 1.45	\$ -
150	Water/Inside/Industrial	3"		0	0	0	\$ 1.45	\$ -
151	Water/Inside/Industrial	4"		0	0	0	\$ 1.45	\$ -
152	Water/Inside/Industrial	6"		0	0	0	\$ 1.45	\$ -
153		Industrial Commodity Charge Billings, Total		2,758	3,014	3,014		\$ 4,370
154	Water/Inside/Non-Profit	5/8"		5,972	5,555	5,555	\$ 1.45	\$ 8,054
155	Water/Inside/Non-Profit	3/4"		2,083	2,480	2,480	\$ 1.45	\$ 3,596
156	Water/Inside/Non-Profit	1"		4,899	5,820	5,820	\$ 1.45	\$ 8,439
157	Water/Inside/Non-Profit	1 1/2"		1,560	808	808	\$ 1.45	\$ 1,171
158	Water/Inside/Non-Profit	2"		26,969	27,473	27,473	\$ 1.45	\$ 39,835
159	Water/Inside/Non-Profit	3"		5,419	4,228	4,228	\$ 1.45	\$ 6,130
160	Water/Inside/Non-Profit	4"		38,127	43,740	43,740	\$ 1.45	\$ 63,423
161	Water/Inside/Non-Profit	6"		0	0	0	\$ 1.45	\$ -
162		Non-Profit Commodity Charge Billings, Total		85,029	90,104	90,104		\$ 130,648
163	Second Water Meter/Inside/Residential	Total of all meters		21,936	19,395	19,395	\$ 1.45	\$ 28,122
164	Second Water Meter/Inside/Residential/Lawn	Total of all meters		32,510	27,535	27,535	\$ 1.45	\$ 39,925
165	Second Water Meter/Inside/Commercial	Total of all meters		11,473	11,532	11,532	\$ 1.45	\$ 16,721
166	Second Water Meter/Inside/Commercial/Lawn	Total of all meters		18,693	18,056	18,056	\$ 1.45	\$ 26,181
167	Second Water Meter/Inside/Industrial	Total of all meters		632	740	740	\$ 1.45	\$ 1,073
168	Second Water Meter/Inside/Industrial/Lawn	Total of all meters		24	0	0	\$ 1.45	\$ -
169	Second Water Meter/Inside/Non-Profit	Total of all meters		23,835	19,597	19,597	\$ 1.45	\$ 28,415
170	Second Water Meter/Inside/Non-Profit/Lawn	Total of all meters		9,029	11,675	11,675	\$ 1.45	\$ 16,928
171	Second Water/Inside/5/8" (Garages)	Total of all meters		1,580	2,823	2,823	\$ 1.45	\$ 4,093
172		Rate Codes 1201 to 1401 Commodity Charge Billings, Total		119,712	111,353	111,353		\$ 161,458
173		Commodity Charge Billings, Total Inside City		490,802	472,867	472,867		\$ 685,647
174	OUTSIDE-CITY							
175	Water/Outside/Resort & Bear Creek Twps/Residential	5/8"		15,128	15,683	15,683	\$ 2.18	\$ 34,188
176	Water/Outside/Resort & Bear Creek Twps/Residential	3/4"		249	182	182	\$ 2.18	\$ 396
177	Water/Outside/Resort & Bear Creek Twps/Residential	1"		2,676	2,392	2,392	\$ 2.18	\$ 5,214
178	Water/Outside/Resort & Bear Creek Twps/Residential	1 1/2"		2,584	2,714	2,714	\$ 2.18	\$ 5,916



**Table W2**  
**Projected FY 2019 Water Billings Using FY 2018 Water Rates and Projected FY 2019 Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
179	Water/Outside/Resort & Bear Creek Twps/Residential	2"		15,395	13,999	13,999	\$ 2.18	\$ 30,517
180	Water/Outside/Resort & Bear Creek Twps/Residential	3"		0	0	0	\$ 2.18	\$ -
181	Water/Outside/Resort & Bear Creek Twps/Residential	4"		0	0	0	\$ 2.18	\$ -
182	Water/Outside/Resort & Bear Creek Twps/Residential	6"		0	0	0	\$ 2.18	\$ -
183		Resort & Bear Creek Twps Residential Commodity Charge Billings, Total		36,032	34,970	34,970		\$ 76,231
184	Water/Outside/Resort & Bear Creek Twps/Commercial	5/8"		2,099	1,552	1,552	\$ 2.18	\$ 3,383
185	Water/Outside/Resort & Bear Creek Twps/Commercial	3/4"		1,116	516	516	\$ 2.18	\$ 1,124
186	Water/Outside/Resort & Bear Creek Twps/Commercial	1"		3,043	3,469	3,469	\$ 2.18	\$ 7,562
187	Water/Outside/Resort & Bear Creek Twps/Commercial	1 1/2"		9,540	7,839	7,839	\$ 2.18	\$ 17,089
188	Water/Outside/Resort & Bear Creek Twps/Commercial	2"		38,836	42,853	42,853	\$ 2.18	\$ 93,419
189	Water/Outside/Resort & Bear Creek Twps/Commercial	3"		7,475	6,278	6,278	\$ 2.18	\$ 13,686
190	Water/Outside/Resort & Bear Creek Twps/Commercial	4"		0	0	0	\$ 2.18	\$ -
191	Water/Outside/Resort & Bear Creek Twps/Commercial	6"		0	0	0	\$ 2.18	\$ -
192		Resort & Bear Creek Twps Commercial Commodity Charge Billings, Total		62,109	62,507	62,507		\$ 136,263
193	Water/Outside/Resort & Bear Creek Twps/Industrial	5/8"		0	0	0	\$ 2.18	\$ -
194	Water/Outside/Resort & Bear Creek Twps/Industrial	3/4"		0	0	0	\$ 2.18	\$ -
195	Water/Outside/Resort & Bear Creek Twps/Industrial	1"		899	896	896	\$ 2.18	\$ 1,953
196	Water/Outside/Resort & Bear Creek Twps/Industrial	1 1/2"		0	0	0	\$ 2.18	\$ -
197	Water/Outside/Resort & Bear Creek Twps/Industrial	2"		0	0	0	\$ 2.18	\$ -
198	Water/Outside/Resort & Bear Creek Twps/Industrial	3"		0	0	0	\$ 2.18	\$ -
199	Water/Outside/Resort & Bear Creek Twps/Industrial	4"		0	0	0	\$ 2.18	\$ -
200	Water/Outside/Resort & Bear Creek Twps/Industrial	6"		0	0	0	\$ 2.18	\$ -
201		Resort & Bear Creek Twps Industrial Commodity Charge Billings, Total		899	896	896		\$ 1,953
202	Water/Outside/Resort & Bear Creek Twps/Non-Profit	5/8"		37	60	60	\$ 2.18	\$ 130
203	Water/Outside/Resort & Bear Creek Twps/Non-Profit	3/4"		72	654	654	\$ 2.18	\$ 1,425
204	Water/Outside/Resort & Bear Creek Twps/Non-Profit	1"		462	547	547	\$ 2.18	\$ 1,192
205	Water/Outside/Resort & Bear Creek Twps/Non-Profit	1 1/2"		0	0	0	\$ 2.18	\$ -
206	Water/Outside/Resort & Bear Creek Twps/Non-Profit	2"		864	1,012	1,012	\$ 2.18	\$ 2,206
207	Water/Outside/Resort & Bear Creek Twps/Non-Profit	3"		0	0	0	\$ 2.18	\$ -
208	Water/Outside/Resort & Bear Creek Twps/Non-Profit	4"		0	0	0	\$ 2.18	\$ -
209	Water/Outside/Resort & Bear Creek Twps/Non-Profit	6"		0	0	0	\$ 2.18	\$ -
210		Resort & Bear Creek Twps Non-Profit Commodity Charge Billings, Total		1,435	2,273	2,273		\$ 4,953
211	Second Water/Outside/Resort & Bear Creek Twps/Residential	Total of all meters		1,844	1,286	1,286	\$ 2.18	\$ 2,803
212	Second Water/Outside/Resort & Bear Creek Twps/Residential/Lawn	Total of all meters		447	174	174	\$ 2.18	\$ 379
213	Second Water/Outside/Resort & Bear Creek Twps/Commercial	Total of all meters		13,867	11,989	11,989	\$ 2.18	\$ 26,136
214	Second Water/Outside/Resort & Bear Creek Twps/Commercial/Lawn	Total of all meters		7,235	5,545	5,545	\$ 2.18	\$ 12,088
215	Second Water/Outside/Resort & Bear Creek Twps/Industrial	Total of all meters		0	0	0	\$ 2.18	\$ -
216	Second Water/Outside/Resort & Bear Creek Twps/Industrial/Lawn	Total of all meters		0	0	0	\$ 2.18	\$ -
217	Second Water/Outside/Resort & Bear Creek Twps/Non-Profit	Total of all meters		552	774	774	\$ 2.18	\$ 1,687
218	Second Water/Outside/Resort & Bear Creek Twps/Non-Profit/Lawn	Total of all meters		0	0	0	\$ 2.18	\$ -
219		Resort & Bear Creek Twps 2nd, Lawn Commodity Charge Billings, Total		23,945	19,768	19,768		\$ 43,093

**Table W2**  
**Projected FY 2019 Water Billings Using FY 2018 Water Rates and Projected FY 2019 Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
220		Commodity Charge Billings, Total Outside City		124,420	120,414	120,414		\$ 262,493
221	WA Bay View 6"	Water provided thru a 6" and a 12" main. RTS billed as 6"		28,755	24,974	24,974	\$ 1.82	\$ 45,452
222		Bay View Commodity Charge Billings, Total		28,755	24,974	24,974		\$ 45,452
223		Commodity Charge Billings, Total Inside, Outside City and Bay View		643,977	618,255	618,255		\$ 993,592
224		Total Inside City Billings						\$ 1,638,507
225		Total Outside City Billings						\$ 564,074
226		Total Bay View Billings						\$ 62,327
227		Total Inside City, Outside City and Bay View Billings						\$ 2,264,908

Table W3  
Projected Total Inside-City and Outside-City Water Equivalent Billing Units

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I	J	K	L
1	Projected Annual Water Billing Units										
2		Current Number of Meters Used for Billing for Water and Sewer Service	Meter Rated Capacity, Gallons per Minute (per AWWA)	Readiness to Serve Meter Ratio (Equal to Meter Capacity Divided by 5/8" Meter Capacity)	Annual Billing Units for Meters Used for Water and Sewer Billing Charge (Water and Sewer Billing Charge and RTS Charge Based on 12 Meter Readings per Year)	Annual Billing Units for Meters Used for Lawn Billing Charge (Lawn Billing Charge Based on 2 Meter Readings per Year)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	INSIDE CITY										
4	Growth Rate						0.0%	0.0%	0.0%	0.0%	0.0%
5	Billing Charge Billing Units, Total				36,000	424	36,424	36,424	36,424	36,424	36,424
6	Readiness to Serve Charge Billing Units, by Meter Size										
7	5/8"	2,838	20	1.0	31,656		31,656	31,656	31,656	31,656	31,656
8	3/4"	61	30	1.5	1,098		1,098	1,098	1,098	1,098	1,098
9	1"	201	50	2.5	6,030		6,030	6,030	6,030	6,030	6,030
10	1 1/2"	49	100	5.0	2,940		2,940	2,940	2,940	2,940	2,940
11	2"	42	160	8.0	4,032		4,032	4,032	4,032	4,032	4,032
12	3"	3	350	17.5	630		630	630	630	630	630
13	4"	6	600	30.0	2,160		2,160	2,160	2,160	2,160	2,160
14	6"	0	1,250	62.5	-		-	0	0	0	0
15	Readiness to Serve Charge Billing Units, Total	3,000			48,546		48,546	48,546	48,546	48,546	48,546
16	Commodity Charge Billing Units, All Meter Sizes						472,867	472,867	472,867	472,867	472,867
17	OUTSIDE CITY										
18	Growth Rate						0.0%	0.0%	0.0%	0.0%	0.0%
19	Billing Charge Billing Units, Total (Resort and Bear Creek Townships)				4,500	22	4,522	4,522	4,522	4,522	4,522
20	Readiness to Serve Charge Billing Units, by Meter Size (Resort and Bear Creek Townships)										
21	5/8"	260	20	1.0	3,120		3,120	3,120	3,120	3,120	3,120
22	3/4"	12	30	1.5	216		216	216	216	216	216
23	1"	34	50	2.5	1,020		1,020	1,020	1,020	1,020	1,020
24	1 1/2"	13	100	5.0	780		780	780	780	780	780
25	2"	55	160	8.0	5,280		5,280	5,280	5,280	5,280	5,280
26	3"	1	350	17.5	210		210	210	210	210	210
27	4"	0	600	30.0	0		-	0	0	0	0
28	6"	0	1,250	62.5	0		-	0	0	0	0
29	Readiness to Serve Charge Billing Units, Total (Resort Township and Bear Creek Townships)	375			10,626		10,626	10,626	10,626	10,626	10,626
30	Commodity Charge Billing Units, All Meter Sizes (Resort Township and Bear Creek Townships)						120,414	120,414	120,414	120,414	120,414
31	BAY VIEW										
32	Readiness to Serve Charge Billing Units, by Meter Size										
33	Water provided thru a 6" and a 12" main. RTS billed as 6"	1	1,250	62.5	750						
34	Readiness to Serve Charge Billing Units, Total	1			750		750	750	750	750	750
35	Commodity Charge Billing Units, Total						24,974	24,974	24,974	24,974	24,974
36	PROJECTED TOTAL INSIDE-CITY, OUTSIDE-CITY AND BAY VIEW EQUIVALENT BILLING UNITS										
37	Resort and Bear Creek Township to Inside Equivalent Factor (B)				1.50						
38	Resort and Bear Creek Township to Inside Equivalent Factor (R)				1.50						
39	Resort and Bear Creek Township to Inside Equivalent Factor (C)				1.50						
40					1.25						
41					1.25						
42							FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
43	Total Equivalent Billing Charge Billing Units						43,207	43,207	43,207	43,207	43,207
44	Total Equivalent Readiness to Serve Charge Billing Units						65,423	65,423	65,423	65,423	65,423
45	Total Equivalent Commodity Charge Billing Units						684,706	684,706	684,706	684,706	684,706

Table W4  
Five-Year Water Revenue Adequacy Using Current Water Rates and Required Percent Adjustments

W&S rate study 2018 - final

	B	C	F	G	H	I	J	K
1			Current			Projected		
			FY 2018 Budget (Cash Basis)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2	Account	WATER FUND						
3		EXPENSES:						
4		MAINTENANCE WELLS & STATION						
5	592-537-702.000	SALARIES & WAGES	58,000	59,740	61,532	63,378	65,280	67,238
6	592-537-724.000	FRINGE BENEFITS	4,700	5,170	5,887	6,256	6,881	7,569
7	592-537-775.000	MATERIALS & SUPPLIES	10,000	10,100	10,201	10,303	10,406	10,510
8	592-537-802.000	CONTRACTED SERVICES	46,000	46,460	46,925	47,394	47,868	48,346
9	592-537-947.000	VEHICLE RENTAL	2,200	2,222	2,244	2,267	2,289	2,312
10		TOTAL MAINTENANCE WELLS & STATION	120,900	123,692	126,589	129,597	132,724	135,976
11								
12		PUMPING						
13	592-538-850.000	COMMUNICATIONS	9,200	9,292	9,385	9,479	9,574	9,669
14	592-538-920.000	PUBLIC UTILITIES	184,000	189,520	195,206	201,062	207,094	213,306
15		TOTAL PUMPING	193,200	198,812	204,591	210,541	216,667	222,976
16								
17		WATER PURIFICATION						
18	592-540-702.000	SALARIES & WAGES	3,000	3,090	3,183	3,278	3,377	3,478
19	592-540-724.000	FRINGE BENEFITS	400	440	484	532	586	644
20	592-540-775.000	MATERIALS & SUPPLIES	14,000	14,140	14,281	14,424	14,568	14,714
21	592-540-783.000	CHEMICALS	22,000	24,200	26,820	29,282	32,210	35,431
22	592-540-802.000	CONTRACTED SERVICES	1,000	1,010	1,020	1,030	1,041	1,051
23	592-540-947.000	VEHICLE RENTAL	200	202	204	206	208	210
24		TOTAL WATER PURIFICATION	40,600	43,082	45,792	48,753	51,990	55,529
25								
26		GENERAL DISTRIBUTION						
27	592-542-702.000	SALARIES & WAGES	10,000	10,300	10,609	10,927	11,255	11,593
28	592-542-724.000	FRINGE BENEFITS	1,500	1,650	1,815	1,997	2,196	2,416
29	592-542-775.000	MATERIALS & SUPPLIES	5,900	5,959	6,019	6,079	6,140	6,201
30	592-542-802.000	CONTRACTED SERVICES	8,000	8,080	8,161	8,242	8,325	8,408
31	592-542-920.000	PUBLIC UTILITIES	2,000	2,060	2,122	2,185	2,251	2,319
32	592-543-947.000	VEHICLE RENTAL	100	101	102	103	104	105
33		TOTAL GENERAL DISTRIBUTION	27,500	28,150	28,827	29,533	30,271	31,041
34								
35		MAINTENANCE OF RESERVOIRS						
36	592-543-702.000	SALARIES & WAGES	13,000	13,390	13,792	14,205	14,632	15,071
37	592-543-724.000	FRINGE BENEFITS	1,200	1,320	1,452	1,597	1,757	1,933
38	592-543-775.000	MATERIALS & SUPPLIES	1,000	1,010	1,020	1,030	1,041	1,051
39	592-543-802.000	CONTRACTED SERVICES	13,000	13,130	13,261	13,394	13,528	13,663
40	592-543-947.000	VEHICLE RENTAL	200	202	204	206	208	210
41		TOTAL MAINTENANCE OF RESERVOIRS	28,400	29,052	29,729	30,433	31,165	31,928
42								
43		MAINTENANCE OF MAINS						
44	592-544-702.000	SALARIES & WAGES	32,000	32,980	33,949	34,967	36,016	37,097
45	592-544-724.000	FRINGE BENEFITS	2,800	3,080	3,388	3,727	4,099	4,509
46	592-544-775.000	MATERIALS & SUPPLIES	30,000	30,300	30,603	30,909	31,218	31,530
47	592-544-802.000	CONTRACTED SERVICES	105,000	106,050	107,111	108,182	109,263	110,356
48	592-544-947.000	VEHICLE RENTAL	5,500	5,555	5,611	5,667	5,723	5,781
49		TOTAL MAINTENANCE OF MAINS	175,300	177,945	180,661	183,451	186,321	189,273
50								
51		MAINTENANCE OF SERVICES						
52	592-545-702.000	SALARIES & WAGES	45,000	46,350	47,741	49,173	50,648	52,167
53	592-545-724.000	FRINGE BENEFITS	4,000	4,400	4,840	5,324	5,856	6,442
54	592-545-775.000	MATERIALS & SUPPLIES	15,000	15,150	15,302	15,455	15,609	15,765
55	592-545-802.000	CONTRACTED SERVICES	65,000	65,650	66,307	66,970	67,639	68,316
56	592-545-947.000	VEHICLE RENTAL	18,000	18,180	18,362	18,545	18,731	18,918
57	592-545-960.000	UNCOLLECTABLE ACCOUNTS	8,000	8,000	8,000	8,000	8,000	8,000
58		TOTAL MAINTENANCE OF SERVICES	155,000	157,730	160,550	163,468	166,483	169,608
59								
60		MAINTENANCE OF METERS						
61	592-546-702.000	SALARIES & WAGES	25,000	25,750	26,523	27,318	28,138	28,982
62	592-546-724.000	FRINGE BENEFITS	4,000	4,400	4,840	5,324	5,856	6,442
63	592-546-775.000	MATERIALS & SUPPLIES	50,000	50,500	51,005	51,515	52,030	52,551
64	592-546-802.000	CONTRACTED SERVICES	500	505	510	515	520	526
65	592-546-947.000	VEHICLE RENTAL	500	505	510	515	520	526
66		TOTAL MAINTENANCE OF METERS	80,000	81,660	83,388	85,188	87,065	89,025
67								
68		MAINTENANCE OF HYDRANTS						
69	592-547-702.000	SALARIES & WAGES	16,000	16,480	16,974	17,484	18,008	18,548
70	592-547-724.000	FRINGE BENEFITS	1,500	1,650	1,815	1,997	2,196	2,416
71	592-547-775.000	MATERIALS & SUPPLIES	15,000	15,150	15,302	15,455	15,609	15,765
72	592-547-802.000	CONTRACTED SERVICES	15,500	15,655	15,812	15,970	16,129	16,291
73	592-546-947.000	VEHICLE RENTAL	2,000	2,020	2,040	2,061	2,081	2,102
74		TOTAL MAINTENANCE OF HYDRANTS	50,000	50,955	51,943	52,965	54,024	55,122
75								
76		GENERAL WATER ADMINISTRATION						
77	592-549-702.000	SALARIES & WAGES	104,000	107,120	107,120	107,120	107,120	107,120
78	592-549-702.100	WAGES - SUPERVISORY	-	-	-	-	-	-
79	592-549-724.000	FRINGE BENEFITS	250,000	275,000	302,500	332,750	366,025	402,828
80	592-549-751.000	OFFICE SUPPLIES	10,000	10,100	10,201	10,303	10,406	10,510
81	592-549-787.000	OTHER - UNIFORMS	2,500	2,525	2,550	2,576	2,602	2,628
82	592-549-775.000	MATERIALS & SUPPLIES	2,000	2,020	2,040	2,061	2,081	2,102
83	592-549-785.000	SMALL TOOLS	8,000	8,080	8,161	8,242	8,325	8,408
84	592-549-802.000	CONTRACTED SERVICES	75,000	77,250	79,568	81,955	84,413	86,948
85	592-549-850.000	COMMUNICATIONS	4,200	4,242	4,284	4,327	4,371	4,414
86	592-549-815.000	EDUCATION & TRAINING	13,000	13,130	13,261	13,394	13,528	13,663
87	592-549-937.000	INSURANCE & BONDS	7,000	7,070	7,141	7,212	7,284	7,357
88	592-549-945.000	DPW RENT	9,700	9,797	9,895	9,994	10,094	10,195
89	592-549-945.000	CITY HALL BUILDING RENT	13,000	13,130	13,261	13,394	13,528	13,663
90	592-549-947.000	VEHICLE RENTAL	34,400	34,744	35,091	35,442	35,797	36,155
91	592-549-995.000	UTILITY BILLING COMPONENT OF ADMINISTRATIVE FEES *	103,300	106,399	109,591	112,879	116,265	119,753
92	592-549-995.000	ADMINISTRATIVE FEES LESS UTILITY BILLING *	206,600	212,798	219,182	225,757	232,530	239,506
93		TOTAL GENERAL WATER ADMINISTRATION	842,700	883,405	923,847	967,406	1,014,368	1,065,047
94								
95		TOTAL WATER OPERATING	1,713,600	1,774,483	1,835,916	1,901,333	1,971,077	2,045,525
96								
97	592-550-995.000	WATER PAYMENT IN LIEU OF TAXES TO THE GENERAL FUND	159,100	159,100	159,100	159,100	159,100	159,100
98								
99		PROJECT COST - WATER						

Table W4  
Five-Year Water Revenue Adequacy Using Current Water Rates and Required Percent Adjustments

W&S rate study 2018 - final

	B	C	F	G	H	I	J	K
1			Current			Projected		
2	Account	WATER FUND	FY 2018 Budget (Cash Basis)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
100	592-020-342	Job 918: Emmet Street water main						
101	592-020-342	Job 921: Bayfront Drive water main						
102	592-549-802	MDOT US-31 Water Design	120,000					
103	592-549-802	Telephony Upgrades	5,000					
104	Operating Revenue	US-31 - Lewis Street to Boulder Lane. Highway water main crossings and water main replacement. Paid from operating revenue. (Potential \$100,000 MDOT grant).		250,000				
105	Operating Revenue	Jackson Street - West Mitchel Street to Hospital Ring Road. Replace water mains and components. Paid from operating revenue.			90,000			
106	Operating Revenue	Kalamazoo Avenue - Jennings to Grove Street. Replace water mains and components. Paid from operating revenue.			295,000			
107	Operating Revenue	Miscellaneous water main spot repairs and upgrades. Paid from operating revenue.				150,000		
108	Operating Revenue	Greenwood Road - Sheridan to Charlevoix Avenue. Replace water main along Greenwood Road. Paid from operating revenue.				275,000		
109	Operating Revenue	Lime Kiln Well and Control Building Improvements. Convert from vertical turbine pump to submersible pump system, update chlorine feed system and renovate control and monitoring systems. Paid from operating revenue.				75,000	175,000	
110	Operating Revenue	East Lake - Kalamazoo to Division. Replace water mains in conjunction with street reconstruction. Paid from operating revenue.					273,000	
111	Operating Revenue	Howard Street and miscellaneous water main spot repairs and upgrades. Paid from operating revenue.						290,000
112	Operating Revenue	Miscellaneous water system capital improvements (if projects total is less than \$500,000). Paid from operating revenue. To bring total annual water CIP cost to at least \$500,000 beginning FY 2019.		250,000	115,000	-	52,000	210,000
113		<b>TOTAL PROJECT COST</b>	<b>125,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>
114								
115		DEPRECIATION						
116	592-564-968-000	DEPRECIATION - WATER	0	0	0	0	0	0
117		<b>TOTAL DEPRECIATION</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
118								
119		BOND EXPENSE						
120		Outstanding water bonds: None as of August 2018.						
121	592-565-992-000	INTEREST EXPENSE (6,400 Aug 29 email)	0	0	0	0	0	0
122	592-565-993-000	PAYING AGENT FEES (300 Aug 29 email)	0	0	0	0	0	0
123	592-565-996-000	OTHER EXPENSE (20,000 Aug 29 email)	0	0	0	0	0	0
124		Projected water bonds: None. All capital projects will be paid from operating revenue.						
125		<b>TOTAL BOND EXPENSE</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
126								
127		<b>TOTAL FUND EXPENDITURES</b>	<b>1,997,700</b>	<b>2,433,583</b>	<b>2,495,016</b>	<b>2,560,433</b>	<b>2,630,177</b>	<b>2,704,825</b>
128								
129		REVENUE:						
130	592-081-843-000	NON-PROFIT SALES - WATER	320,000	320,000	320,000	320,000	320,000	320,000
131	592-081-843-100	INDUSTRIAL SALES - WATER	11,000	11,000	11,000	11,000	11,000	11,000
132	592-081-843-200	COMMERCIAL SALES - WATER	680,000	680,000	680,000	680,000	680,000	680,000
133	592-081-843-300	RESIDENTIAL SALES - WATER	1,185,000	1,185,000	1,185,000	1,185,000	1,185,000	1,185,000
134	592-081-843-500	FIRE PROTECTION	30,000	30,000	30,000	30,000	30,000	30,000
135	592-081-843-600	TOWER RENTAL	55,000	55,000	55,000	55,000	55,000	55,000
136	592-081-882-000	OTHER (SCRAP METAL, TURN ON/OFFS)	10,000	10,000	10,000	10,000	10,000	10,000
137	592-082-848-010	PROJECTS - WATER	5,000	5,000	5,000	5,000	5,000	5,000
138	TBD	BOND PROCEEDS (No current or projected)	0	0	0	0	0	0
139	TBD	TRANSFER TO/FROM FUND BALANCE	0	0	0	0	0	0
140	592-082-884-000	INTEREST INCOME	50,000	50,000	50,000	50,000	50,000	50,000
141	592-082-890-000	RESTITUTION	6,000	6,000	6,000	6,000	6,000	6,000
142		<b>TOTAL REVENUE</b>	<b>2,352,000</b>	<b>2,352,000</b>	<b>2,352,000</b>	<b>2,352,000</b>	<b>2,352,000</b>	<b>2,352,000</b>
143								
144		<b>NET REVENUES OVER EXPENDITURES</b>	<b>354,300</b>	<b>(81,583)</b>	<b>(143,016)</b>	<b>(208,433)</b>	<b>(278,177)</b>	<b>(352,825)</b>
145								
146		<b>REVENUE FROM CURRENT RATES</b>	<b>2,196,000</b>	<b>2,196,000</b>	<b>2,196,000</b>	<b>2,196,000</b>	<b>2,196,000</b>	<b>2,196,000</b>
147		Percent Adjustment		3.7%	2.7%	2.8%	2.9%	3.0%
148		FY 2019 Additional Revenue from Rates		81,583	81,583	81,583	81,583	81,583
149		FY 2020 Additional Revenue from Rates			81,433	81,433	81,433	81,433
150		FY 2021 Additional Revenue from Rates				65,417	65,417	65,417
151		FY 2022 Additional Revenue from Rates					89,744	89,744
152		FY 2023 Additional Revenue from Rates						74,447
153		<b>REVENUE FROM ADJUSTED RATES</b>	<b>2,196,000</b>	<b>2,277,583</b>	<b>2,339,016</b>	<b>2,404,433</b>	<b>2,474,177</b>	<b>2,548,825</b>
154		<b>TOTAL ADJUSTED REVENUE</b>	<b>2,352,000</b>	<b>2,433,583</b>	<b>2,495,016</b>	<b>2,560,433</b>	<b>2,630,177</b>	<b>2,704,825</b>
155		<b>NET REVENUES OVER EXPENDITURES</b>	<b>354,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
156								
157		<b>BEGIN OF YEAR UNRESTRICTED WATER FUND BALANCE</b>	<b>2,757,951</b>	<b>3,112,251</b>	<b>3,112,251</b>	<b>3,112,251</b>	<b>3,112,251</b>	<b>3,112,251</b>
158		<b>WITHDRAWALS/ADDITIONS</b>	<b>354,300</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
159		<b>END OF YEAR UNRESTRICTED WATER FUND BALANCE ****</b>	<b>3,112,251</b>	<b>3,112,251</b>	<b>3,112,251</b>	<b>3,112,251</b>	<b>3,112,251</b>	<b>3,112,251</b>
160								
161		Utility Billing Expense assumed = Administrative Fees x 0.33						

**Table W5**  
**Cost Allocations, Net Revenue Recovered by Water Rates, Rate Calculations**

W&S rate study 2018 - final

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	WATER FUND	FY 2019	Allocation to Billing		Allocation to Readiness-to-Serve		Allocation to Commodity		FY 2020	Allocation to Billing		Allocation to Readiness-to-Serve		Allocation to Commodity		FY 2021	Allocation to Billing		Allocation to Readiness-to-Serve	
2	EXPENSES:		Percent	Amount	Percent	Amount	Percent	Amount		Percent	Amount	Percent	Amount	Percent	Amount		Percent	Amount	Percent	Amount
3	TOTAL MAINTENANCE WELLS & STATION	123,692	0.00%	0	0.00%	0	100.00%	123,692	126,589	0.00%	0	0.00%	0	100.00%	126,589	129,597	0.00%	0	0.00%	0
4	TOTAL PUMPING	198,812	0.00%	0	0.00%	0	100.00%	198,812	204,591	0.00%	0	0.00%	0	100.00%	204,591	210,541	0.00%	0	0.00%	0
5	TOTAL WATER PURIFICATION	43,082	0.00%	0	0.00%	0	100.00%	43,082	45,792	0.00%	0	0.00%	0	100.00%	45,792	48,753	0.00%	0	0.00%	0
6	TOTAL GENERAL DISTRIBUTION	28,150	0.00%	0	0.00%	0	100.00%	28,150	28,827	0.00%	0	0.00%	0	100.00%	28,827	29,533	0.00%	0	0.00%	0
7	TOTAL MAINTENANCE OF RESERVOIRS	29,052	0.00%	0	0.00%	0	100.00%	29,052	29,729	0.00%	0	0.00%	0	100.00%	29,729	30,433	0.00%	0	0.00%	0
8	TOTAL MAINTENANCE OF MAINS	177,945	0.00%	0	0.00%	0	100.00%	177,945	180,661	0.00%	0	0.00%	0	100.00%	180,661	183,451	0.00%	0	0.00%	0
9	TOTAL MAINTENANCE OF SERVICES	157,730	0.00%	0	0.00%	0	100.00%	157,730	160,550	0.00%	0	0.00%	0	100.00%	160,550	163,466	0.00%	0	0.00%	0
10	TOTAL MAINTENANCE OF METERS	81,660	0.00%	0	0.00%	0	100.00%	81,660	83,388	0.00%	0	0.00%	0	100.00%	83,388	85,188	0.00%	0	0.00%	0
11	TOTAL MAINTENANCE OF HYDRANTS	50,955	0.00%	0	0.00%	0	100.00%	50,955	51,943	0.00%	0	0.00%	0	100.00%	51,943	52,965	0.00%	0	0.00%	0
12	UTILITY BILLING COMPONENT OF ADMINISTRATIVE FEES *	106,399	100.00%	106,399	0.00%	0	0.00%	0	109,591	100.00%	109,591	0.00%	0	0.00%	0	112,879	100.00%	112,879	0.00%	0
13	GENERAL WATER ADMINISTRATION LESS BILLING*(10/31/18)	777,006	0.00%	0	40.00%	310,802	60.00%	466,204	814,256	0.00%	0	40.00%	325,702	60.00%	488,553	854,527	0.00%	0	40.00%	341,811
14	WATER PAYMENT IN LIEU OF TAXES TO THE GENERAL FUND	159,100	0.00%	0	100.00%	159,100	0.00%	0	159,100	0.00%	0	100.00%	159,100	0.00%	0	159,100	0.00%	0	100.00%	159,100
15	TOTAL PROJECT COST	500,000	0.00%	0	100.00%	500,000	0.00%	0	500,000	0.00%	0	100.00%	500,000	0.00%	0	500,000	0.00%	0	100.00%	500,000
16	TOTAL BOND EXPENSE	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0
17	TOTAL FUND EXPENDITURES	2,433,683		106,399		969,902		1,357,282	2,495,016		109,691		984,802		1,400,623	2,560,433		112,879		1,000,911
18																				
19	OFFSETTING REVENUE																			
20	FIRE PROTECTION	30,000	0.00%	0	0.00%	0	100.00%	30,000	30,000	0.00%	0	0.00%	0	100.00%	30,000	30,000	0.00%	0	0.00%	0
21	TOWER RENTAL	55,000	0.00%	0	0.00%	0	100.00%	55,000	55,000	0.00%	0	0.00%	0	100.00%	55,000	55,000	0.00%	0	0.00%	0
22	OTHER (SCRAP METAL, TURN ON/OFFS)	10,000	0.00%	0	0.00%	0	100.00%	10,000	10,000	0.00%	0	0.00%	0	100.00%	10,000	10,000	0.00%	0	0.00%	0
23	PROJECTS - WATER	5,000	0.00%	0	100.00%	5,000	0.00%	0	5,000	0.00%	0	100.00%	5,000	0.00%	0	5,000	0.00%	0	100.00%	5,000
24	BOND PROCEEDS (No current or projected)	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0
25	TRANSFER TO/FROM FUND BALANCE	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0
26	INTEREST INCOME	50,000	0.00%	0	100.00%	50,000	0.00%	0	50,000	0.00%	0	100.00%	50,000	0.00%	0	50,000	0.00%	0	100.00%	50,000
27	RESTITUTION	6,000	0.00%	0	100.00%	6,000	0.00%	0	6,000	0.00%	0	100.00%	6,000	0.00%	0	6,000	0.00%	0	100.00%	6,000
28	TOTAL - OFFSETTING REVENUE	156,000		0		61,000		95,000	156,000		0		61,000		95,000	156,000		0		61,000
29																				
30	NET REVENUE TO BE RECOVERED BY RATES	\$2,277,583		\$106,399		\$ 908,902		\$1,262,282	\$2,339,016		\$109,691		\$ 923,802		\$1,305,623	\$2,404,433		\$ 112,879		\$ 939,911
31	Total Equivalent Billing Charge Billing Units			43,207							43,207							43,207		
32	Total Equivalent Readiness to Serve Charge Billing Units					65,423							65,423							65,423
33	Total Equivalent Commodity Charge Billing Units							684,706							684,706					
34	Rate per Equivalent Billing Unit			\$ 2.47		\$ 13.90		\$ 1.85			\$ 2.54		\$ 14.13		\$ 1.91			\$ 2.62		\$ 14.37
35	Inside-City Rates			\$ 2.47		\$ 13.90		\$ 1.85			\$ 2.54		\$ 14.13		\$ 1.91			\$ 2.62		\$ 14.37
36	Resort & Bear Creek Township Outside-City Rates			\$ 3.71		\$ 20.65		\$ 2.76			\$ 3.81		\$ 21.20		\$ 2.87			\$ 3.93		\$ 21.66
37	Bay View Rates			N/A		\$ 17.38		\$ 2.32			N/A		\$ 17.67		\$ 2.39			N/A		\$ 17.97
38	* See Table W4 for Utility Billing Component Calculation																			

Table W6  
Cost Allocations, Net Revenue Recovered by Water Rates, Rate Calculations

W&S rate study 2018 - final

	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
	Percent	Allocation to Commodity Amount	FY 2022	Allocation to Billing Percent	Allocation to Billing Amount	Allocation to Billing Percent	Allocation to Billing Amount	Allocation to Billing Percent	Allocation to Billing Amount	FY 2023	Allocation to Billing Percent	Allocation to Billing Amount	Allocation to Billing Percent	Allocation to Billing Amount	Allocation to Billing Percent	Allocation to Billing Amount
1	100.00%	129,597	132,724	0.00%	0	0.00%	0	100.00%	132,724	135,976	0.00%	0	0.00%	0	100.00%	135,976
2	100.00%	210,541	218,697	0.00%	0	0.00%	0	100.00%	218,697	222,976	0.00%	0	0.00%	0	100.00%	222,976
3	100.00%	48,753	51,990	0.00%	0	0.00%	0	100.00%	51,990	55,529	0.00%	0	0.00%	0	100.00%	55,529
4	100.00%	29,533	30,271	0.00%	0	0.00%	0	100.00%	30,271	31,041	0.00%	0	0.00%	0	100.00%	31,041
5	100.00%	30,433	31,165	0.00%	0	0.00%	0	100.00%	31,165	31,928	0.00%	0	0.00%	0	100.00%	31,928
6	100.00%	183,451	188,321	0.00%	0	0.00%	0	100.00%	188,321	189,273	0.00%	0	0.00%	0	100.00%	189,273
7	100.00%	163,466	169,463	0.00%	0	0.00%	0	100.00%	169,463	169,608	0.00%	0	0.00%	0	100.00%	169,608
8	100.00%	85,188	87,065	0.00%	0	0.00%	0	100.00%	87,065	88,025	0.00%	0	0.00%	0	100.00%	88,025
9	100.00%	52,965	54,024	0.00%	0	0.00%	0	100.00%	54,024	55,122	0.00%	0	0.00%	0	100.00%	55,122
10	100.00%	118,265	118,265	100.00%	118,265	100.00%	118,265	100.00%	118,265	119,763	100.00%	119,763	100.00%	119,763	100.00%	119,763
11	60.00%	512,718	899,103	0.00%	0	40.00%	359,241	60.00%	538,862	945,294	0.00%	0	40.00%	378,118	60.00%	587,178
12	0.00%	0	159,100	0.00%	0	100.00%	159,100	0.00%	0	159,100	0.00%	0	100.00%	159,100	0.00%	0
13	0.00%	0	500,000	0.00%	0	100.00%	500,000	0.00%	0	500,000	0.00%	0	100.00%	500,000	0.00%	0
14	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
15	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
16	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
17	0.00%	1,446,644	2,630,177	0.00%	0	100.00%	1,019,341	0.00%	1,495,671	2,704,628	0.00%	0	100.00%	1,037,218	0.00%	1,547,684
18	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
19	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
20	100.00%	30,000	30,000	0.00%	0	0.00%	0	100.00%	30,000	30,000	0.00%	0	0.00%	0	100.00%	30,000
21	100.00%	55,000	55,000	0.00%	0	0.00%	0	100.00%	55,000	55,000	0.00%	0	0.00%	0	100.00%	55,000
22	100.00%	10,000	10,000	0.00%	0	0.00%	0	100.00%	10,000	10,000	0.00%	0	0.00%	0	100.00%	10,000
23	0.00%	0	5,000	0.00%	0	100.00%	5,000	0.00%	0	5,000	0.00%	0	100.00%	5,000	0.00%	0
24	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
25	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
26	0.00%	0	50,000	0.00%	0	100.00%	50,000	0.00%	0	50,000	0.00%	0	100.00%	50,000	0.00%	0
27	0.00%	0	6,000	0.00%	0	100.00%	6,000	0.00%	0	6,000	0.00%	0	100.00%	6,000	0.00%	0
28	0.00%	95,000	186,000	0.00%	0	100.00%	61,000	0.00%	95,000	165,000	0.00%	0	100.00%	61,000	0.00%	95,000
29	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
30	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
31	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
32	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
33	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
34	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
35	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
36	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
37	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
38	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
39	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
40	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
41	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
42	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
43	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
44	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
45	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
46	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
47	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
48	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
49	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
50	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
51	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
52	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
53	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
54	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
55	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
56	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
57	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
58	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
59	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
60	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
61	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
62	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
63	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
64	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
65	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
66	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
67	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
68	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
69	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
70	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
71	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
72	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
73	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
74	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
75	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
76	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
77	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
78	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
79	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
80	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
81	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
82	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
83	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
84	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
85	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	1			



Table W6  
Example Water Bills

W&S rate study 2018 - final

	A	B	C	D	E	F	G	H	I	J	K
1	Inside City					Outside City (Resort & Bear Creek Twps)					
2		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	Usage (Number of 100 Cubic Feet Units per Month):										
4	0										
5	Meter Size: 5/8"										
6	Current Bill	\$ 20.16	\$ 16.37	\$ 16.67	\$ 16.99	\$ 17.34	\$ 30.24	\$ 24.56	\$ 25.01	\$ 25.49	\$ 26.01
7	Proposed Bill	\$ 16.37	\$ 16.67	\$ 16.99	\$ 17.34	\$ 17.71	\$ 24.66	\$ 25.01	\$ 25.49	\$ 26.01	\$ 26.57
8	Change (Percent)	-18.8%	1.8%	1.9%	2.1%	2.1%	-18.8%	1.8%	1.9%	2.0%	2.2%
9	Change (Dollars)	\$ (3.79)	\$ 0.30	\$ 0.32	\$ 0.35	\$ 0.37	\$ (5.68)	\$ 0.45	\$ 0.48	\$ 0.52	\$ 0.56
10	Usage (Number of 100 Cubic Feet Units per Month):										
11	5										
12	Meter Size: 5/8"										
13	Current Bill	\$ 27.41	\$ 25.62	\$ 26.22	\$ 26.89	\$ 27.59	\$ 41.14	\$ 38.46	\$ 39.36	\$ 40.34	\$ 41.41
14	Proposed Bill	\$ 25.62	\$ 26.22	\$ 26.89	\$ 27.59	\$ 28.36	\$ 38.46	\$ 39.36	\$ 40.34	\$ 41.41	\$ 42.57
15	Change (Percent)	-6.5%	2.3%	2.6%	2.6%	2.6%	-6.5%	2.3%	2.5%	2.7%	2.8%
16	Change (Dollars)	\$ (1.79)	\$ 0.60	\$ 0.67	\$ 0.70	\$ 0.77	\$ (2.68)	\$ 0.90	\$ 0.98	\$ 1.07	\$ 1.16
17	Usage (Number of 100 Cubic Feet Units per Month):										
18	10										
19	Meter Size: 5/8"										
20	Current Bill	\$ 34.66	\$ 34.87	\$ 35.77	\$ 36.79	\$ 37.84	\$ 62.04	\$ 52.36	\$ 53.71	\$ 55.19	\$ 56.81
21	Proposed Bill	\$ 34.87	\$ 35.77	\$ 36.79	\$ 37.84	\$ 39.01	\$ 62.36	\$ 53.71	\$ 55.19	\$ 56.81	\$ 58.57
22	Change (Percent)	0.6%	2.6%	2.9%	2.9%	3.1%	0.5%	2.6%	2.8%	2.9%	3.1%
23	Change (Dollars)	\$ 0.21	\$ 0.90	\$ 1.02	\$ 1.05	\$ 1.17	\$ 0.32	\$ 1.35	\$ 1.48	\$ 1.62	\$ 1.76
24	Usage (Number of 100 Cubic Feet Units per Month):										
25	50										
26	Meter Size: 3/4"										
27	Current Bill	\$ 101.66	\$ 115.82	\$ 112.17	\$ 115.99	\$ 119.84	\$ 152.74	\$ 173.99	\$ 179.11	\$ 184.77	\$ 190.99
28	Proposed Bill	\$ 115.82	\$ 112.17	\$ 115.99	\$ 119.84	\$ 124.21	\$ 173.99	\$ 179.11	\$ 184.77	\$ 190.99	\$ 197.77
29	Change (Percent)	13.9%	-3.2%	3.4%	3.3%	3.6%	13.9%	2.9%	3.2%	3.4%	3.5%
30	Change (Dollars)	\$ 14.16	\$ (3.65)	\$ 3.82	\$ 3.85	\$ 4.37	\$ 21.25	\$ 5.12	\$ 5.66	\$ 6.22	\$ 6.78
31	Usage (Number of 100 Cubic Feet Units per Month):										
32	200										
33	Meter Size: 1"										
34	Current Bill	\$ 337.16	\$ 407.22	\$ 419.87	\$ 434.55	\$ 449.30	\$ 606.74	\$ 611.84	\$ 630.81	\$ 651.83	\$ 674.95
35	Proposed Bill	\$ 407.22	\$ 419.87	\$ 434.55	\$ 449.30	\$ 466.11	\$ 611.84	\$ 630.81	\$ 651.83	\$ 674.95	\$ 700.17
36	Change (Percent)	20.8%	3.1%	3.5%	3.4%	3.7%	20.7%	3.1%	3.3%	3.5%	3.7%
37	Change (Dollars)	\$ 70.06	\$ 12.65	\$ 14.68	\$ 14.75	\$ 16.81	\$ 105.10	\$ 18.97	\$ 21.02	\$ 23.12	\$ 25.22
38	Usage (Number of 100 Cubic Feet Units per Month):										
39	600										
40	Meter Size: 2"										
41	Current Bill	\$ 1,016.16	\$ 1,223.67	\$ 1,261.58	\$ 1,305.58	\$ 1,349.82	\$ 1,527.24	\$ 1,838.51	\$ 1,895.41	\$ 1,958.41	\$ 2,027.73
42	Proposed Bill	\$ 1,223.67	\$ 1,261.58	\$ 1,305.58	\$ 1,349.82	\$ 1,400.22	\$ 1,838.51	\$ 1,895.41	\$ 1,958.41	\$ 2,027.73	\$ 2,103.37
43	Change (Percent)	20.4%	3.1%	3.5%	3.4%	3.7%	20.4%	3.1%	3.3%	3.5%	3.7%
44	Change (Dollars)	\$ 207.51	\$ 37.91	\$ 44.00	\$ 44.24	\$ 50.40	\$ 311.27	\$ 56.90	\$ 63.00	\$ 69.32	\$ 75.64
45	Usage (Number of 100 Cubic Feet Units per Month):										
46	1,200										
47	Meter Size: 3"										
48	Current Bill	\$ 2,057.16	\$ 2,465.72	\$ 2,541.82	\$ 2,630.10	\$ 2,718.90	\$ 3,091.74	\$ 3,704.59	\$ 3,818.81	\$ 3,945.23	\$ 4,084.35
49	Proposed Bill	\$ 2,465.72	\$ 2,541.82	\$ 2,630.10	\$ 2,718.90	\$ 2,820.06	\$ 3,704.59	\$ 3,818.81	\$ 3,945.23	\$ 4,084.35	\$ 4,236.17
50	Change (Percent)	19.9%	3.1%	3.5%	3.4%	3.7%	19.8%	3.1%	3.3%	3.5%	3.7%
51	Change (Dollars)	\$ 408.56	\$ 76.10	\$ 88.28	\$ 88.80	\$ 101.16	\$ 612.85	\$ 114.22	\$ 126.42	\$ 139.12	\$ 151.82
52	Usage (Number of 100 Cubic Feet Units per Month):										
53	7,000										
54	Meter Sizes: 4", 4", 2", 5/8", 2", 2", 2"										
55	Current Bill	\$ 11,839.12	\$ 14,259.99	\$ 14,701.87	\$ 15,214.75	\$ 15,730.42	\$ 17,199.68	\$ 20,966.34	\$ 21,821.87	\$ 22,348.27	\$ 23,147.51
56	Proposed Bill	\$ 14,259.99	\$ 14,701.87	\$ 15,214.75	\$ 15,730.42	\$ 16,317.95	\$ 20,966.34	\$ 21,821.87	\$ 22,348.27	\$ 23,147.51	\$ 24,019.59
57	Change (Percent)	20.4%	3.1%	3.5%	3.4%	3.7%	21.9%	3.1%	3.4%	3.6%	3.8%
58	Change (Dollars)	\$ 2,420.87	\$ 441.88	\$ 512.88	\$ 515.67	\$ 587.53	\$ 3,766.66	\$ 655.53	\$ 726.40	\$ 799.24	\$ 872.08
59	Usage (Number of 100 Cubic Feet Units per Month):										
60	2,800										
61	Meter Size: 6"										
62	Current Bill	\$ 5,187.16	\$ 6,051.22	\$ 6,233.67	\$ 6,444.75	\$ 6,657.70	\$ 7,794.74	\$ 9,090.84	\$ 9,364.81	\$ 9,667.43	\$ 10,000.55
63	Proposed Bill	\$ 6,051.22	\$ 6,233.67	\$ 6,444.75	\$ 6,657.70	\$ 6,899.91	\$ 9,090.84	\$ 9,364.81	\$ 9,667.43	\$ 10,000.55	\$ 10,364.17
64	Change (Percent)	16.7%	3.0%	3.4%	3.3%	3.6%	16.6%	3.0%	3.2%	3.4%	3.6%
65	Change (Dollars)	\$ 864.06	\$ 182.45	\$ 211.08	\$ 212.95	\$ 242.21	\$ 1,296.10	\$ 273.97	\$ 302.62	\$ 333.12	\$ 363.62
66							BAYVIEW ANNUAL BILL				
67	Usage (Number of 100 Cubic Feet Units per Year):						FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
68	24,874										
69	Water provided thru a 6" and a 12" main. RTS billed as 6"										
70	Current Bill						\$ 62,327.68	\$ 70,974.68	\$ 72,940.42	\$ 75,413.08	\$ 77,908.18
71	Proposed Bill						\$ 70,974.68	\$ 72,940.42	\$ 75,413.08	\$ 77,908.18	\$ 80,683.14
72	Change (Percent)						13.9%	2.8%	3.4%	3.3%	3.6%
73	Change (Dollars)						\$ 8,647.00	\$ 1,965.74	\$ 2,472.66	\$ 2,485.10	\$ 2,774.96

Table W6 Residential  
Example Water Bills

W&S rate study 2018 - final

	A	B	C	D	E	F	G	H	I	J	K
1	Inside City						Outside City (Resort & Bear Creek Twps)				
2		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	Usage (Number of 100 Cubic Feet Units per Month):										
4	0										
5	Meter Size: 5/8"										
6	Current Bill	\$ 20.16	\$ 16.37	\$ 16.67	\$ 16.99	\$ 17.34	\$ 30.24	\$ 24.56	\$ 25.01	\$ 25.49	\$ 26.01
7	Proposed Bill	\$ 16.37	\$ 16.67	\$ 16.99	\$ 17.34	\$ 17.71	\$ 24.56	\$ 25.01	\$ 25.49	\$ 26.01	\$ 26.57
8	Change (Percent)	-18.8%	1.8%	1.9%	2.1%	2.1%	-18.8%	1.8%	1.9%	2.0%	2.2%
9	Change (Dollars)	\$ (3.79)	\$ 0.30	\$ 0.32	\$ 0.35	\$ 0.37	\$ (5.68)	\$ 0.45	\$ 0.48	\$ 0.52	\$ 0.56
10	Usage (Number of 100 Cubic Feet Units per Month):										
11	1										
12	Meter Size: 5/8"										
13	Current Bill	\$ 21.61	\$ 18.22	\$ 18.58	\$ 18.97	\$ 19.39	\$ 32.42	\$ 27.34	\$ 27.88	\$ 28.46	\$ 29.09
14	Proposed Bill	\$ 18.22	\$ 18.58	\$ 18.97	\$ 19.39	\$ 19.84	\$ 27.34	\$ 27.88	\$ 28.46	\$ 29.09	\$ 29.77
15	Change (Percent)	-15.7%	2.0%	2.1%	2.2%	2.3%	-15.7%	2.0%	2.1%	2.2%	2.3%
16	Change (Dollars)	\$ (3.39)	\$ 0.36	\$ 0.39	\$ 0.42	\$ 0.45	\$ (5.08)	\$ 0.54	\$ 0.58	\$ 0.63	\$ 0.68
17	Usage (Number of 100 Cubic Feet Units per Month):										
18	2										
19	Meter Size: 5/8"										
20	Current Bill	\$ 23.08	\$ 20.07	\$ 20.49	\$ 20.95	\$ 21.44	\$ 34.60	\$ 30.12	\$ 30.75	\$ 31.43	\$ 32.17
21	Proposed Bill	\$ 20.07	\$ 20.49	\$ 20.95	\$ 21.44	\$ 21.97	\$ 30.12	\$ 30.75	\$ 31.43	\$ 32.17	\$ 32.97
22	Change (Percent)	-13.0%	2.1%	2.2%	2.3%	2.5%	-12.9%	2.1%	2.2%	2.4%	2.5%
23	Change (Dollars)	\$ (2.99)	\$ 0.42	\$ 0.46	\$ 0.49	\$ 0.53	\$ (4.48)	\$ 0.63	\$ 0.68	\$ 0.74	\$ 0.80
24	Usage (Number of 100 Cubic Feet Units per Month):										
25	3										
26	Meter Size: 5/8"										
27	Current Bill	\$ 24.51	\$ 21.92	\$ 22.40	\$ 22.93	\$ 23.49	\$ 36.78	\$ 32.90	\$ 33.62	\$ 34.40	\$ 35.25
28	Proposed Bill	\$ 21.92	\$ 22.40	\$ 22.93	\$ 23.49	\$ 24.10	\$ 32.90	\$ 33.62	\$ 34.40	\$ 35.25	\$ 36.17
29	Change (Percent)	-10.6%	2.2%	2.4%	2.4%	2.6%	-10.5%	2.2%	2.3%	2.5%	2.6%
30	Change (Dollars)	\$ (2.59)	\$ 0.48	\$ 0.53	\$ 0.56	\$ 0.61	\$ (3.88)	\$ 0.72	\$ 0.78	\$ 0.85	\$ 0.92
31	Usage (Number of 100 Cubic Feet Units per Month):										
32	4										
33	Meter Size: 5/8"										
34	Current Bill	\$ 25.96	\$ 23.77	\$ 24.31	\$ 24.91	\$ 25.54	\$ 38.96	\$ 35.68	\$ 36.49	\$ 37.37	\$ 38.33
35	Proposed Bill	\$ 23.77	\$ 24.31	\$ 24.91	\$ 25.54	\$ 26.23	\$ 35.68	\$ 36.49	\$ 37.37	\$ 38.33	\$ 39.37
36	Change (Percent)	-8.4%	2.3%	2.5%	2.5%	2.7%	-8.4%	2.3%	2.4%	2.6%	2.7%
37	Change (Dollars)	\$ (2.19)	\$ 0.54	\$ 0.60	\$ 0.63	\$ 0.69	\$ (3.28)	\$ 0.81	\$ 0.88	\$ 0.96	\$ 1.04
38	Usage (Number of 100 Cubic Feet Units per Month):										
39	5										
40	Meter Size: 5/8"										
41	Current Bill	\$ 27.41	\$ 25.62	\$ 26.22	\$ 26.89	\$ 27.59	\$ 41.14	\$ 38.46	\$ 39.36	\$ 40.34	\$ 41.41
42	Proposed Bill	\$ 25.62	\$ 26.22	\$ 26.89	\$ 27.59	\$ 28.36	\$ 38.46	\$ 39.36	\$ 40.34	\$ 41.41	\$ 42.57
43	Change (Percent)	-6.5%	2.3%	2.6%	2.6%	2.8%	-6.5%	2.3%	2.5%	2.7%	2.8%
44	Change (Dollars)	\$ (1.79)	\$ 0.60	\$ 0.67	\$ 0.70	\$ 0.77	\$ (2.68)	\$ 0.90	\$ 0.98	\$ 1.07	\$ 1.16
45	Usage (Number of 100 Cubic Feet Units per Month):										
46	6										
47	Meter Size: 5/8"										
48	Current Bill	\$ 28.86	\$ 27.47	\$ 28.13	\$ 28.87	\$ 29.64	\$ 43.32	\$ 41.24	\$ 42.23	\$ 43.31	\$ 44.49
49	Proposed Bill	\$ 27.47	\$ 28.13	\$ 28.87	\$ 29.64	\$ 30.49	\$ 41.24	\$ 42.23	\$ 43.31	\$ 44.49	\$ 45.77
50	Change (Percent)	-4.8%	2.4%	2.6%	2.7%	2.9%	-4.8%	2.4%	2.6%	2.7%	2.9%
51	Change (Dollars)	\$ (1.39)	\$ 0.66	\$ 0.74	\$ 0.77	\$ 0.85	\$ (2.08)	\$ 0.99	\$ 1.08	\$ 1.18	\$ 1.28
52	Usage (Number of 100 Cubic Feet Units per Month):										
53	7										
54	Meter Size: 5/8"										
55	Current Bill	\$ 30.31	\$ 29.32	\$ 30.04	\$ 30.85	\$ 31.69	\$ 45.60	\$ 44.02	\$ 45.10	\$ 46.28	\$ 47.57
56	Proposed Bill	\$ 29.32	\$ 30.04	\$ 30.85	\$ 31.69	\$ 32.62	\$ 44.02	\$ 45.10	\$ 46.28	\$ 47.57	\$ 48.97
57	Change (Percent)	-3.3%	2.5%	2.7%	2.7%	2.9%	-3.3%	2.5%	2.6%	2.8%	2.9%
58	Change (Dollars)	\$ (0.99)	\$ 0.72	\$ 0.81	\$ 0.84	\$ 0.93	\$ (1.48)	\$ 1.08	\$ 1.18	\$ 1.29	\$ 1.40
59	Usage (Number of 100 Cubic Feet Units per Month):										
60	8										
61	Meter Size: 5/8"										
62	Current Bill	\$ 31.76	\$ 31.17	\$ 31.95	\$ 32.83	\$ 33.74	\$ 47.68	\$ 46.80	\$ 47.97	\$ 49.25	\$ 50.65
63	Proposed Bill	\$ 31.17	\$ 31.95	\$ 32.83	\$ 33.74	\$ 34.75	\$ 46.80	\$ 47.97	\$ 49.25	\$ 50.65	\$ 52.17
64	Change (Percent)	-1.9%	2.5%	2.8%	2.8%	3.0%	-1.8%	2.5%	2.7%	2.8%	3.0%
65	Change (Dollars)	\$ (0.59)	\$ 0.78	\$ 0.88	\$ 0.91	\$ 1.01	\$ (0.88)	\$ 1.17	\$ 1.28	\$ 1.40	\$ 1.52
66	Usage (Number of 100 Cubic Feet Units per Month):										
67	9										
68	Meter Size: 5/8"										
69	Current Bill	\$ 33.21	\$ 33.02	\$ 33.86	\$ 34.81	\$ 35.79	\$ 49.86	\$ 49.58	\$ 50.84	\$ 52.22	\$ 53.73
70	Proposed Bill	\$ 33.02	\$ 33.86	\$ 34.81	\$ 35.79	\$ 36.88	\$ 49.58	\$ 50.84	\$ 52.22	\$ 53.73	\$ 55.37
71	Change (Percent)	-0.6%	2.5%	2.8%	2.8%	3.0%	-0.6%	2.5%	2.7%	2.8%	3.1%
72	Change (Dollars)	\$ (0.19)	\$ 0.84	\$ 0.95	\$ 0.98	\$ 1.09	\$ (0.28)	\$ 1.26	\$ 1.38	\$ 1.51	\$ 1.64
73	Usage (Number of 100 Cubic Feet Units per Month):										
74	10										
75	Meter Size: 5/8"										
76	Current Bill	\$ 34.66	\$ 34.87	\$ 35.74	\$ 36.79	\$ 37.94	\$ 52.04	\$ 52.36	\$ 53.71	\$ 55.19	\$ 56.81
77	Proposed Bill	\$ 34.87	\$ 35.74	\$ 36.79	\$ 37.94	\$ 39.01	\$ 52.36	\$ 53.71	\$ 55.19	\$ 56.81	\$ 58.51
78	Change (Percent)	0.6%	2.6%	2.9%	2.9%	3.1%	0.6%	2.6%	2.8%	2.9%	3.1%
79	Change (Dollars)	\$ 0.21	\$ 0.90	\$ 1.02	\$ 1.05	\$ 1.17	\$ 0.32	\$ 1.35	\$ 1.48	\$ 1.62	\$ 1.76

**Table W7  
Water Rate Revenue Adequacy**

W&S rate study 2018 - final

	A	B	C	D	E
1		<b>FY 2019</b>			
2	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
3		Billing - Inside City	\$ 2.47	36,424	\$ 89,967
4		RTS - Inside City	\$ 13.90	48,546	\$ 674,789
5		Commodity - Inside City	\$ 1.85	472,867	\$ 874,804
6		Billing - Outside City	\$ 3.71	4,522	\$ 16,777
7		RTS - Outside City	\$ 20.85	10,626	\$ 221,552
8		Commodity - Outside City	\$ 2.78	120,414	\$ 334,751
9		RTS - Bayview	\$ 1,086.25	12	\$ 13,035
10		Commodity - Bayview	\$ 2.32	24,974	\$ 57,940
11	\$ 2,277,583	<b>TOTAL</b>			\$ 2,283,616
12	\$ 2,277,583			<b>CLOSURE:</b>	\$ 6,032
13		<b>FY 2020</b>			
14	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
15		Billing - Inside City	\$ 2.54	36,424	\$ 92,517
16		RTS - Inside City	\$ 14.13	48,546	\$ 685,955
17		Commodity - Inside City	\$ 1.91	472,867	\$ 903,176
18		Billing - Outside City	\$ 3.81	4,522	\$ 17,229
19		RTS - Outside City	\$ 21.20	10,626	\$ 225,271
20		Commodity - Outside City	\$ 2.87	120,414	\$ 345,588
21		RTS - Bayview	\$ 1,104.38	12	\$ 13,253
22		Commodity - Bayview	\$ 2.39	24,974	\$ 59,688
23	\$ 2,339,016	<b>TOTAL</b>			\$ 2,342,677
24	\$ 2,339,016			<b>CLOSURE:</b>	\$ 3,660
25		<b>FY 2021</b>			
26	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
27		Billing - Inside City	\$ 2.62	36,424	\$ 95,431
28		RTS - Inside City	\$ 14.37	48,546	\$ 697,606
29		Commodity - Inside City	\$ 1.98	472,867	\$ 936,277
30		Billing - Outside City	\$ 3.93	4,522	\$ 17,771
31		RTS - Outside City	\$ 21.56	10,626	\$ 229,097
32		Commodity - Outside City	\$ 2.97	120,414	\$ 357,630
33		RTS - Bayview	\$ 1,123.13	12	\$ 13,478
34		Commodity - Bayview	\$ 2.48	24,974	\$ 61,936
35	\$ 2,404,433	<b>TOTAL</b>			\$ 2,409,224
36	\$ 2,404,433			<b>CLOSURE:</b>	\$ 4,791
37		<b>FY 2022</b>			
38	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
39		Billing - Inside City	\$ 2.70	36,424	\$ 98,345
40		RTS - Inside City	\$ 14.64	48,546	\$ 710,713
41		Commodity - Inside City	\$ 2.05	472,867	\$ 969,377
42		Billing - Outside City	\$ 4.05	4,522	\$ 18,314
43		RTS - Outside City	\$ 21.96	10,626	\$ 233,347
44		Commodity - Outside City	\$ 3.08	120,414	\$ 370,875
45		RTS - Bayview	\$ 1,143.75	12	\$ 13,725
46		Commodity - Bayview	\$ 2.57	24,974	\$ 64,183
47	\$ 2,474,177	<b>TOTAL</b>			\$ 2,478,880
48	\$ 2,474,177			<b>CLOSURE:</b>	\$ 4,702
49		<b>FY 2023</b>			
50	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
51		Billing - Inside City	\$ 2.78	36,424	\$ 101,259
52		RTS - Inside City	\$ 14.93	48,546	\$ 724,792
53		Commodity - Inside City	\$ 2.13	472,867	\$ 1,007,207
54		Billing - Outside City	\$ 4.17	4,522	\$ 18,857
55		RTS - Outside City	\$ 22.40	10,626	\$ 238,022
56		Commodity - Outside City	\$ 3.20	120,414	\$ 385,325
57		RTS - Bayview	\$ 1,166.88	12	\$ 14,003
58		Commodity - Bayview	\$ 2.67	24,974	\$ 66,681
59	\$ 2,548,625	<b>TOTAL</b>			\$ 2,558,144
60	\$ 2,548,625			<b>CLOSURE:</b>	\$ 7,519
61		<b>FY 2019 to FY2023</b>			
62	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
63		Billing - Inside City			\$ 477,519
64		RTS - Inside City			\$ 3,493,856
65		Commodity - Inside City			\$ 4,690,841
66		Billing - Outside City			\$ 88,948
67		RTS - Outside City			\$ 1,147,289
68		Commodity - Outside City			\$ 1,794,169
69		RTS - Bayview			\$ 67,493
70		Commodity - Bayview			\$ 310,427
71	\$ 12,043,835	<b>TOTAL</b>			\$ 12,070,540
72	\$ 12,043,835			<b>CLOSURE:</b>	\$ 26,705

	A	B Table W7	C	D	W&S rate study 2018 - final
1	<b>Water Rate Revenue Adequacy</b>				
2	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
3		Billing - Inside City	\$ 2.47	36,424	\$ 89,967
4		RTS - Inside City	\$ 13.90	48,546	\$ 674,789
5		Commodity - Inside City	\$ 1.85	472,867	\$ 874,804
6		Billing - Outside City	\$ 3.71	4,522	\$ 16,777
7		RTS - Outside City	\$ 20.85	10,626	\$ 221,552
8		Commodity - Outside City	\$ 2.78	120,414	\$ 334,751
9		RTS - Bayview	\$ 1,086.25	12	\$ 13,035
10		Commodity - Bayview	\$ 2.32	24,974	\$ 57,940
11	\$ 2,277,583	<b>TOTAL</b>			\$ 2,283,615
12	\$ 2,277,583			<b>CLOSURE:</b>	\$ 6,032
13	<b>FY 2020</b>				
14	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
15		Billing - Inside City	\$ 2.54	36,424	\$ 92,517
16		RTS - Inside City	\$ 14.13	48,546	\$ 685,955
17		Commodity - Inside City	\$ 1.91	472,867	\$ 903,176
18		Billing - Outside City	\$ 3.81	4,522	\$ 17,229
19		RTS - Outside City	\$ 21.20	10,626	\$ 225,271
20		Commodity - Outside City	\$ 2.87	120,414	\$ 345,588
21		RTS - Bayview	\$ 1,104.38	12	\$ 13,253
22		Commodity - Bayview	\$ 2.39	24,974	\$ 59,688
23	\$ 2,339,016	<b>TOTAL</b>			\$ 2,342,677
24	\$ 2,339,016			<b>CLOSURE:</b>	\$ 3,660
25	<b>FY 2021</b>				
26	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
27		Billing - Inside City	\$ 2.62	36,424	\$ 95,431
28		RTS - Inside City	\$ 14.37	48,546	\$ 697,606
29		Commodity - Inside City	\$ 1.98	472,867	\$ 936,277
30		Billing - Outside City	\$ 3.93	4,522	\$ 17,771
31		RTS - Outside City	\$ 21.56	10,626	\$ 229,097
32		Commodity - Outside City	\$ 2.97	120,414	\$ 357,630
33		RTS - Bayview	\$ 1,123.13	12	\$ 13,478
34		Commodity - Bayview	\$ 2.48	24,974	\$ 61,936
35	\$ 2,404,433	<b>TOTAL</b>			\$ 2,409,224
36	\$ 2,404,433			<b>CLOSURE:</b>	\$ 4,791
37	<b>FY 2022</b>				
38	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
39		Billing - Inside City	\$ 2.70	36,424	\$ 98,345
40		RTS - Inside City	\$ 14.64	48,546	\$ 710,713
41		Commodity - Inside City	\$ 2.05	472,867	\$ 969,377
42		Billing - Outside City	\$ 4.05	4,522	\$ 18,314
43		RTS - Outside City	\$ 21.96	10,626	\$ 233,347
44		Commodity - Outside City	\$ 3.08	120,414	\$ 370,875
45		RTS - Bayview	\$ 1,143.75	12	\$ 13,725
46		Commodity - Bayview	\$ 2.57	24,974	\$ 64,183
47	\$ 2,474,177	<b>TOTAL</b>			\$ 2,478,880
48	\$ 2,474,177			<b>CLOSURE:</b>	\$ 4,702
49	<b>FY 2023</b>				
50	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
51		Billing - Inside City	\$ 2.78	36,424	\$ 101,259
52		RTS - Inside City	\$ 14.93	48,546	\$ 724,792
53		Commodity - Inside City	\$ 2.13	472,867	\$ 1,007,207
54		Billing - Outside City	\$ 4.17	4,522	\$ 18,857
55		RTS - Outside City	\$ 22.40	10,626	\$ 238,022
56		Commodity - Outside City	\$ 3.20	120,414	\$ 385,325
57		RTS - Bayview	\$ 1,166.88	12	\$ 14,003
58		Commodity - Bayview	\$ 2.67	24,974	\$ 66,681
59	\$ 2,548,625	<b>TOTAL</b>			\$ 2,556,144
60	\$ 2,548,625			<b>CLOSURE:</b>	\$ 7,519
61	<b>FY 2019 to FY2023</b>				
62	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
63		Billing - Inside City			\$ 477,519
64		RTS - Inside City			\$ 3,493,856
65		Commodity - Inside City			\$ 4,690,841
66		Billing - Outside City			\$ 88,948
67		RTS - Outside City			\$ 1,147,289
68		Commodity - Outside City			\$ 1,794,169
69		RTS - Bayview			\$ 67,493
70		Commodity - Bayview			\$ 12,120,180
71	\$ 12,043,835	<b>TOTAL</b>			\$ 12,070,540
72	\$ 12,043,835			<b>CLOSURE:</b>	\$ 26,705

Table W8  
Local Replacement Value of Water Facilities

W&S rate study 2018 - final

Asset No.	Facility Name/Location	Year Acquired	ENR Factor in Year Acquired	Useful Life (Yrs)	Total Amount Paid (\$)	Amount Locally Paid (\$)	Others Paid	ENR Factor to September, 2018	Local Replacement Value September, 2018 (\$)
Land & Rights									
592-020-310.09.01	Strathmore Well Purchase	2009	8,570	25	260,795	260,795	0	1.3034	339,919
592-020-310.95.01	Beginning Balances	1995		0	20,610	20,610	0		20,610
592-020-310.10.01	Petoskey School Well Site	2010		0	199,874	199,874	0		199,874
592-020-310.96.01	Water Storage Tank Site	1996		0	503,138	503,138	0		503,138
Pumping System									
592-020-321.00.01	Structures & Imp 1958 - 1969	1969	1,300	25	117,471	117,471	0	8.5925	1,009,372
592-020-321.06.01	Anderson Rd. Well Site	2006	7,751	20	37,495	37,495	0	1.4411	54,034
592-020-321.00.01	Well monitoring - Waterfront S	2007	7,967	20	41,794	41,794	0	1.4021	58,598
592-020-321.10.02	Production Wells-Intertown	2010			179,526				
592-020-321.10.03	Bay Harbor-Preserve Wells	2010			594,785				
592-020-321.10.04	Northman Drive Wells	2010			101,109				
592-020-321.10.05	Ingalls Pump Station	2010			13,887				
592-020-321.11.01	Preserve Wells	2011			239,715				
592-020-321.11.02	Northman Drive Wells	2011			1,662,155				
592-020-321.11.03	Ingalls Pump Station - Renovations	2011			219,002				
592-020-321.80.01	Improvements - 1980	1980	3,237	25	2,433	2,433	0	3.4505	8,395
592-020-321.83.01	Jobs 317 & 416	1983	4,067	25	73,164	73,164	0	2.7485	200,941
592-020-321.84.01	Job 546 Chlorinator	1984	4,148	25	7,485	7,485	0	2.6930	20,157
592-020-321.85.01	Job 443 Pump house	1985	4,194	25	188,829	188,829	0	2.6637	502,978
592-020-321.85.02	Heater Ingalls Pumphouse	1985	4,194	25	1,959	1,959	0	2.6637	5,218
592-020-321.87.01	Final on Pumphouse Imp	1987	4,392	25	100	100	0	2.5432	254
592-020-321.89.01	Job 886 Test Wells	1989	4,606	25	38,410	38,410	0	2.4250	93,145
592-020-321.90.01	Job 178 Landscaping Pumphouse	1990	4,726	25	34,127	34,127	0	2.3828	80,634
592-020-321.91.01	Improvements 1991	1991	4,834	25	2,867	2,867	0	2.3106	6,824
592-020-321.94.01	Job 571	1994	5,410	10	2,626	2,626	0	2.0648	5,422
592-020-321.95.01	Aurora GSS Pump	1995	5,471	5	1,691	1,691	0	2.0417	3,453
592-020-321.95.02	Neptune chemical Mixer	1995	5,471	5	3,939	3,939	0	2.0417	8,042
592-020-321.96.02	Chlorinators (2)	1996	5,618	5	2,815	2,815	0	1.9883	5,597
592-020-321.96.04	Townsend Road Site	1996	5,618	40	100,000	99,999	1	1.9883	198,826
592-020-321.96.07	Preserve Drive Well Site	1996	5,618	40	325,000	324,998	2	1.9883	648,186
592-020-321.96.08	Bay Harbor Watermains, Easemen	1996	5,618	40	1,625,000	1,624,997	3	1.9883	3,230,946
592-020-321.97.01	50 Gallon Tank with Mixer	1997	5,823	5	1,064	1,064	0	1.9183	2,041
592-020-321.98.01	Bay Harbor Wells/Job 676	1998	5,820	30	531,852	531,852	0	1.8889	1,003,575
592-020-321.99.01	Booster Station US 31	1999	6,059	10	26,192	26,192	0	1.8434	48,283
592-020-321.99.02	Ingalls' Pump Rebuild	1999	6,059	10	15,764	15,764	0	1.8434	29,060
592-020-325.65.01	Pump Equipment 1956 - 1965	1965	971	33	36,290	36,290	0	11.5039	417,476
592-020-325.75.01	Pump Equipment	1975	2,212	33	1,461	1,461	0	5.0499	7,378
592-020-325.78.01	Pump Equipment - 1978	1978	2,776	10	39	39	0	4.0239	157
592-020-325.79.01	Pump Equipment	1979	3,003	33	4,569	4,569	0	3.7201	16,997
592-020-325.80.01	Pump Equipment - 1980	1980	3,237	33	22,048	22,048	0	3.4505	76,070
592-020-325.81.01	Pump Equipment - 1981	1981	3,533	33	1,353	1,353	0	3.1614	4,277
592-020-325.82.01	Pump Equipment - 1982	1982	3,816	33	1,555	1,555	0	2.9272	4,552
592-020-325.83.01	Pump Equipment - 1983	1983	4,067	10	104	104	0	2.7485	288
592-020-325.84.01	Pump Equipment - 1984	1984	4,148	33	1,374	1,374	0	2.6930	3,700
592-020-325.85.01	Pump Equipment - 1985	1985	4,194	33	5,663	5,663	0	2.6637	15,084
592-020-325.86.01	Pump Equipment - 1986	1986	4,287	33	5,111	5,111	0	2.6055	13,317
592-020-325.87.01	Pump Equipment - 1987	1987	4,392	33	78,456	78,456	0	2.5432	199,530
592-020-325.89.01	Pump Equipment - 1989	1989	4,606	33	34,056	34,056	0	2.4250	82,587
592-020-325.90.01	Pump Equipment - 1990	1990	4,726	33	29,010	29,010	0	2.3828	68,544
592-020-325.92.01	Pump Equipment - 1992	1992	4,985	1	339	339	0	2.2410	760
592-020-325.94.01	Pump Equipment - 1994	1994	5,410	33	8,536	8,536	0	2.0648	17,625
592-020-321.12.06	Northman Drive Wells-2012	2012	9,308	25	99,710	99,709	1	1.2001	119,656
592-020-321.12.07	Ingalls Pump Station	2012	9,308	25	81,573	81,571	2	1.2001	97,890
592-020-321.16.01	Water Tower Painting US-131	2016	10,339	20	293,254	293,251	3	1.0804	316,836
Distribution System									
592-020-342.00.01	Meters	2000	6,221	10	13,759	13,759	0	1.7955	24,705
592-020-342.00.02	Watermain Anderson Road	2000	6,221	30	92,422	92,422	0	1.7955	165,947
592-020-342.01.01	Watermain E of Middle School	2001	6,342	30	33,161	33,161	0	1.7813	58,406
592-020-342.02.01	Middle & High School Main	2002	6,538	50	13,763	13,763	0	1.7085	23,515
592-020-342.02.02	Spencer & Quinlan St Main	2002	6,538	50	59,996	59,996	0	1.7085	102,505
592-020-342.03.01	Atkins Rd Watermain Extension	2003	6,895	50	261,454	261,454	0	1.6885	438,247
592-020-342.03.02	Belle Ave Reconstruction	2003	6,895	50	116,963	116,963	0	1.6885	195,157
592-020-342.03.03	Standish Avenue	2003	6,895	50	85,434	85,434	0	1.6885	142,550
592-020-342.03.04	Hill Street	2003	6,895	50	27,608	27,608	0	1.6885	46,065
592-020-342.03.05	Spruce Street	2003	6,895	50	69,539	69,539	0	1.6885	116,029
592-020-342.03.06	Jackson Street	2003	6,895	50	10,450	10,450	0	1.6885	17,436
592-020-342.03.07	Hoffman, Lindel & Karmol Ct	2003	6,895	50	4,420	4,420	0	1.6885	7,375
592-020-342.03.08	Anderson Lane - Hydrants	2003	6,895	25	8,840	8,840	0	1.6885	14,750
592-020-342.05.01	W. Lake St. Water main	2005	7,444	20	462,234	462,234	0	1.5005	693,604
592-020-342.06.02	Watermain Liberty/W Jefferson	2006	7,751	20	183,740	183,740	0	1.4411	284,788
592-020-342.07.01	Watermain - Liberty, Madison Grac	2007	7,967	20	85,793	85,793	0	1.4021	120,288
592-020-342.07.02	Watermain - Resort Pike 16"	2007	7,967	20	32,235	32,235	0	1.4021	45,196
592-020-342.07.03	Watermain - Chx, Maple, Branch	2007	7,967	20	37,062	37,062	0	1.4021	51,964
592-020-342.07.04	Watermain - Lincoln Place	2007	7,967	20	77,408	77,408	0	1.4021	108,532
592-020-342.07.05	Watermain - East Mitchell	2007	7,967	20	52,520	52,520	0	1.4021	73,637
592-020-342.08.01	East Mitchell Watermain	2008	8,310	20	781,713	781,713	0	1.3442	1,050,778
592-020-342.10.06	E. Mitchell Watermain	2010	8,799	20	26,107	26,107	0	1.2695	33,143
592-020-342.10.07	System Wide Upgrade	2010	8,799	20	43,968	43,968	0	1.2695	55,818
592-020-342.10.08	Wachtel, Jackson, Ione Watermain	2010	8,799	20	141,778	141,778	0	1.2695	179,989
592-020-342.11.01	Atkins/Kalamazoo Watermain	2011	9,070	25	115,756	115,756	0	1.2316	142,564
592-020-342.66.01	Storage Reservoir 66-83	1966	1,019	33	79,329	79,329	0	10.9620	869,605
592-020-342.87.01	Job 679 Lockwood 1987	1987	4,392	33	419,546	419,546	0	2.5432	1,068,991
592-020-342.94.01	Job 545 Water Taps 1994	1994	5,410	10	2,534	2,534	0	2.0648	5,232
592-020-342.94.02	Job 565 Street Project	1994	5,410	10	23,066	23,066	0	2.0648	47,627
592-020-342.95.01	Rockwell Meters - 60	1995	5,471	10	3,597	3,597	0	2.0417	7,344
592-020-342.95.02	Job 643 Water Taps - 95	1995	5,471	10	243	243	0	2.0417	496
592-020-342.97.01	4" Sensus Meter	1997	5,823	10	2,832	2,832	0	1.9183	5,433
592-020-342.97.02	Ingalls Wellhouse Landscape	1997	5,823	10	2,704	2,704	0	1.9183	5,187
592-020-342.97.03	CBD Water Mains & Services	1997	5,823	30	183,145	183,145	0	1.9183	351,334
592-020-342.97.04	Lake/US 31 Watermain	1997	5,823	30	29,431	29,431	0	1.9183	56,459
592-020-342.98.01	Bay Harbor Watermains Job	1998	5,920	40	531,852	531,852	0	1.8889	1,003,575
592-020-342.98.02	Water Transmission Main Job	1998	5,920	40	3,919,335	3,919,335	0	1.8869	7,395,563
592-020-342.98.03	(2) 4" Meters	1998	5,920	10	6,611	6,611	0	1.8869	12,475
592-020-342.99.01	East Mitchell Watermain	1998	5,920	10	87,547	87,547	0	1.8434	161,386
592-020-342.99.02	Watermain - Friendship Cent	1998	6,059	30	3,645	3,645	0	1.8434	6,719
592-020-343.58.01	Mains 1958	1958	759	66	43,036	43,036	0	14.7171	633,365
592-020-343.59.01	Mains 1959	1959	797	66	8,917	8,917	0	14.0154	124,975

Table W8  
Local Replacement Value of Water Facilities

W&S rate study 2018 - final

Asset No.	Facility Name/Location	Year Acquired	ENR Factor in Year Acquired	Useful Life (Yrs)	Total Amount Paid (\$)	Amount Locally Paid (\$)	Others Paid	ENR Factor to September, 2018	Local Replacement Value September, 2018 (\$)
592-020-343.60.01	Mains 1960	1960	824	66	9,727	9,727	0	13.5562	131,861
592-020-343.61.01	Mains 1961	1961	847	66	781	781	0	13.1881	10,300
592-020-343.62.01	Mains 1962	1962	872	66	7,681	7,681	0	12.8100	98,393
592-020-343.64.01	Mains 1964	1964	936	66	13,460	13,460	0	11.9341	160,632
592-020-343.65.01	Mains 1965	1965	971	66	13,346	13,346	0	11.5039	153,531
592-020-343.66.01	Mains 1966	1966	1,019	66	42,590	42,590	0	10.9620	466,872
592-020-343.67.01	Mains 1967	1967	1,074	66	30,879	30,879	0	10.4006	321,161
592-020-343.68.01	Mains 1968	1968	1,155	66	4,174	4,174	0	9.6712	40,368
592-020-343.69.01	Mains 1969	1969	1,300	66	8,412	8,412	0	8.5925	72,280
592-020-343.70.01	Mains 1970	1970	1,450	66	12,894	12,894	0	7.7036	99,331
592-020-343.71.01	Mains 1971	1971	1,581	66	4,343	4,343	0	7.0653	30,885
592-020-343.72.01	Mains 1972	1972	1,753	66	51,178	51,178	0	6.3721	328,111
592-020-343.73.01	Mains 1973	1973	1,900	66	42,053	42,053	0	5.8791	247,234
592-020-343.74.01	Mains 1974	1974	2,020	66	7,858	7,858	0	5.5298	43,453
592-020-343.75.01	Mains 1975	1975	2,212	66	20,422	20,422	0	5.0499	103,128
592-020-343.76.01	Mains 1976	1976	2,400	66	7,176	7,176	0	4.6544	33,400
592-020-343.77.01	Mains 1977	1977	2,577	66	25,680	25,680	0	4.3352	111,329
592-020-343.78.01	Mains 1978	1978	2,776	66	12,636	12,636	0	4.0239	50,846
592-020-343.79.01	Mains 1979	1979	3,003	66	148,842	148,842	0	3.7201	553,710
592-020-343.80.01	Mains 1980	1980	3,237	66	22,238	22,238	0	3.4505	78,733
592-020-343.83.01	Mains 1983	1983	4,067	66	84,150	84,150	0	2.7465	231,114
592-020-343.84.01	Mains 1984	1984	4,148	66	316,679	316,679	0	2.6930	852,802
592-020-343.86.01	Hydraulic Valve Opener	1986	4,287	15	11,571	11,571	0	2.6055	30,148
592-020-343.87.01	Job 688 Mitchell to Lockwo	1987	4,392	66	298,326	298,326	0	2.5432	758,704
592-020-343.87.02	Job 713 Bay Street	1987	4,392	66	55,338	55,338	0	2.5432	140,736
592-020-343.87.03	Job 851 & Job 873	1987	4,392	66	11,482	11,482	0	2.5432	29,201
592-020-343.89.01	Job 103 & Job 910	1989	4,606	66	4,065	4,065	0	2.4250	9,858
592-020-343.90.01	Job 170 City Hall Water Serv	1990	4,728	66	25,352	25,352	0	2.3628	59,901
592-020-343.91.01	Mains 1991	1991	4,834	66	2,793	2,793	0	2.3106	6,453
592-020-343.92.01	Mains 1992	1992	4,985	66	31,620	31,620	0	2.2410	70,860
592-020-343.93.01	Mains 1993	1993	5,211	66	15,424	15,424	0	2.1437	33,065
592-020-343.94.01	Mains 1994	1994	5,410	66	2,186	2,186	0	2.0648	4,514
592-020-343.94.02	Job 592	1994	5,410	66	14,422	14,422	0	2.0648	29,779
592-020-345.58.01	New Services 1958	1958	759	66	16,182	16,182	0	14.7171	238,152
592-020-345.65.01	New Services 1962/1965	1965	971	10	837	837	0	11.5039	9,629
592-020-345.66.01	New Services 1966	1966	1,019	66	1,067	1,067	0	10.9620	11,696
592-020-345.67.01	New Services 1967	1967	1,074	66	1,635	1,635	0	10.4006	17,005
592-020-345.68.01	New Services 1968	1968	1,155	66	1,833	1,833	0	9.6712	17,727
592-020-345.69.01	New Services 1969	1969	1,300	10	881	881	0	8.5925	7,570
592-020-345.70.01	New Services 1970	1970	1,450	66	3,288	3,288	0	7.7036	25,330
592-020-345.71.01	New Services 1971	1971	1,581	66	3,062	3,062	0	7.0653	21,634
592-020-345.72.01	New Services 1972	1972	1,753	66	2,713	2,713	0	6.3721	17,287
592-020-345.73.01	New Services 1973	1973	1,900	66	6,743	6,743	0	5.8791	39,643
592-020-345.74.01	New Services 1974	1974	2,020	66	2,222	2,222	0	5.5298	12,287
592-020-345.75.01	New Services 1975	1975	2,212	66	2,444	2,444	0	5.0499	12,342
592-020-345.76.01	New Services 1976	1976	2,400	66	4,049	4,049	0	4.6544	18,846
592-020-345.77.01	New Services 1977	1977	2,577	66	6,722	6,722	0	4.3352	29,141
592-020-345.78.01	New Services 1978	1978	2,776	66	7,410	7,410	0	4.0239	29,817
592-020-345.79.01	New Services 1979	1979	3,003	66	4,133	4,133	0	3.7201	15,375
592-020-345.80.01	New Services 1980	1980	3,237	66	3,561	3,561	0	3.4505	12,287
592-020-345.81.01	New Services 1981	1981	3,533	66	10,593	10,593	0	3.1614	33,489
592-020-345.82.01	New Services 1982	1982	3,816	66	4,141	4,141	0	2.9272	12,121
592-020-345.83.01	New Services 1983	1983	4,067	66	5,374	5,374	0	2.7465	14,759
592-020-345.84.01	Job 506	1984	4,148	66	5,081	5,081	0	2.6930	13,663
592-020-345.85.01	Job 627	1985	4,194	66	1,578	1,578	0	2.6637	4,203
592-020-345.86.01	Job 645	1986	4,287	66	2,482	2,482	0	2.6055	6,467
592-020-345.87.01	Job 722	1987	4,392	66	4,156	4,156	0	2.5432	10,570
592-020-345.88.01	Job 722	1988	4,519	66	2,347	2,347	0	2.4716	5,801
592-020-345.89.01	Job 986 Water Taps	1989	4,606	66	3,603	3,603	0	2.4250	8,737
592-020-345.90.01	Job 167 Water Taps	1990	4,728	66	3,252	3,252	0	2.3628	7,684
592-020-345.91.01	Job 251 and Others	1991	4,834	66	1,355	1,355	0	2.3106	3,131
592-020-345.92.01	Job 251 Ans WSP Work	1992	4,985	66	17,826	17,826	0	2.2410	39,948
592-020-345.93.01	Job 433 Water Taps	1993	5,211	25	1,392	1,392	0	2.1437	2,984
592-020-346.58.01	Meters 1958	1958	759	50	9,073	9,073	0	14.7171	133,528
592-020-346.59.01	Meters 1958 & 1959	1959	797	10	300	300	0	14.0154	4,205
592-020-346.60.01	Meters 1960	1960	824	50	1,373	1,373	0	13.5562	18,613
592-020-346.62.01	Meters 1962	1962	872	50	1,962	1,962	0	12.8100	25,133
592-020-346.63.01	Meters 1961 & 1963	1963	901	50	327	327	0	12.3976	4,054
592-020-346.64.01	Meters 1964	1964	936	50	1,485	1,485	0	11.9341	17,722
592-020-346.65.01	Meters 1965	1965	971	50	2,006	2,006	0	11.5039	23,077
592-020-346.66.01	Meters 1966	1966	1,019	50	1,440	1,440	0	10.9620	15,785
592-020-346.67.01	Meters 1967	1967	1,074	50	4,748	4,748	0	10.4006	49,382
592-020-346.68.01	Meters 1968	1968	1,155	50	5,381	5,381	0	9.6712	52,041
592-020-346.69.01	Meters 1969	1969	1,300	50	3,259	3,259	0	8.5925	28,003
592-020-346.70.01	Meters 1970	1970	1,450	50	3,545	3,545	0	7.7036	27,309
592-020-346.71.01	Meters 1971	1971	1,581	50	5,162	5,162	0	7.0653	36,471
592-020-346.72.01	Meters 1972	1972	1,753	50	5,418	5,418	0	6.3721	34,524
592-020-346.73.01	Meters 1973	1973	1,900	50	5,343	5,343	0	5.8791	31,412
592-020-346.74.01	Meters 1974	1974	2,020	50	5,351	5,351	0	5.5298	29,590
592-020-346.75.01	Meters 1975	1975	2,212	50	4,699	4,699	0	5.0499	23,729
592-020-346.76.01	Meters 1976	1976	2,400	50	4,943	4,943	0	4.6544	23,007
592-020-346.77.01	Meters 1977	1977	2,577	50	2,414	2,414	0	4.3352	10,465
592-020-346.78.01	Meters 1978	1978	2,776	50	7,794	7,794	0	4.0239	31,362
592-020-346.79.01	Meters 1979	1979	3,003	50	10,546	10,546	0	3.7201	39,232
592-020-346.80.01	Meters 1980	1980	3,237	50	10,604	10,604	0	3.4505	36,589
592-020-346.81.01	Meters 1981	1981	3,533	50	9,156	9,156	0	3.1614	28,948
592-020-346.82.01	Meters 1982	1982	3,816	50	7,390	7,390	0	2.9272	21,632
592-020-346.83.01	Meters 1983	1983	4,067	50	5,528	5,528	0	2.7465	15,182
592-020-346.84.01	Meters 1984	1984	4,148	50	3,277	3,277	0	2.6930	8,825
592-020-346.85.01	Meters 1985	1985	4,194	50	5,168	5,168	0	2.6637	13,766
592-020-346.86.01	Meters 1986	1986	4,287	50	3,511	3,511	0	2.6055	9,148
592-020-346.87.01	Meters 1987	1987	4,392	50	1,160	1,160	0	2.5432	2,950
592-020-346.88.01	Meters 1988	1988	4,519	50	7,804	7,804	0	2.4716	19,268
592-020-346.89.01	Meters 1989	1989	4,606	50	635	635	0	2.4250	1,540
592-020-346.90.01	Meters 1990	1990	4,728	50	10,736	10,736	0	2.3628	128,850
592-020-346.91.01	Meters 1991	1991	4,834	50	5,246	5,246	0	2.3106	12,121
592-020-348.58.01	Fire Hydrants	1958	759	66	2,356	2,356	0	14.7171	34,673
592-020-348.58.02	Hydrants	1958	759	10	859	859	0	14.7171	12,842

Table W8  
Local Replacement Value of Water Facilities

W&S rate study 2018 - final

Asset No.	Facility Name/Location	Year Acquired	ENR Factor in Year Acquired	Useful Life (Yrs)	Total Amount Paid (\$)	Amount Locally Paid (\$)	Others Paid	ENR Factor to September 1, 2018	Local Replacement Value September, 2018 (\$)
592-020-348.59.01	Fire Hydrants	1959	797	66	2,000	2,000	0	14.0154	28,031
592-020-348.62.01	Fire Hydrants 1962	1962	872	66	1,009	1,009	0	12.8100	12,925
592-020-348.71.01	Fire Hydrants 1971	1971	1,581	66	1,350	1,350	0	7.0653	9,538
592-020-348.72.01	Fire Hydrants 1960 thru 1972	1972	1,753	10	3,535	3,535	0	6.3721	22,525
592-020-348.73.01	Fire Hydrants 1973	1973	1,900	66	3,264	3,264	0	5.8791	19,189
592-020-348.76.01	Fire Hydrants 1976	1976	2,400	66	1,000	1,000	0	4.6544	4,654
592-020-348.77.01	Fire Hydrants 1977	1977	2,577	66	1,619	1,619	0	4.3352	7,019
592-020-348.79.01	Fire Hydrants 1979	1979	3,003	66	1,072	1,072	0	3.7201	3,988
592-020-348.80.01	Fire Hydrants 1980	1980	3,237	66	2,914	2,914	0	3.4505	10,055
592-020-348.81.01	Fire Hydrants 1981	1981	3,533	66	3,409	3,409	0	3.1614	10,777
592-020-348.84.01	Fire Hydrants 1984	1984	4,148	66	1,825	1,825	0	2.6930	4,915
592-020-348.85.01	Fire Hydrants 1985	1985	4,194	10	341	341	0	2.6637	908
592-020-348.86.01	Fire Hydrants 1986	1986	4,287	66	7,033	7,033	0	2.6055	18,324
592-020-348.87.01	Fire Hydrants Job 780	1987	4,392	66	4,097	4,097	0	2.5432	10,420
592-020-348.88.01	Fire Hydrants Job 915	1988	4,519	66	3,093	3,093	0	2.4716	7,645
592-020-348.89.01	Fire Hydrants 1989	1989	4,606	66	1,124	1,124	0	2.4250	2,726
592-020-348.93.01	Job 492 MDOT Widening	1993	5,211	66	7,125	7,125	0	2.1437	15,274
592-020-342.12.08	Atkins/Kalamazoo Watermain	2012	9,308	25	17,295	17,295	0	1.2001	20,755
592-020-342.12.09	Howard Street Watermain	2012	9,308	25	163,589	163,589	0	1.2001	196,316
592-020-342.12.10	Emmet Street Watermain	2012	9,308	25	28,264	28,264	0	1.2001	33,918
592-020-342.13.01	Ingalls/Madison Watermain	2013	9,547	25	186,481	186,481	0	1.1701	218,197
592-020-342.13.02	Connable/Monroe Watermain	2013	9,547	25	93,123	93,123	0	1.1701	108,961
592-020-342.13.03	Bay Street Watermain	2013	9,547	25	11,310	11,310	0	1.1701	13,234
592-020-342.14.01	System Wide Upgrade	2014	9,807	25	19,438	19,438	0	1.1391	22,141
592-020-342.14.02	Connable Reconfiguration	2014	9,807	25	57,581	57,581	0	1.1391	65,589
592-020-342.14.03	Arlington Ave Watermain	2014	9,807	25	220,806	220,806	0	1.1391	251,513
592-020-342.14.04	Lockwood Ave Watermain	2014	9,807	25	19,789	19,789	0	1.1391	22,541
592-020-342.15.01	Franklin St Watermain	2015	10,031	25	32,653	32,653	0	1.1136	36,363
592-020-342.15.02	Chx Ave Water Main - MDOT	2015	10,031	25	55,007	55,007	0	1.1136	61,257
592-020-342.15.03	Arlington Ave Watermain	2015	10,031	25	17,499	17,499	0	1.1136	19,487
592-020-342.15.04	Fulton St Watermain	2015	10,031	25	22,143	22,143	0	1.1136	24,659
592-020-312.17.01	Emmet Street Watermain	2017	10,737	25	378,479	378,479	0	1.0404	393,767
592-020-342.17.02	Bayfront Dr Watermain	2017	10,737	25	119,416	119,416	0	1.0404	124,240
<b>Furniture &amp; Equipment</b>									
592-020-382.86.01	Computer & Software	1986	4,287	5	6,731	6,731	0	2.6055	17,537
592-020-382.89.01	Utilicorders	1989	4,606	5	3,907	3,907	0	2.4250	9,475
592-020-382.90.01	Burster 1/3	1990	4,728	5	2,375	2,375	0	2.3628	5,612
592-020-382.91.01	Utilicorders 1/3	1991	4,834	5	663	663	0	2.3106	1,532
592-020-382.93.01	B38 Workstation 1/3	1993	5,211	3	1,247	1,247	0	2.1437	2,673
592-020-382.93.02	Land Mapping System 1/3	1993	5,211	3	7,965	7,965	0	2.1437	17,075
592-020-391.00.01	Automatic Meter Read Equipment	2000	6,221	5	15,170	15,170	0	1.7955	27,238
592-020-391.01.01	Automatic Meter Read Equipment	2001	6,342	5	46,805	46,805	0	1.7613	82,437
592-020-391.94.01	Office Furniture & Equipment	1994	5,410	5	19,996	19,996	0	2.0648	41,288
592-020-394.91.01	Mueiler Tap & Drill Machine	1991	4,834	10	1,515	1,515	0	2.3106	3,501
592-020-394.92.01	Insertion Maching/Quick	1992	4,985	10	25,000	25,000	0	2.2410	56,025
592-020-394.94.01	Water Taps 1994	1994	5,410	5	4,500	4,500	0	2.0648	9,292
<b>Total</b>					<b>19,342,961</b>	<b>16,332,770</b>			<b>34,737,490</b>



Table W9  
Water System Development Charge Calculations

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I	J
1				FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2	<b>CURRENT LOCAL REPLACEMENT VALUE</b>			34,737,490	34,737,490	34,737,490	34,737,490	34,737,490	34,737,490
3	<b>PROPOSED CAPITAL IMPROVEMENTS</b>	<b>Year to be Built</b>	<b>Cost</b>						
4	US-31 - Lewis Street to Boulder Lane. Highway water main crossings and water main replacement. Paid from operating revenue. (Potential \$100,000 MDOT grant).	2019	250,000		250,000				
5	Jackson Street - West Mitchell Street to Hospital Ring Road. Replace water mains and components. Paid from operating revenue.	2020	90,000			90,000			
6	Kalamazoo Avenue - Jennings to Grove Street. Replace water mains and components. Paid from operating revenue.	2020	295,000			295,000			
7	Miscellaneous water main spot repairs and upgrades. Paid from operating revenue.	2021	150,000				150,000		
8	Greenwood Road - Sheridan to Charlevoix Avenue. Replace water main along Greenwood Road. Paid from operating revenue.	2021	275,000				275,000		
9	Lime Kiln Well and Control Building Improvements. Convert from vertical turbine pump to submersible pump system, update chlorine feed system and renovate control and monitoring systems. Paid from operating revenue.	2021	75,000				75,000		
10	Lime Kiln Well and Control Building Improvements. Convert from vertical turbine pump to submersible pump system, update chlorine feed system and renovate control and monitoring systems. Paid from operating revenue.	2022	175,000					175,000	
11	East Lake - Kalamazoo to Division. Replace water mains in conjunction with street reconstruction. Paid from operating revenue.	2022	273,000					273,000	
12	Howard Street and miscellaneous water main spot repairs and upgrades. Paid from operating revenue.	2023	290,000						290,000
13	Miscellaneous water system capital improvements (if projects total is less than \$500,000). Paid from operating revenue. To bring total annual water CIP cost to at least \$500,000 beginning FY 2019.	2019	250,000		250,000				
14	Miscellaneous water system capital improvements (if projects total is less than \$500,000). Paid from operating revenue. To bring total annual water CIP cost to at least \$500,000 beginning FY 2019.	2020	115,000			115,000			
15	Miscellaneous water system capital improvements (if projects total is less than \$500,000). Paid from operating revenue. To bring total annual water CIP cost to at least \$500,000 beginning FY 2019.	2021	-				-	-	-
16	Miscellaneous water system capital improvements (if projects total is less than \$500,000). Paid from operating revenue. To bring total annual water CIP cost to at least \$500,000 beginning FY 2019.	2022	52,000					52,000	
17	Miscellaneous water system capital improvements (if projects total is less than \$500,000). Paid from operating revenue. To bring total annual water CIP cost to at least \$500,000 beginning FY 2019.	2023	210,000						210,000
18	Total Cost (\$), 5 Year CIP (FY 2019 to FY 2023)		2,500,000		500,000	500,000	500,000	500,000	500,000
19	<b>TOTAL PROJECTED LOCAL REPLACEMENT VALUE</b>				35,237,490	35,737,490	36,237,490	36,737,490	37,237,490
20									
21	<b>OUTSTANDING BOND PRINCIPAL</b>				-	-	-	-	-
22	<b>TOTAL LOCAL REPLACEMENT VALUE LESS TOTAL OUTSTANDING PRINCIPAL</b>				35,237,490	35,737,490	36,237,490	36,737,490	37,237,490
23									
24	Water System Design Capacity, Gallons Per Day (GPD)				6,480,000	6,480,000	6,480,000	6,480,000	6,480,000
25	System Development Charge (SDC) per GPD (Maximum)				\$ 5.44	\$ 5.52	\$ 5.59	\$ 5.67	\$ 5.75
26	GPD per Residential Equivalent Unit (REU)				240	240	240	240	240
27	Water SDC per Equivalent REU = Inside City Water SDC (Maximum, Rounded)				\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400
28	Outside City Water SDC = 1.5 x Inside-City Water SDC (Maximum, Rounded)				\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100
29	<b>Inside-City SDC Per Meter Size (Maximum, Rounded):</b>								
30	5/8"				\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400
31	3/4"				\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100
32	1"				\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
33	1 1/2"				\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
34	2"				\$ 11,200	\$ 11,200	\$ 11,200	\$ 11,200	\$ 11,200
35	3"				\$ 24,500	\$ 24,500	\$ 24,500	\$ 24,500	\$ 24,500
36	4"				\$ 42,000	\$ 42,000	\$ 42,000	\$ 42,000	\$ 42,000
37	6"				\$ 87,500	\$ 87,500	\$ 87,500	\$ 87,500	\$ 87,500
38	<b>Outside-City SDC Per Meter Size (Maximum, Rounded):</b>								
39	5/8"				\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100
40	3/4"				\$ 3,150	\$ 3,150	\$ 3,150	\$ 3,150	\$ 3,150
41	1"				\$ 5,250	\$ 5,250	\$ 5,250	\$ 5,250	\$ 5,250
42	1 1/2"				\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500	\$ 10,500
43	2"				\$ 16,800	\$ 16,800	\$ 16,800	\$ 16,800	\$ 16,800
44	3"				\$ 36,750	\$ 36,750	\$ 36,750	\$ 36,750	\$ 36,750
45	4"				\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000
46	6"				\$ 131,250	\$ 131,250	\$ 131,250	\$ 131,250	\$ 131,250

Table S1  
Current FY 2018 and Proposed FY 2019 to FY 2023 Sewer Rates and System Development Charges and Extra Strength Surcharges  
W&S rate study 2018 - final

	A	B	C	D	E	F	G
1	Current	Current	Proposed				
2		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	INSIDE-CITY	Effective January 1, 2014	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
4	Billing Charge, per Month	\$ 2.48	\$ 2.72	\$ 2.75	\$ 2.78	\$ 2.81	\$ 2.83
5	Roadiness to Serve Charge, per Meter Size, per Month						
6		6/8"	\$ 28.21	\$ 36.32	\$ 35.32	\$ 36.76	\$ 36.77
7		3/4"	\$ 42.32	\$ 62.98	\$ 52.98	\$ 55.14	\$ 55.16
8		1"	\$ 70.53	\$ 88.30	\$ 91.90	\$ 91.93	\$ 95.40
9		1 1/2"	\$ 141.05	\$ 178.60	\$ 176.60	\$ 183.80	\$ 183.85
10		2"	\$ 225.68	\$ 282.66	\$ 282.66	\$ 294.08	\$ 294.16
11		3"	\$ 493.68	\$ 618.10	\$ 618.10	\$ 643.30	\$ 643.48
12		4"	\$ 846.30	\$ 1,059.60	\$ 1,059.60	\$ 1,102.80	\$ 1,103.10
13		6"	\$ 1,763.13	\$ 2,207.60	\$ 2,207.50	\$ 2,297.50	\$ 2,298.13
14	Commodity Charge, per 100 Cubic Feet		\$ 2.85	\$ 3.16	\$ 3.26	\$ 3.39	\$ 3.54
15	Sewer System Development Charge ("Capital" Charge)	Current					
		Maximum Calculated					
16	Water Service Meter Size:	Effective January 1, 2011	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
17		5/8"	\$ 3,200	\$ 4,600	\$ 4,600	\$ 4,600	\$ 4,600
18		3/4"	\$ 4,800	\$ 6,900	\$ 6,900	\$ 6,900	\$ 6,900
19		1"	\$ 8,000	\$ 11,500	\$ 11,500	\$ 11,500	\$ 11,500
20		1 1/2"	\$ 16,000	\$ 23,000	\$ 23,000	\$ 23,000	\$ 23,000
21		2"	\$ 25,600	\$ 36,800	\$ 36,800	\$ 36,800	\$ 36,800
22		3"	\$ 56,000	\$ 80,500	\$ 80,500	\$ 80,500	\$ 80,500
23		4"	\$ 96,000	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000
24		6"	\$ 200,000	\$ 287,500	\$ 287,500	\$ 287,500	\$ 287,500
25		Current					
26	OUTSIDE-CITY	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
27	Resort Township	Effective January 1, 2014	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
28	Billing Charge, per Month = City	\$ 2.48	\$ 2.72	\$ 2.75	\$ 2.78	\$ 2.81	\$ 2.83
29	Roadiness to Serve Charge, per Meter Size, per Month = 1.75 x City						
30		6/8"	\$ 49.37	\$ 61.81	\$ 61.81	\$ 64.33	\$ 64.35
31		3/4"	\$ 74.06	\$ 92.72	\$ 92.72	\$ 96.50	\$ 96.53
32		1"	\$ 123.44	\$ 154.53	\$ 154.53	\$ 160.83	\$ 160.88
33		1 1/2"	\$ 246.85	\$ 309.05	\$ 309.05	\$ 321.65	\$ 321.75
34		2"	\$ 394.96	\$ 494.48	\$ 494.48	\$ 514.64	\$ 514.80
35		3"	\$ 863.98	\$ 1,081.68	\$ 1,081.68	\$ 1,125.78	\$ 1,126.13
36		4"	\$ 1,481.10	\$ 1,864.30	\$ 1,864.30	\$ 1,929.90	\$ 1,930.50
37		6"	\$ 3,085.63	\$ 3,863.13	\$ 3,863.13	\$ 4,020.63	\$ 4,021.88
38	Commodity Charge, per 100 Cubic Feet = City		\$ 2.85	\$ 3.16	\$ 3.26	\$ 3.39	\$ 3.54
39	Sewer System Development Charge ("Capital" Charge)	Current					
		Maximum Calculated					
40	Water Service Meter Size:	Effective January 1, 2011	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
41		5/8"	\$ 3,200	\$ 4,600	\$ 4,600	\$ 4,600	\$ 4,600
42		3/4"	\$ 4,800	\$ 6,900	\$ 6,900	\$ 6,900	\$ 6,900
43		1"	\$ 8,000	\$ 11,500	\$ 11,500	\$ 11,500	\$ 11,500
44		1 1/2"	\$ 16,000	\$ 23,000	\$ 23,000	\$ 23,000	\$ 23,000
45		2"	\$ 25,600	\$ 36,800	\$ 36,800	\$ 36,800	\$ 36,800
46		3"	\$ 56,000	\$ 80,500	\$ 80,500	\$ 80,500	\$ 80,500
47		4"	\$ 96,000	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000
48		6"	\$ 200,000	\$ 287,500	\$ 287,500	\$ 287,500	\$ 287,500
49		Current					
		Proposed					
50	Springvale-Bear Creek Sewage Disposal Authority (By Contract, per Restated Agreement, March 19, 2018)	Effective March, 2018	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
51	Monthly Commodity Charge: 95% of City Commodity Charge, per 100 Cubic Feet	\$ 2.71	\$ 3.00	\$ 3.10	\$ 3.23	\$ 3.37	\$ 3.51
52	Monthly Capital Charge: SVBC Share of Outstanding WWTP-Related Bonds	\$ 13,231.84	\$ 14,928.00	\$ 14,706.66	\$ 15,779.17	\$ 15,642.43	\$ 16,629.79
53	Bay View rates = 1.25 x City (per contract)						
54	Readiness to Serve Charge, per Meter Size, per Month						
55	Sewage pumped via 8" FM, RTS charge billed as meter size = 4"	\$ 1,057.88	\$ 1,324.50	\$ 1,324.50	\$ 1,378.50	\$ 1,379.10	\$ 1,431.00
56	Commodity Charge, per 100 Cubic Feet	\$ 3.57	\$ 3.94	\$ 4.08	\$ 4.24	\$ 4.43	\$ 4.62
57	EXTRA STRENGTH SURCHARGES - ALL CUSTOMERS						
58	Biological Oxygen Demand: Above 300 mg/l (per pound)	\$ 0.23	\$ 0.24	\$ 0.24	\$ 0.25	\$ 0.25	\$ 0.28
59	Suspended Solids: Above 300 mg/l (per pound)	\$ 0.22	\$ 0.23	\$ 0.23	\$ 0.24	\$ 0.24	\$ 0.26
60	Phosphorus: Above 7 mg/l (per pound)	\$ 2.17	\$ 2.25	\$ 2.25	\$ 2.35	\$ 2.45	\$ 2.58
61	Total Kjeldahl Nitrogen: Above 40 mg/l (per pound)	\$ 0.66	\$ 0.57	\$ 0.60	\$ 0.62	\$ 0.62	\$ 0.66

**Table S2**  
**Projected FY 2019 Sewer Billings Using FY 2018 Sewer Rates and Projected FY 2019 Sewer Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
1	Class	<b>PROJECTED BILLINGS USING CURRENT RATES</b>	Number of Meters Used for Billing for Water and Sewer Service (Active Customers)	Number of Meters Used for Billing for Sewer Only Service (Active Customers)	Current Equivalent Annual Billing Units for Meters Used for Water and Sewer Billing (Billing Charge and RTS Charge Based on 12 Meter Readings per Year)	Annual Billing Units for Sewer Only Service (Billing Charge and RTS Charge Based on 12 Meter Readings per Year)	Sewer Rates Effective January 1, 2018	Projected FY 2019 Sewer Billings Using FY 2018 Sewer Rates
2		<b>Billing Charges</b>						
3	<b>INSIDE-CITY</b>							
4		<b>Billing Charges</b>			2,924		\$ 2.48	\$ 87,018
5		<b>Sewer Only Billing Charges</b>				6	\$ 2.48	\$ 178
6		<b>Billing Charges, Total Inside-City</b>			2,924	6		\$ 87,196
7	<b>OUTSIDE-CITY</b>							
8		<b>Billing Charges</b>			133		\$ 2.48	\$ 3,958
9		<b>Sewer Only Billing Charges</b>				68	\$ 2.48	\$ 2,023
10		<b>Billing Charges, Total Outside-City</b>			133	68		\$ 5,981
11		<b>Billing Charges, Total Inside and Outside-City</b>			3,057	74		\$ 93,177
12								
13		<b>Readiness to Serve Charge Billings, by Meter Size</b>	<b>Active Meters as of May, 2018</b>					
14	<b>INSIDE-CITY</b>							
15	Second Sewer/Inside/Residential	5/8"	1				\$ 28.21	\$ 338
16	Sewer/Inside/Residential	5/8"	2,274				\$ 28.21	\$ 769,794
17	Sewer/Inside/Residential	3/4"	35				\$ 42.32	\$ 17,774
18	Sewer/Inside/Residential	1"	117				\$ 70.53	\$ 99,024
19	Sewer/Inside/Residential	1 1/2"	29				\$ 141.05	\$ 49,085
20	Sewer/Inside/Residential	2"	2				\$ 225.68	\$ 5,416
21		<b>Residential Readiness to Serve Charge Billings, Total</b>	<b>2,458</b>					\$ 941,431
22	Sewer/Inside/Commercial	5/8"	263				\$ 28.21	\$ 89,030
23	Sewer/Inside/Commercial	3/4"	15				\$ 42.32	\$ 7,617
24	Sewer/Inside/Commercial	1"	41				\$ 70.53	\$ 34,700
25	Sewer/Inside/Commercial	1 1/2"	14				\$ 141.05	\$ 23,696
26	Sewer/Inside/Commercial	2"	22				\$ 225.68	\$ 59,579
27	Sewer/Inside/Commercial	3"	1				\$ 493.68	\$ 5,924
28	Sewer/Inside/Commercial	4"	4				\$ 846.30	\$ 40,622
29	Sewer/Inside/Commercial	6"	0				\$ 1,763.13	\$ -
30		<b>Commercial Readiness to Serve Charge Billings, Total</b>	<b>360</b>					\$ 261,168
31	Sewer/Inside/Industrial	5/8"	9				\$ 28.21	\$ 3,046
32	Sewer/Inside/Industrial	3/4"	0				\$ 42.32	\$ -
33	Sewer/Inside/Industrial	1"	0				\$ 70.53	\$ -
34	Sewer/Inside/Industrial	1 1/2"	1				\$ 141.05	\$ 1,692
35	Sewer/Inside/Industrial	2"	0				\$ 225.68	\$ -
36	Sewer/Inside/Industrial	3"	0				\$ 493.68	\$ -
37	Sewer/Inside/Industrial	4"	0				\$ 846.30	\$ -
38	Sewer/Inside/Industrial	6"	0				\$ 1,763.13	\$ -
39		<b>Industrial Readiness to Serve Charge Billings, Total</b>	<b>10</b>					\$ 4,738
40	Sewer/Inside/Non-Profit	5/8"	48				\$ 28.21	\$ 16,248
41	Sewer/Inside/Non-Profit	3/4"	4				\$ 42.32	\$ 2,031
42	Sewer/Inside/Non-Profit	1"	19				\$ 70.53	\$ 16,080
43	Sewer/Inside/Non-Profit	1 1/2"	5				\$ 141.05	\$ 8,463
44	Sewer/Inside/Non-Profit	2"	16				\$ 225.68	\$ 43,330
45	Sewer/Inside/Non-Profit	3"	2				\$ 493.68	\$ 11,848
46	Sewer/Inside/Non-Profit	4"	2				\$ 846.30	\$ 20,311
47	Sewer/Inside/Non-Profit	6"	0				\$ 1,763.13	\$ -
48		<b>Non-Profit Readiness to Serve Charge Billings, Total</b>	<b>96</b>					\$ 118,311
49	Sewer Only/Inside/Residential	5/8"		5			\$ 28.21	\$ 1,692
50		<b>Sewer Only Residential Readiness to Serve Charge Billings, Total</b>						\$ 1,692
51	Sewer Only/Inside/Commercial	5/8"		0			\$ 28.21	\$ -
52	Sewer Only/Inside/Commercial	1"		1			\$ 70.53	\$ 846
53	Sewer Only/Inside/Commercial	2"		0			\$ 225.68	\$ -
54	Sewer Only/Inside/Commercial	3"		0			\$ 493.68	\$ -

Petoskey Sewer Rate Study  
Tetra Tech SmartRate

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**Table S2**  
**Projected FY 2019 Sewer Billings Using FY 2018 Sewer Rates and Projected FY 2019 Sewer Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
55	Sewer Only/Inside/Commercial	4"		0			\$ 846.30	\$ -
56		Sewer Only Commercial Readiness to Serve Charge Billings, Total		1				\$ 846
57		Readiness to Serve Charge Billings, Total Inside City	2,924	6				\$ 1,328,186
58	<b>OUTSIDE-CITY</b>							
59	Sewer/Outside/Resort Twp/Residential	5/8"	104				\$ 49.37	\$ 61,613
60	Sewer/Outside/Resort Twp/Residential	3/4"	1				\$ 74.06	\$ 888
61	Sewer/Outside/Resort Twp/Residential	1"	1				\$ 123.44	\$ 1,481
62		Resort Twp Residential Readiness to Serve Charge Billings, Total	106					\$ 63,982
63	Sewer/Outside/Resort Twp/Commercial	5/8"	9				\$ 49.37	\$ 5,331
64	Sewer/Outside/Resort Twp/Commercial	3/4"	3				\$ 74.06	\$ 2,666
65	Sewer/Outside/Resort Twp/Commercial	1"	3				\$ 123.44	\$ 4,443
66	Sewer/Outside/Resort Twp/Commercial	1 1/2"	1				\$ 246.85	\$ 2,962
67	Sewer/Outside/Resort Twp/Commercial	2"	5				\$ 394.96	\$ 23,697
68	Sewer/Outside/Resort Twp/Commercial	3"	1				\$ 863.98	\$ 10,367
69	Sewer/Outside/Resort Twp/Commercial	4"	0				\$ 1,481.10	\$ -
70		Resort Twp Commercial Readiness to Serve Charge Billings, Total	22					\$ 49,466
71	Sewer/Outside/Resort Twp/Industrial	1"	0				\$ 123.44	\$ -
72	Sewer/Outside/Resort Twp/Industrial	1 1/2"	1				\$ 246.85	\$ 2,962
73		Resort Twp Industrial Readiness to Serve Charge Billings, Total	1					\$ 2,962
74	Sewer/Outside/Resort Twp/Non-Profit	3/4"	2				\$ 74.06	\$ 1,777
75	Sewer/Outside/Resort Twp/Non-Profit	1"	1				\$ 123.44	\$ 1,481
76	Sewer/Outside/Resort Twp/Non-Profit	1 1/2"	1				\$ 246.85	\$ 2,962
77	Sewer/Outside/Resort Twp/Non-Profit	2"	0				\$ 394.96	\$ -
78	Sewer/Outside/Resort Twp/Non-Profit	3"	0				\$ 863.98	\$ -
79		Resort Twp Non- Profit Readiness to Serve Charge Billings, Total	4					\$ 6,220
80	Sewer Only/Outside/Resort Twp/Residential	5/8"		60			\$ 49.37	\$ 35,546
81	Sewer Only/Outside/Resort Twp/Residential	3/4"		1			\$ 74.06	\$ 888
82	Sewer Only/Outside/Resort Twp/Residential	1"		0			\$ 123.44	\$ -
83	Sewer Only/Outside/Resort Twp/Residential	1 1/2"		0			\$ 246.85	\$ -
84	Sewer Only/Outside/Resort Twp/Residential	2"		0			\$ 394.96	\$ -
85	Sewer Only/Outside/Resort Twp/Residential	3"		0			\$ 863.98	\$ -
86	Sewer Only/Outside/Resort Twp/Residential	4"		0			\$ 1,481.10	\$ -
87	Sewer Only/Outside/Resort Twp/Residential	6"		0			\$ 3,085.63	\$ -
88		Resort Twp Sewer Only Residential Readiness to Serve Charge Billings, Total		61				\$ 36,434
89	Sewer Only/Outside/Resort Twp/Commercial	5/8"		5			\$ 49.37	\$ 2,962
90	Sewer Only/Outside/Resort Twp/Commercial	3/4"		1			\$ 74.06	\$ 888
91	Sewer Only/Outside/Resort Twp/Commercial	1"		0			\$ 123.44	\$ -
92	Sewer Only/Outside/Resort Twp/Commercial	1 1/2"		0			\$ 246.85	\$ -
93	Sewer Only/Outside/Resort Twp/Commercial	2"		1			\$ 394.96	\$ 4,739
94	Sewer Only/Outside/Resort Twp/Commercial	3"		0			\$ 863.98	\$ -
95	Sewer Only/Outside/Resort Twp/Commercial	4"		0			\$ 1,481.10	\$ -
96	Sewer Only/Outside/Resort Twp/Commercial	6"		0			\$ 3,085.63	\$ -

**Table S2**  
**Projected FY 2019 Sewer Billings Using FY 2018 Sewer Rates and Projected FY 2019 Sewer Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
97		Resort Twp Sewer Only Commercial Readiness to Serve Charge Billings, Total		7				\$ 8,589
98	Sewer Only/Outside/Resort Twp/Industrial	5/8"		0			\$ 49.37	\$ -
99	Sewer Only/Outside/Resort Twp/Industrial (Started June 2009 - RV Park)	4"		0			\$ 1,481.10	\$ -
100		Resort Twp Sewer Only Industrial Readiness to Serve Charge Billings, Total		0				\$ -
101		Readiness to Serve Charge Billings, Total Resort Twp	133	68				\$ 167,653
102		Bay View						
103	SE ONLY 4" BAY VIEW	Sewage pumped via 8" FM, RTS charge billed as meter size = 4"		1			\$ 1,057.88	\$ 12,694
104		Readiness to Serve Charge Billings, Bay View						\$ 12,694
105		Outside City Readiness to Serve Charge Billings (Total Resort Twp and Bay View)						\$ 180,347
106		Total Inside and Outside City Readiness to Serve Charge Billings						\$ 1,508,533
107		Commodity Charge Billings, by Meter Size		Actual Calendar 2016 Billable Flow (100 CF Units)	Actual Calendar 2017 Billable Flow (100 CF Units)	Projected Calendar 2019 Billable Flow (100 CF Units)		
108	Calendar 2019 Projected Billable Flow Multiplier Above Calendar 2017:					1.00		
109	INSIDE-CITY							
110	Second Sewer/Inside/Residential	5/8"		51	51	51	\$ 2.85	\$ 145
111	Sewer/Inside/Residential	5/8"		119,294	112,410	112,410	\$ 2.85	\$ 320,369
112	Sewer/Inside/Residential	3/4"		2,140	2,211	2,211	\$ 2.85	\$ 6,301
113	Sewer/Inside/Residential	1"		12,514	9,685	9,685	\$ 2.85	\$ 27,602
114	Sewer/Inside/Residential	1 1/2"		15,255	16,649	16,649	\$ 2.85	\$ 47,450
115	Sewer/Inside/Residential	2"		1,494	1,382	1,382	\$ 2.85	\$ 3,939
116		Residential Commodity Charge Billings, Total		150,748	142,388	142,388		\$ 405,806
117	Sewer/Inside/Commercial	5/8"		23,489	24,602	24,602	\$ 2.85	\$ 70,115
118	Sewer/Inside/Commercial	3/4"		4,387	4,546	4,546	\$ 2.85	\$ 12,956
119	Sewer/Inside/Commercial	1"		7,718	7,978	7,978	\$ 2.85	\$ 22,737
120	Sewer/Inside/Commercial	1 1/2"		10,495	12,097	12,097	\$ 2.85	\$ 34,476
121	Sewer/Inside/Commercial	2"		26,495	25,469	25,469	\$ 2.85	\$ 72,586
122	Sewer/Inside/Commercial	3"		247	639	639	\$ 2.85	\$ 1,821
123	Sewer/Inside/Commercial	4"		19,488	15,851	15,851	\$ 2.85	\$ 45,175
124	Sewer/Inside/Commercial	6"		0	426	426	\$ 2.85	\$ 1,214
125		Commercial Commodity Charge Billings, Total		92,319	91,608	91,608		\$ 261,080
126	Sewer/Inside/Industrial	5/8"		539	728	728	\$ 2.85	\$ 2,074
127	Sewer/Inside/Industrial	3/4"		0	0	0	\$ 2.85	\$ -
128	Sewer/Inside/Industrial	1"		55	19	19	\$ 2.85	\$ 54
129	Sewer/Inside/Industrial	1 1/2"		536	508	508	\$ 2.85	\$ 1,447
130	Sewer/Inside/Industrial	2"		0	0	0	\$ 2.85	\$ -
131	Sewer/Inside/Industrial	3"		0	0	0	\$ 2.85	\$ -
132	Sewer/Inside/Industrial	4"		0	0	0	\$ 2.85	\$ -
133	Sewer/Inside/Industrial	6"		0	0	0	\$ 2.85	\$ -
134		Industrial Commodity Charge Billings, Total		1,130	1,255	1,255		\$ 3,575
135	Sewer/Inside/Non-Profit	5/8"		5,712	5,300	5,300	\$ 2.85	\$ 15,105
136	Sewer/Inside/Non-Profit	3/4"		2,080	2,450	2,450	\$ 2.85	\$ 6,982
137	Sewer/Inside/Non-Profit	1"		4,298	5,368	5,368	\$ 2.85	\$ 15,298
138	Sewer/Inside/Non-Profit	1 1/2"		1,527	503	503	\$ 2.85	\$ 1,433
139	Sewer/Inside/Non-Profit	2"		24,688	25,881	25,881	\$ 2.85	\$ 73,760
140	Sewer/Inside/Non-Profit	3"		5,240	3,948	3,948	\$ 2.85	\$ 11,251
141	Sewer/Inside/Non-Profit	4"		32,609	38,858	38,858	\$ 2.85	\$ 110,745
142	Sewer/Inside/Non-Profit	6"		0	0	0	\$ 2.85	\$ -
143	200-12749-18002	Non-Profit Commodity Charge Billings, Total	Petoskey Sewer Rate Study Tetra Tech SmartRate	6,154	82,308	82,308	2/13/2018 9:59 AM	\$ 234,574
144	Sewer Only/Inside/Residential	5/8"		163	224	224	\$ 2.85	\$ 638

**Table S2**  
**Projected FY 2019 Sewer Billings Using FY 2018 Sewer Rates and Projected FY 2019 Sewer Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
145		<b>Sewer Only Residential Commodity Charge Billings, Total</b>		163	224	224		638
146	Sewer Only/Inside/Commercial	5/8"		0	0	0	\$ 2.85	\$ -
147	Sewer Only/Inside/Commercial	1"		386	385	365	\$ 2.85	\$ 1,040
148	Sewer Only/Inside/Commercial	2"		0	0	0	\$ 2.85	\$ -
149	Sewer Only/Inside/Commercial	3"		0	0	0	\$ 2.85	\$ -
150	Sewer Only/Inside/Commercial	4"		0	0	0	\$ 2.85	\$ -
151		<b>Sewer Only Commercial Commodity Charge Billings, Total</b>		386	365	365		\$ 1,040
152		<b>Commodity Charge Billings, Total Inside City</b>		320,900	318,148	318,148		\$ 906,713
153	<b>OUTSIDE-CITY</b>							
154	Sewer/Outside/Resort Twp/Residential	5/8"		6,627	6,665	6,665	\$ 2.85	\$ 18,995
155	Sewer/Outside/Resort Twp/Residential	3/4"		25	16	16	\$ 2.85	\$ 45
156	Sewer/Outside/Resort Twp/Residential	1"		41	46	46	\$ 2.85	\$ 131
157		<b>Resort Twp Residential Commodity Charge Billings, Total</b>		6,693	6,727	6,727		\$ 19,171
158	Sewer/Outside/Resort Twp/Commercial	5/8"		946	647	647	\$ 2.85	\$ 1,843
159	Sewer/Outside/Resort Twp/Commercial	3/4"		230	189	189	\$ 2.85	\$ 538
160	Sewer/Outside/Resort Twp/Commercial	1"		852	739	739	\$ 2.85	\$ 2,106
161	Sewer/Outside/Resort Twp/Commercial	1 1/2"		1,796	2,129	2,129	\$ 2.85	\$ 6,067
162	Sewer/Outside/Resort Twp/Commercial	2"		9,336	17,516	17,516	\$ 2.85	\$ 49,920
163	Sewer/Outside/Resort Twp/Commercial	3"		7,475	6,278	6,278	\$ 2.85	\$ 17,892
164	Sewer/Outside/Resort Twp/Commercial	4"		0	0	0	\$ 2.85	\$ -
165		<b>Resort Twp Commercial Commodity Charge Billings, Total</b>		20,635	27,498	27,498		\$ 78,366
166	Sewer/Outside/Resort Twp/Industrial	1"		899	896	896	\$ 2.85	\$ 2,553
167	Sewer/Outside/Resort Twp/Industrial	1 1/2"		0	0	0	\$ 2.85	\$ -
168		<b>Resort Twp Industrial Commodity Charge Billings, Total</b>		899	896	896		\$ 2,553
169	Sewer/Outside/Resort Twp/Non-Profit	3/4"		72	85	85	\$ 2.85	\$ 242
170	Sewer/Outside/Resort Twp/Non-Profit	1"		68	64	64	\$ 2.85	\$ 182
171	Sewer/Outside/Resort Twp/Non-Profit	2"		64	92	92	\$ 2.85	\$ 262
172	Sewer/Outside/Resort Twp/Non-Profit	3"		3	0	0	\$ 2.85	\$ -
173		<b>Resort Twp Non-Profit Commodity Charge Billings, Total</b>		207	241	241		\$ 686
174	Sewer Only/Outside/Resort Twp/Residential	5/8"		2,555	2,149	2,149	\$ 2.85	\$ 6,124
175	Sewer Only/Outside/Resort Twp/Residential	3/4"		56	425	425	\$ 2.85	\$ 1,211
176	Sewer Only/Outside/Resort Twp/Residential	1"		42	0	0	\$ 2.85	\$ -
177	Sewer Only/Outside/Resort Twp/Residential	1 1/2"		120	0	0	\$ 2.85	\$ -
178	Sewer Only/Outside/Resort Twp/Residential	2"		0	0	0	\$ 2.85	\$ -
179	Sewer Only/Outside/Resort Twp/Residential	3"		0	0	0	\$ 2.85	\$ -
180	Sewer Only/Outside/Resort Twp/Residential	4"		0	0	0	\$ 2.85	\$ -
181	Sewer Only/Outside/Resort Twp/Residential	6"		0	0	0	\$ 2.85	\$ -
182		<b>Resort Twp Sewer Only Residential Commodity Charge Billings, Total</b>		2,773	2,574	2,574		\$ 7,335
183	Sewer Only/Outside/Resort Twp/Commercial	5/8"		452	701	701	\$ 2.85	\$ 1,997
184	Sewer Only/Outside/Resort Twp/Commercial	3/4"		320	312	312	\$ 2.85	\$ 889
185	Sewer Only/Outside/Resort Twp/Commercial	1"		0	0	0	\$ 2.85	\$ -
186	Sewer Only/Outside/Resort Twp/Commercial	1 1/2"		0	0	0	\$ 2.85	\$ -
187	Sewer Only/Outside/Resort Twp/Commercial	2"		5,150	3,526	3,526	\$ 2.85	\$ 10,049
188	Sewer Only/Outside/Resort Twp/Commercial	3"		0	0	0	\$ 2.85	\$ -
189	Sewer Only/Outside/Resort Twp/Commercial	4"		0	0	0	\$ 2.85	\$ -
190	Sewer Only/Outside/Resort Twp/Commercial	6"		0	0	0	\$ 2.85	\$ -

**Table S2**  
**Projected FY 2019 Sewer Billings Using FY 2018 Sewer Rates and Projected FY 2019 Sewer Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
191		Resort Twp Sewer Only Commercial Commodity Charge Billings, Total		5,922	4,539	4,539		\$ 12,935
192	Sewer Only/Outside/Resort Twp/Industrial	5/8"		0	0	0	\$ 2.85	\$ -
193	Sewer Only/Outside/Resort Twp/Industrial (Started June2009 - RV Park)	4"		0	0	0	\$ 2.85	\$ -
194		Resort Twp Sewer Only Industrial Commodity Charge Billings, Total		0	0	0		\$ -
195		Commodity Charge Billings, Total Resort Township		37,129	42,475	42,475		\$ 121,046
196		Springvale - Bear Creek Sewer Authority						
197	Springvale - Bear Creek Sewer Authority	Monthly Commodity Charge: 95% of City Commodity Charge, per 100 Cubic Feet		59,012	52,677	52,677	\$ 2.71	\$ 142,622
198		Commodity Charge Billings, Total SVBC						\$ 142,622
199		Bay View						
200	SE ONLY 4" BAY VIEW	Bay View rates = 1.25 x City (per contract)		20,584	20,016	20,016	\$ 3.57	\$ 71,457
201		Commodity Charge Billings, Total Bay View		20,584	20,016	20,016		\$ 71,457
202		Commodity Charge Billings, Total Outside City (Resort Twp, SVBC and Bay View)		116,725	115,168	115,168		\$ 335,125
203		Commodity Charge Billings, Total Inside and Outside City		437,625	433,316	433,316		\$ 1,241,838
204	INSIDE-CITY AND OUTSIDE-CITY DEDUCTS AND FREEZE CREDITS							
205	SE Deduct Residential			10,707	8,603	8,603	\$ 2.85	\$ 24,518
206	SE Deduct Commercial			19,658	17,115	17,115	\$ 2.85	\$ 48,777
207	SE Deduct Industrial			1,683	1,352	1,352	\$ 2.85	\$ 3,853
208	SE Deduct Non-Profit			6,283	7,129	7,129	\$ 2.85	\$ 20,317
209	Total Inside-City Deducts			38,331	34,199	34,199		\$ 97,465
210	SE Deduct Outside Residential			207	242	242	\$ 2.85	\$ 689
211	SE Deduct Outside Commercial			1,035	616	616	\$ 2.85	\$ 1,755
212	SE Deduct Outside Industrial			0	0	0	\$ 2.85	\$ -
213	SE Deduct Outside Non-Profit			0	0	0	\$ 2.85	\$ -
214	Total Outside-City Deducts			1,242	858	858		\$ 2,444
215	Freeze Credit Residential			3,406	958	958	\$ 2.85	\$ 2,730
216	Freeze Credit Commercial			316	245	245	\$ 2.85	\$ 698
217	Freeze Credit Industrial			0	-1	-1	\$ 2.85	\$ (2)
218	Freeze Credit Non-Profit			81	-9	-9	\$ 2.85	\$ (25)
219	Total Inside-City Freeze Credits			3,803	1,193	1,193		\$ 3,401
220	Freeze Credit Outside Residential			105	13	13	\$ 2.85	\$ 37
221	Freeze Credit Outside Commercial			0	0	0	\$ 2.85	\$ -
222	Freeze Credit Outside Industrial			0	0	0	\$ 2.85	\$ -
223	Freeze Credit Outside Non-Profit			0	0	0	\$ 2.85	\$ -
224	Total Outside-City Freeze Credits			105	13	13		\$ 37
225	SE Freeze Residential			3,426	978	978	\$ 2.85	\$ 2,787
226	SE Freeze Commercial			240	212	212	\$ 2.85	\$ 604
227	SE Freeze Non-Profit			104	-8	-8	\$ 2.85	\$ (22)
228				3,770	1,182	1,182		\$ 3,369
229	TOTAL SEWER DEDUCTS AND FREEZE NET SEWER BILLABLE FLOW & COMMODITY CHARGE BILLINGS			47,251	37,445	37,445		\$ 106,716
230				390,374	395,871	395,871		\$ 1,135,122
231		Total Inside City Billings						\$ 2,322,095
232		Total Outside City Billings (Not Including SVBC Capital Charge)						\$ 521,453
233	Springvale - Bear Creek Sewer Authority	Monthly Capital Charge: 16.8% of Debt Service on Outstanding Sewer Bonds					\$ 13,231.84	\$ 158,782
234	200-12749-18002	Total Inside, Outside City, Bay View and Springvale - Bear Creek Authority Billings	Petoskey Sewer Rate Study Tetra Tech SmartRate				12/13/2018 9:59 AM	\$ 3,002,330



**Table S2**  
**Projected FY 2019 Sewer Billings Using FY 2018 Sewer Rates and Projected FY 2019 Sewer Billing Units**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I
235		Less Sewer Deducts and Freezes						\$ 2,895,614

Table S3

W&amp;S rate study 2018 - final

## Projected Total Inside-City and Outside-City Sewer Equivalent Billing Units

	B	C	D	E	F	G	H	I	J	K	L	M
1	Projected Annual Sewer Billing Units											
2		Current Number of Meters Used for Billing for Water and Sewer Service	Current Number of Meters Used for Sewer Only Service (Active Customers)	Meter Rated Capacity, Gallons per Minute (per AWWA)	Readiness to Serve Meter Ratio (Equal to Meter Capacity Divided by 5/8" Meter Capacity)(per AWWA)	Proposed Annual Billing Units for Meters Used for Water and Sewer Billing (Billing Charge and RTS Charge Based on 12 Meter Readings per Year)	Proposed Annual Billing Units for Sewer Only Service (Billing Charge and RTS Charge Based on 12 Meter Readings per Year)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	INSIDE CITY											
4	Growth Rate							0.0%	0.0%	0.0%	0.0%	0.0%
5	Billing Charge Billing Units, Total					35,088	72	35,160	35,160	35,160	35,160	35,160
6	Readiness to Serve Charge Billing Units, by Meter Size											
7	6/8"	2,594	5	20	1.0	31,128	60	31,188	31,188	31,188	31,188	31,188
8	3/4"	54	0	30	1.5	972	-	972	972	972	972	972
9	1"	177	1	50	2.5	5,310	30	5,340	5,340	5,340	5,340	5,340
10	1 1/2"	49	0	100	5.0	2,940	-	2,940	2,940	2,940	2,940	2,940
11	2"	40	0	160	8.0	3,840	-	3,840	3,840	3,840	3,840	3,840
12	3"	3	0	350	17.5	630	-	630	630	630	630	630
13	4"	6	0	600	30.0	2,160	-	2,160	2,160	2,160	2,160	2,160
14	6"	0	0	1,250	62.5	-	-	-	0	0	0	0
15	Readiness to Serve Charge Billing Units, Total	2,923	6			46,980	90	47,070	47,070	47,070	47,070	47,070
16	Commodity Charge Billing Units, All Meter Sizes							318,148	318,148	318,148	318,148	318,148
17	OUTSIDE CITY											
18	Growth Rate							0.0%	0.0%	0.0%	0.0%	0.0%
19	Billing Charge Billing Units, Total (Resort Township)					1,596	816	2,412	2,412	2,412	2,412	2,412
20	Readiness to Serve Charge Billing Units, by Meter Size (Resort Township)											
21	6/8"	113	65	20	1.0	1,356	780	2,136	2,136	2,136	2,136	2,136
22	3/4"	6	2	30	1.5	108	36	144	144	144	144	144
23	1"	5	0	50	2.5	150	-	150	150	150	150	150
24	1 1/2"	3	0	100	5.0	180	-	180	180	180	180	180
25	2"	5	1	160	8.0	480	96	576	576	576	576	576
26	3"	1	0	350	17.5	210	-	210	210	210	210	210
27	4"	0	0	600	30.0	-	-	-	0	0	0	0
28	6"	0	0	1,250	62.5	-	-	-	0	0	0	0
29	Readiness to Serve Charge Billing Units, Total (Resort Township)	133	68			2,484	912	3,396	3,396	3,396	3,396	3,396
30	Commodity Charge Billing Units, All Meter Sizes (Resort Township)							42,475	42,475	42,475	42,475	42,475
31	Commodity Charge Billing Units (Springvale - Bear Creek Sewage Disposal Authority)							52,677	52,677	52,677	52,677	52,677
32	Readiness to Serve Charge Billing Units, by Meter Size (Bay View)											
33	Sewage pumped via 8" FM, billed as meter size = 4"	1		600	30		360					
34	Readiness to Serve Charge Billing Units, Total (Bay View)							360	360	360	360	360
35	Commodity Charge Billing Units, Total (Bay View)							20,016	20,016	20,016	20,016	20,016
36												
37	PROJECTED TOTAL INSIDE-CITY, RESORT TOWNSHIP, SVBC AND BAY VIEW EQUIVALENT BILLING UNITS											
38	Resort Twp to Inside Equivalent Factors (Billing Charge):					1.00						
39	Resort Twp to Inside Equivalent Factors (RTS Charge):					1.75						
40	Resort Twp to Inside Equivalent Factor (Commodity Charge):					1.00						
41												
42	SVBC to Inside Equivalent Factor (Commodity Charge):					0.95						
43												
44	Bay View to Inside Equivalent Factors (RTS Charge):					1.25						
45	Bay View to Inside Equivalent Factor (Commodity Charge):					1.25						
46												
47								FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
48	Total Equivalent Billing Charge Billing Units							37,672	37,672	37,672	37,672	37,672
49	Total Equivalent Readiness to Serve Charge Billing Units							63,463	63,463	63,463	63,463	63,463
50	Total Equivalent Commodity Charge Billing Units							435,686	435,686	435,686	435,686	435,686

**Table S4**  
**Five-Year Sewer Revenue Adequacy Using Current Sewer Rates and Required Percent Adjustments**

W&S rate study 2018 - final

	B	C	F	G	H	I	J	K
1			Current			Projected		
			FY 2018 Budget (Cash Basis)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2	Account	SEWER FUND						
3		EXPENSES:						
4		OPERATING OF PLANT						
5	592-551-702.000	SALARIES & WAGES	38,000	39,140	40,314	41,524	42,769	44,052
6	592-551-724.000	FRINGE BENEFITS	3,500	3,850	4,235	4,659	5,124	5,637
7	592-551-775.000	MATERIALS & SUPPLIES	10,000	10,100	10,201	10,303	10,406	10,510
8	592-551-783.000	CHEMICALS	95,000	95,950	96,910	97,879	98,857	99,846
9	592-551-801.000	PROFESSIONAL SERVICES	7,000	7,070	7,141	7,212	7,284	7,357
10	592-551-806.000	SLUDGE REMOVAL	75,000	90,000	108,000	129,600	155,520	186,624
11	592-551-920.000	PUBLIC UTILITIES	210,000	212,100	214,221	216,363	218,527	220,712
12	592-551-947.000	VEHICLE RENTAL	-	-	-	-	-	-
13		TOTAL OPERATING OF PLANT	438,500	458,210	481,021	507,539	538,488	574,738
14								
15		OPERATION OF LAB						
16	592-551-702.000	SALARIES & WAGES	56,000	57,680	59,410	61,193	63,028	64,919
17	592-551-724.000	FRINGE BENEFITS	4,100	4,510	4,961	5,457	6,003	6,603
18	592-551-775.000	MATERIALS & SUPPLIES	35,000	35,350	35,704	36,061	36,421	36,785
19	592-551-801.000	PROFESSIONAL SERVICES	9,000	9,090	9,181	9,273	9,365	9,459
20	592-553-802.000	CONTRACTED SERVICES	8,000	8,080	8,161	8,242	8,325	8,408
21	592-551-947.000	VEHICLE RENTAL	-	-	-	-	-	-
22		TOTAL OPERATION OF LAB	112,100	114,710	117,417	120,225	123,143	126,175
23								
24		MAINTENANCE OF PLANT & GROUNDS						
25	592-551-702.000	SALARIES & WAGES	30,000	30,900	31,827	32,782	33,765	34,778
26	592-551-724.000	FRINGE BENEFITS	3,100	3,410	3,751	4,126	4,539	4,993
27	592-551-775.000	MATERIALS & SUPPLIES	16,000	16,160	16,322	16,485	16,650	16,818
28	592-553-802.000	CONTRACTED SERVICES	95,000	95,950	96,910	97,879	98,857	99,846
29	592-551-947.000	VEHICLE RENTAL	5,000	5,050	5,101	5,152	5,203	5,255
30		TOTAL MAINTENANCE OF PLANT & GROUNDS	149,100	151,470	153,910	156,423	159,014	161,688
31								
32		MAINTENANCE OF LIFT STATION						
33	592-551-702.000	SALARIES & WAGES	8,200	8,446	8,699	8,960	9,229	9,506
34	592-551-724.000	FRINGE BENEFITS	800	880	968	1,065	1,171	1,288
35	592-551-775.000	MATERIALS & SUPPLIES	7,200	7,272	7,345	7,418	7,492	7,567
36	592-551-801.000	PROFESSIONAL SERVICES	27,000	27,270	27,543	27,818	28,096	28,377
37	592-553-802.000	CONTRACTED SERVICES	13,000	13,130	13,261	13,394	13,528	13,663
38	592-551-947.000	VEHICLE RENTAL	200	202	204	206	208	210
39		TOTAL MAINTENANCE OF LIFT STATION	56,400	57,200	58,020	58,861	59,725	60,612
40								
41		MAINTENANCE OF SANITARY SEWERS						
42	592-551-702.000	SALARIES & WAGES	21,000	21,630	22,279	22,947	23,636	24,345
43	592-551-724.000	FRINGE BENEFITS	2,000	2,200	2,420	2,662	2,928	3,221
44	592-551-775.000	MATERIALS & SUPPLIES	3,000	3,030	3,060	3,091	3,122	3,153
45	592-553-802.000	CONTRACTED SERVICES	69,000	69,690	70,387	71,091	71,802	72,520
46	592-551-947.000	VEHICLE RENTAL	15,000	15,150	15,302	15,455	15,609	15,765
47		TOTAL MAINTENANCE OF SANITARY SEWERS	110,000	111,700	113,448	115,245	117,096	118,904
48								
49		MAINTENANCE LIFT STATION - BAY HARBOR						
50	592-551-702.000	SALARIES & WAGES	8,000	8,240	8,487	8,742	9,004	9,274
51	592-551-724.000	FRINGE BENEFITS	800	880	968	1,065	1,171	1,288
52	592-551-775.000	MATERIALS & SUPPLIES	15,000	15,150	15,302	15,455	15,609	15,765
53	592-553-802.000	CONTRACTED SERVICES	35,000	35,350	35,704	36,061	36,421	36,785
54	592-551-920.000	PUBLIC UTILITIES	25,500	25,755	26,013	26,273	26,535	26,801
55	592-551-947.000	VEHICLE RENTAL	500	505	510	515	520	526
56		TOTAL MAINTENANCE LIFT STATION - BAY HARBOR	84,800	85,880	86,983	88,109	89,261	90,439
57								
58		MAINTENANCE SANITARY SEWER - BAY HARBOR						
59	592-551-702.000	SALARIES & WAGES	600	618	637	656	675	696
60	592-551-724.000	FRINGE BENEFITS	100	110	121	133	146	161
61	592-553-802.000	CONTRACTED SERVICES	18,000	18,180	18,362	18,545	18,731	18,918
62		TOTAL MAINTENANCE SANITARY SEWER - BAY HARBOR	18,700	18,968	19,119	19,334	19,553	19,775
63								
64		GENERAL SEWER ADMINISTRATION						
65	592-551-702.000	SALARIES & WAGES	12,000	12,360	12,731	13,113	13,506	13,911
66	592-560-702.100	WAGES - SUPERVISORY	76,000	78,280	80,628	83,047	85,539	88,105
67	592-551-724.000	FRINGE BENEFITS	182,000	200,200	220,220	242,242	266,466	293,113
68	592-560-751.000	OFFICE SUPPLIES	10,000	10,100	10,201	10,303	10,406	10,510
69	592-560-767.000	OTHER - UNIFORMS	3,800	3,838	3,876	3,915	3,954	3,994
70	592-553-802.000	CONTRACTED SERVICES	125,000	126,250	127,513	128,788	130,076	131,376
71	592-560-850.000	COMMUNICATIONS	9,000	9,090	9,181	9,273	9,365	9,459
72	592-560-915.000	EDUCATION & TRAINING	13,000	13,130	13,261	13,394	13,528	13,663
73	592-560-937.000	INSURANCE, FIRE & LIABILITY	16,000	16,160	16,322	16,485	16,650	16,818
74	592-560-945.000	DPW RENT	9,700	9,797	9,895	9,994	10,094	10,195
75	592-551-947.000	EQUIPMENT RENTAL	33,000	33,330	33,663	34,000	34,340	34,683
76	592-560-995.000	UTILITY BILLING COMPONENT OF ADMINISTRATIVE FEES *	101,133	102,145	103,166	104,188	105,210	106,232
77	592-560-995.000	ADMINISTRATIVE FEES LESS UTILITY BILLING *	202,267	208,335	214,585	221,022	227,653	234,463
78		TOTAL GENERAL SEWER ADMINISTRATION	792,900	823,014	855,242	889,773	926,816	966,600
79								
80		TOTAL SEWER OPERATING	1,782,500	1,821,092	1,885,159	1,955,511	2,033,097	2,119,032
81								
82		SEWER PAYMENT (IN LIEU OF TAXES TO THE GENERAL FUND)	182,700	182,700	182,700	182,700	182,700	182,700
83								
84		PROJECT COST						
85	592-025-330	Job 923: WWTP Improvements - Grand Traverse Construction (Assume paid from proceeds of FY 2017 WWTP Improvements \$5,000,000 bond)	0	0	0	0	0	0
86	592-025-343	Job 917: Emmet Street - Sewer Upgrade (Assume paid from Operating Revenue)	0	0	0	0	0	0
87	592-025-343	Job 919: Bear River East Lift Station - Upgrade (Assume paid from Operating Revenue)	0	0	0	0	0	0
88	592-560-802	Miscellaneous Reviews and Designs	120,000	0	0	0	0	0
89	592-560-802	Telephony Upgrades	5,000	0	0	0	0	0
90		US-31 - Lewis Street to Boulder Lane. Utility upgrades include sanitary main highway crossings and sanitary main between McDonald Drive and Boulder Lane. Paid from operating revenue. Potential \$173,000 MDOT grant).	0	350,000	0	0	0	0
91		Greenwood Road - Sheridan to Charlevoix Avenue. Replace water main along Greenwood Road. Paid from operating revenue.	0	0	75,000	0	0	0
92		Sanitary - Jackson Street - West Mitchell Street to Hospital Ring Road. This project would include replacement of sanitary sewer and components	0	0	215,000	0	0	0

**Table S4**  
**Five-Year Sewer Revenue Adequacy Using Current Sewer Rates and Required Percent Adjustments**

W&S rate study 2018 - final

	B	C	F	G	H	I	J	K
93		Upgrades - Sanitary sewer work will take place in conjunction with street resurfacing program. Paid from operating revenue.	0	0	0	150,000	0	0
94		Greenwood Road - Sheridan to Charlevoix Avenue. Utility upgrade to include sanitary sewer rehabilitation along Greenwood Road. Paid from operating revenue.	0	0	0	125,000	0	0
95		East Lake - Kalamazoo to Division. Replace sanitary sewers in conjunction with street reconstruction. Paid from operating revenue.	0	0	0	0	231,000	0
96		Howard Street and miscellaneous sewer main spot repairs and upgrades. Paid from operating revenue.	0	0	0	0	0	250,000
97		Miscellaneous wastewater system capital improvements. Paid from operating revenue. To bring total annual wastewater CIP cost to \$500,000 beginning FY 2019.		150,000	210,000	225,000	269,000	250,000
98		<b>TOTAL PROJECT COST</b>	125,000	500,000	500,000	500,000	500,000	500,000
99								
100		<b>DEPRECIATION</b>						
101	592-564-968.100	DEPRECIATION-SEWER	0	0	0	0	0	0
102		<b>TOTAL DEPRECIATION</b>	0	0	0	0	0	0
103								
104		<b>BOND EXPENSE</b>						
105		PRINCIPAL (\$5,000,000, 2017 Sewer Improvements, 3.00% to 3.25%, payments through December 2037)	0	180,000	190,000	195,000	205,000	210,000
106	592-566-992.000	INTEREST (\$5,000,000, 2017 Sewer Improvements, 3.00% to 3.25%, payments through December 2037)	172,012	149,075	143,525	137,750	131,750	125,525
107		PRINCIPAL (\$8,330,000, 2011 Sewer Refunding Bonds, 5.00%, payments through February 2026)	385,000	380,000	380,000	480,000	480,000	580,000
108	592-566-992.000	INTEREST (\$8,330,000, 2011 Sewer Refunding Bonds, 5.00%, payments through February 2026)	199,144	183,869	164,869	143,369	119,369	92,869
109		PRINCIPAL (\$2,755,000, 2011 Sewer Bonds, 3.00% to 5.00%, payments through February 2031)	110,000	115,000	120,000	125,000	135,000	140,000
110	592-566-992.000	INTEREST (\$2,755,000, 2011 Sewer Bonds, 3.00% to 5.00%, payments through February 2031)	96,619	92,094	86,219	80,094	73,594	66,719
111	592-566-996.000	OTHER EXPENSE	1,000	1,000	1,000	1,000	1,000	1,000
112	592-566-993.000	PAYING AGENT FEES	300	300	300	300	300	300
113		<b>TOTAL BOND EXPENSE</b>	964,074	1,101,338	1,085,913	1,162,513	1,146,013	1,218,413
114								
115		<b>TOTAL FUND EXPENDITURES</b>	3,034,274	3,605,130	3,653,772	3,800,723	3,861,809	4,018,144
116								
117		<b>REVENUE</b>						
118	592-081-645.000	RESIDENTIAL - SEWER	1,680,000	1,680,000	1,680,000	1,680,000	1,680,000	1,680,000
119	592-081-645.100	COMMERCIAL SALES - SEWER	675,000	675,000	675,000	675,000	675,000	675,000
120	592-081-645.200	INDUSTRIAL SALES - SEWER	15,000	15,000	15,000	15,000	15,000	15,000
121	592-081-645.300	NON-PROFIT SALES - SEWER	415,000	415,000	415,000	415,000	415,000	415,000
122	592-081-645.500	SEWER ANALYSIS	5,000	5,000	5,000	5,000	5,000	5,000
123	592-082-648.020	PROJECTS, SEWER	5,000	5,000	5,000	5,000	5,000	5,000
124	TBD	BOND PROCEEDS (No current or projected)	-	-	-	-	-	-
125	TBD	TRANSFER TO/FROM FUND BALANCE						
126	592-082-662.100	S.V.B.C. DEBT CHARGE -SEWER	158,782	179,136	176,468	189,350	186,509	198,357
127	592-082-664.000	INTEREST INCOME	50,000	50,000	50,000	50,000	50,000	50,000
128	592-082-690.000	RESTITUTION	6,000	6,000	6,000	6,000	6,000	6,000
129		<b>TOTAL REVENUE</b>	3,009,782	3,030,136	3,027,468	3,040,350	3,037,509	3,049,357
130								
131		<b>NET REVENUES OVER EXPENDITURES</b>	(24,492)	(574,994)	(626,304)	(760,373)	(824,300)	(968,787)
132								
133		<b>REVENUE FROM CURRENT RATES</b>	2,943,782	2,964,136	2,961,468	2,974,350	2,971,509	2,983,357
134		Percent Adjustment		19.4%	1.5%	3.7%	1.7%	3.8%
135		FY 2019 Additional Revenue from Rates		574,994	574,994	574,994	574,994	574,994
136		FY 2020 Additional Revenue from Rates			51,310	51,310	51,310	51,310
137		FY 2021 Additional Revenue from Rates				134,069	134,069	134,069
138		FY 2022 Additional Revenue from Rates					63,926	63,926
139		FY 2023 Additional Revenue from Rates						144,487
140		<b>REVENUE FROM ADJUSTED RATES</b>	2,943,782	3,539,130	3,587,772	3,734,723	3,795,809	3,952,144
141		<b>TOTAL ADJUSTED REVENUE</b>	3,168,564	3,784,266	3,830,240	3,990,074	4,048,318	4,216,502
142		<b>NET REVENUES OVER EXPENDITURES</b>	134,290	179,136	176,468	189,350	186,509	198,357
143								
144		<b>BEGIN OF YEAR UNRESTRICTED SEWER FUND BALANCE</b>	2,757,951	2,892,241	3,071,376	3,247,844	3,437,194	3,623,704
145		<b>WITHDRAWALS/ADDITIONS</b>	134,290	179,136	176,468	189,350	186,509	198,357
146		<b>END OF YEAR UNRESTRICTED SEWER FUND BALANCE ****</b>	2,892,241	3,071,376	3,247,844	3,437,194	3,623,704	3,822,061
148		* Utility Billing Expense assumed = Administrative Fees x 0.33						

Table 55  
Cost Allocations, Net Revenue Recovered by Sewer Rates, Rate Calculations

WAS rate study 2018 - final

A																		B																		C																		D																		E																		F																		G																		H																		I																		J																		K																		L																		M																		N																		O																		P																		Q																		R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				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Table 85  
Cost Allocations, Net Revenue Recovered by Sewer Rates, Rate Calculations

	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	Percent	Allocation to Readiness-to-Serve Amount	Allocation to Commodity Percent	Allocation to Commodity Amount	FY 2022	Allocation to Billing Percent	Allocation to Billing Amount	Allocation to Readiness-to-Serve Percent	Allocation to Readiness-to-Serve Amount	Allocation to Commodity Percent	Allocation to Commodity Amount	FY 2023	Allocation to Billing Percent	Allocation to Billing Amount	Allocation to Readiness-to-Serve Percent	Allocation to Readiness-to-Serve Amount	Allocation to Commodity Percent	Allocation to Commodity Amount
2	0.00%	0	100.00%	507,539	538,488	0.00%	0	0.00%	0	100.00%	538,488	574,738	0.00%	0	0.00%	0	100.00%	574,738
3	0.00%	0	100.00%	120,225	123,143	0.00%	0	0.00%	0	100.00%	123,143	126,175	0.00%	0	0.00%	0	100.00%	126,175
4	0.00%	0	100.00%	156,423	159,014	0.00%	0	0.00%	0	100.00%	159,014	161,888	0.00%	0	0.00%	0	100.00%	161,888
5	0.00%	0	100.00%	58,861	59,725	0.00%	0	0.00%	0	100.00%	59,725	60,812	0.00%	0	0.00%	0	100.00%	60,812
6	0.00%	0	100.00%	115,245	117,068	0.00%	0	0.00%	0	100.00%	117,068	119,064	0.00%	0	0.00%	0	100.00%	119,064
7	0.00%	0	100.00%	88,109	89,261	0.00%	0	0.00%	0	100.00%	89,261	90,439	0.00%	0	0.00%	0	100.00%	90,439
8	0.00%	0	100.00%	19,334	19,553	0.00%	0	0.00%	0	100.00%	19,553	19,775	0.00%	0	0.00%	0	100.00%	19,775
9	0.00%	0	100.00%	105,240	105,240	0.00%	0	0.00%	0	100.00%	105,240	108,282	0.00%	0	0.00%	0	100.00%	108,282
10	0.00%	0	100.00%	471,345	482,948	0.00%	0	0.00%	0	100.00%	482,948	492,948	0.00%	0	0.00%	0	100.00%	492,948
11	40.00%	314,230	60.00%	471,345	821,576	0.00%	0	40.00%	328,631	60.00%	482,948	860,308	0.00%	0	40.00%	344,123	60.00%	518,185
12	100.00%	182,700	0.00%	0	182,700	0.00%	0	100.00%	182,700	0.00%	0	182,700	0.00%	0	100.00%	182,700	0.00%	0
13	100.00%	500,000	0.00%	0	500,000	0.00%	0	100.00%	500,000	0.00%	0	500,000	0.00%	0	100.00%	500,000	0.00%	0
14	100.00%	1,182,513	0.00%	0	1,148,013	0.00%	0	100.00%	1,148,013	0.00%	0	1,216,413	0.00%	0	100.00%	1,216,413	0.00%	0
15		2,159,443		1,537,083	3,881,809		105,240		2,157,343		1,599,228	4,016,144		106,292		2,243,238		1,669,616
16																		
17																		
18	0.00%	0	100.00%	5,000	5,000	0.00%	0	0.00%	0	100.00%	5,000	5,000	0.00%	0	0.00%	0	100.00%	5,000
19	100.00%	5,000	0.00%	0	5,000	0.00%	0	100.00%	5,000	0.00%	0	5,000	0.00%	0	100.00%	5,000	0.00%	0
20	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
21	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0	0	0.00%	0	100.00%	0	0.00%	0
22	100.00%	189,350	0.00%	0	189,350	0.00%	0	100.00%	189,350	0.00%	0	189,357	0.00%	0	100.00%	189,357	0.00%	0
23	0.00%	0	100.00%	50,000	50,000	0.00%	0	0.00%	0	100.00%	50,000	50,000	0.00%	0	0.00%	0	100.00%	50,000
24	0.00%	0	100.00%	6,000	6,000	0.00%	0	0.00%	0	100.00%	6,000	6,000	0.00%	0	0.00%	0	100.00%	6,000
25		184,350		61,000	252,509		0		181,809		61,000	264,357		0		203,357		61,000
26																		
27		\$1,955,093		\$1,476,083	\$3,609,300		\$ 105,240		\$1,955,034		\$1,638,226	\$3,763,787		\$ 106,292		\$2,039,878		\$1,607,616
28							37,572							37,572				
29																		
30		53,463							53,463							53,463		
31		\$ 36,76		435,686			\$ 2,81		\$ 36,77		\$ 3,54			\$ 2,83		\$ 38,16		\$ 435,686
32		\$ 36,76		\$ 3,39			\$ 2,81		\$ 36,77		\$ 3,54			\$ 2,83		\$ 38,16		\$ 3,69
33		\$ 64,33		\$ 3,39			\$ 2,81		\$ 64,35		\$ 3,54			\$ 2,83		\$ 66,78		\$ 3,69
34		N/A		\$ 3,23			N/A		N/A		\$ 3,37			N/A		N/A		\$ 3,51
35		\$ 45,95		\$ 4,24			N/A		\$ 45,97		\$ 4,43			N/A		\$ 47,70		\$ 4,52
36																		

Table S6  
Example Sewer Bills

W&S rate study 2018 - final

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Inside City</b>					<b>Resort Township</b>					
2		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	Usage (Number of 100 Cubic Feet Units per Month):										
4	0										
5	Meter Size: 5/8"										
6	Current Bill	\$ 30.69	\$ 38.04	\$ 38.07	\$ 39.54	\$ 39.58	\$ 61.85	\$ 64.53	\$ 64.56	\$ 67.11	\$ 67.16
7	Proposed Bill	\$ 38.04	\$ 38.07	\$ 39.54	\$ 39.58	\$ 40.99	\$ 64.53	\$ 64.56	\$ 67.11	\$ 67.16	\$ 69.61
8	Change (Percent)	23.9%	0.1%	3.9%	0.1%	3.6%	24.5%	0.0%	3.9%	0.1%	3.6%
9	Change (Dollars)	\$ 7.35	\$ 0.03	\$ 1.47	\$ 0.04	\$ 1.41	\$ 12.68	\$ 0.03	\$ 2.55	\$ 0.05	\$ 2.45
10	Usage (Number of 100 Cubic Feet Units per Month):										
11	5										
12	Meter Size: 5/8"										
13	Current Bill	\$ 44.94	\$ 53.79	\$ 54.37	\$ 56.49	\$ 57.28	\$ 66.10	\$ 80.28	\$ 80.86	\$ 84.06	\$ 84.86
14	Proposed Bill	\$ 53.79	\$ 54.37	\$ 56.49	\$ 57.28	\$ 59.44	\$ 80.28	\$ 80.86	\$ 84.06	\$ 84.86	\$ 88.06
15	Change (Percent)	19.7%	1.1%	3.9%	1.4%	3.8%	21.5%	0.7%	4.0%	1.0%	3.8%
16	Change (Dollars)	\$ 8.85	\$ 0.58	\$ 2.12	\$ 0.79	\$ 2.16	\$ 14.18	\$ 0.58	\$ 3.20	\$ 0.80	\$ 3.20
17	Usage (Number of 100 Cubic Feet Units per Month):										
18	10										
19	Meter Size: 5/8"										
20	Current Bill	\$ 69.19	\$ 69.54	\$ 70.67	\$ 73.44	\$ 74.98	\$ 80.35	\$ 96.03	\$ 97.16	\$ 101.01	\$ 102.56
21	Proposed Bill	\$ 69.54	\$ 70.67	\$ 73.44	\$ 74.98	\$ 77.89	\$ 96.03	\$ 97.16	\$ 101.01	\$ 102.56	\$ 106.51
22	Change (Percent)	17.6%	1.6%	3.9%	2.1%	3.9%	19.5%	1.2%	4.0%	1.5%	3.9%
23	Change (Dollars)	\$ 10.35	\$ 1.13	\$ 2.77	\$ 1.54	\$ 2.91	\$ 16.68	\$ 1.13	\$ 3.85	\$ 1.55	\$ 3.95
24	Usage (Number of 100 Cubic Feet Units per Month):										
25	50										
26	Meter Size: 3/4"										
27	Current Bill	\$ 187.30	\$ 213.20	\$ 218.73	\$ 227.42	\$ 234.97	\$ 219.04	\$ 252.94	\$ 258.47	\$ 268.78	\$ 276.34
28	Proposed Bill	\$ 213.20	\$ 218.73	\$ 227.42	\$ 234.97	\$ 244.57	\$ 252.94	\$ 258.47	\$ 268.78	\$ 276.34	\$ 287.50
29	Change (Percent)	13.8%	2.6%	4.0%	3.3%	4.1%	15.5%	2.2%	4.0%	2.8%	4.0%
30	Change (Dollars)	\$ 25.90	\$ 5.53	\$ 8.69	\$ 7.55	\$ 9.60	\$ 33.90	\$ 5.53	\$ 10.31	\$ 7.56	\$ 11.16
31	Usage (Number of 100 Cubic Feet Units per Month):										
32	200										
33	Meter Size: 1"										
34	Current Bill	\$ 643.01	\$ 721.02	\$ 743.05	\$ 772.68	\$ 802.74	\$ 695.92	\$ 787.25	\$ 809.28	\$ 841.61	\$ 871.69
35	Proposed Bill	\$ 721.02	\$ 743.05	\$ 772.68	\$ 802.74	\$ 836.23	\$ 787.25	\$ 809.28	\$ 841.61	\$ 871.69	\$ 907.78
36	Change (Percent)	12.1%	3.1%	4.0%	3.9%	4.2%	13.1%	2.8%	4.0%	3.6%	4.1%
37	Change (Dollars)	\$ 78.01	\$ 22.03	\$ 29.63	\$ 30.06	\$ 33.49	\$ 91.33	\$ 22.03	\$ 32.33	\$ 30.08	\$ 36.09
38	Usage (Number of 100 Cubic Feet Units per Month):										
39	800										
40	Meter Size: 2"										
41	Current Bill	\$ 1,938.16	\$ 2,175.28	\$ 2,241.31	\$ 2,330.86	\$ 2,420.97	\$ 2,107.44	\$ 2,387.20	\$ 2,453.23	\$ 2,551.42	\$ 2,641.61
42	Proposed Bill	\$ 2,175.28	\$ 2,241.31	\$ 2,330.86	\$ 2,420.97	\$ 2,522.11	\$ 2,387.20	\$ 2,453.23	\$ 2,551.42	\$ 2,641.61	\$ 2,751.07
43	Change (Percent)	12.2%	3.0%	4.0%	3.9%	4.2%	13.3%	2.8%	4.0%	3.5%	4.1%
44	Change (Dollars)	\$ 237.12	\$ 66.03	\$ 89.55	\$ 90.11	\$ 101.14	\$ 279.76	\$ 66.03	\$ 98.19	\$ 90.19	\$ 109.46
45	Usage (Number of 100 Cubic Feet Units per Month):										
46	1,200										
47	Meter Size: 3"										
48	Current Bill	\$ 3,916.16	\$ 4,400.82	\$ 4,532.85	\$ 4,714.08	\$ 4,894.29	\$ 4,286.46	\$ 4,864.40	\$ 4,996.43	\$ 5,196.56	\$ 5,376.94
49	Proposed Bill	\$ 4,400.82	\$ 4,532.85	\$ 4,714.08	\$ 4,894.29	\$ 5,098.63	\$ 4,864.40	\$ 4,996.43	\$ 5,196.56	\$ 5,376.94	\$ 5,599.48
50	Change (Percent)	12.4%	3.0%	4.0%	3.8%	4.2%	13.5%	2.7%	4.0%	3.5%	4.1%
51	Change (Dollars)	\$ 484.66	\$ 132.03	\$ 181.23	\$ 180.21	\$ 204.34	\$ 677.94	\$ 132.03	\$ 200.13	\$ 180.38	\$ 222.54
52	Usage (Number of 100 Cubic Feet Units per Month):										
53	7,000										
54	Meter Sizes: 4", 4", 2", 5/8", 2", 2", 2"										
55	Current Bill	\$ 21,970.29	\$ 24,576.76	\$ 25,346.97	\$ 26,359.42	\$ 27,410.36	\$ 23,472.69	\$ 26,457.57	\$ 27,227.78	\$ 28,316.91	\$ 29,368.54
56	Proposed Bill	\$ 24,576.76	\$ 25,346.97	\$ 26,359.42	\$ 27,410.36	\$ 28,559.17	\$ 26,457.57	\$ 27,227.78	\$ 28,316.91	\$ 29,368.54	\$ 30,591.19
57	Change (Percent)	11.9%	3.1%	4.0%	4.0%	4.2%	12.7%	2.9%	4.0%	3.7%	4.2%
58	Change (Dollars)	\$ 2,606.47	\$ 770.21	\$ 1,012.45	\$ 1,050.94	\$ 1,148.81	\$ 2,984.88	\$ 770.21	\$ 1,089.13	\$ 1,051.63	\$ 1,222.65
59	Usage (Number of 100 Cubic Feet Units per Month):										
60	2,800										
61	Meter Size: 6"										
62	Current Bill	\$ 9,745.61	\$ 11,030.22	\$ 11,338.25	\$ 11,792.28	\$ 12,212.94	\$ 11,088.11	\$ 12,685.85	\$ 12,993.88	\$ 13,515.41	\$ 13,936.69
63	Proposed Bill	\$ 11,030.22	\$ 11,338.25	\$ 11,792.28	\$ 12,212.94	\$ 12,719.83	\$ 12,685.85	\$ 12,993.88	\$ 13,515.41	\$ 13,936.69	\$ 14,508.58
64	Change (Percent)	13.2%	2.8%	4.0%	3.6%	4.2%	14.6%	2.4%	4.0%	3.1%	4.1%
65	Change (Dollars)	\$ 1,284.61	\$ 308.03	\$ 454.03	\$ 420.66	\$ 506.89	\$ 1,617.74	\$ 308.03	\$ 521.53	\$ 421.28	\$ 571.89
66							<b>SVBC ANNUAL BILL</b>				
67	Usage (Number of 100 Cubic Feet Units per Year):						FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
68	52,677										
69	Monthly Capital Charge: SVBC Share of Outstanding WWTP-Related Bonds										
70	Current Bill						\$301,405.09	\$337,166.96	\$339,766.58	\$359,496.77	\$364,030.64
71	Proposed Bill						\$337,166.96	\$339,766.58	\$359,496.77	\$364,030.64	\$383,253.72
72	Change (Percent)						11.9%	0.8%	5.8%	1.3%	5.3%
73	Change (Dollars)						\$ 36,761.87	\$ 2,599.62	\$ 19,730.19	\$ 4,533.87	\$ 19,223.08
74							<b>BAY VIEW ANNUAL BILL</b>				
75	Usage (Number of 100 Cubic Feet Units per Year):						FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
76	20,016										
77	Sewage pumped via 8" FM, RTS charge billed as meter size = 4"										
78	Current Bill						\$ 84,161.68	\$ 94,757.04	\$ 97,559.28	\$101,409.84	\$105,220.08
79	Proposed Bill						\$ 94,757.04	\$ 97,559.28	\$101,409.84	\$105,220.08	\$109,645.92
80	Change (Percent)						12.6%	3.0%	3.9%	4.2%	4.2%
81	Change (Dollars)						\$ 10,605.36	\$ 2,802.24	\$ 3,850.56	\$ 3,810.24	\$ 4,425.84



Table S6 Residential  
Example Sewer Bills

W&S rate study 2018 - final

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Inside City</b>						<b>Resort Township</b>				
2		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	Usage (Number of 100 Cubic Feet Units per Month):										
4	0										
5	Meter Size: 5/8"										
6	Current Bill	\$ 30.69	\$ 38.04	\$ 38.07	\$ 39.54	\$ 39.58	\$ 51.85	\$ 64.53	\$ 64.56	\$ 67.11	\$ 67.16
7	Proposed Bill	\$ 38.04	\$ 38.07	\$ 39.54	\$ 39.58	\$ 40.99	\$ 64.53	\$ 64.56	\$ 67.11	\$ 67.16	\$ 69.61
8	Change (Percent)	23.9%	0.1%	3.9%	0.1%	3.6%	24.5%	0.0%	3.9%	0.1%	3.6%
9	Change (Dollars)	\$ 7.35	\$ 0.03	\$ 1.47	\$ 0.04	\$ 1.41	\$ 12.68	\$ 0.03	\$ 2.55	\$ 0.05	\$ 2.45
10	Usage (Number of 100 Cubic Feet Units per Month):										
11	1										
12	Meter Size: 5/8"										
13	Current Bill	\$ 33.54	\$ 41.19	\$ 41.33	\$ 42.93	\$ 43.12	\$ 54.70	\$ 67.88	\$ 67.82	\$ 70.50	\$ 70.70
14	Proposed Bill	\$ 41.19	\$ 41.33	\$ 42.93	\$ 43.12	\$ 44.68	\$ 67.88	\$ 67.82	\$ 70.50	\$ 70.70	\$ 73.30
15	Change (Percent)	22.8%	0.3%	3.9%	0.4%	3.6%	23.7%	0.2%	4.0%	0.3%	3.7%
16	Change (Dollars)	\$ 7.65	\$ 0.14	\$ 1.60	\$ 0.19	\$ 1.56	\$ 12.98	\$ 0.14	\$ 2.68	\$ 0.20	\$ 2.60
17	Usage (Number of 100 Cubic Feet Units per Month):										
18	2										
19	Meter Size: 5/8"										
20	Current Bill	\$ 36.39	\$ 44.34	\$ 44.59	\$ 46.32	\$ 46.66	\$ 57.55	\$ 70.83	\$ 71.08	\$ 73.89	\$ 74.24
21	Proposed Bill	\$ 44.34	\$ 44.59	\$ 46.32	\$ 46.66	\$ 48.37	\$ 70.83	\$ 71.08	\$ 73.89	\$ 74.24	\$ 76.99
22	Change (Percent)	21.8%	0.6%	3.9%	0.7%	3.7%	23.1%	0.4%	4.0%	0.5%	3.7%
23	Change (Dollars)	\$ 7.95	\$ 0.25	\$ 1.73	\$ 0.34	\$ 1.71	\$ 13.28	\$ 0.25	\$ 2.81	\$ 0.35	\$ 2.75
24	Usage (Number of 100 Cubic Feet Units per Month):										
25	3										
26	Meter Size: 5/8"										
27	Current Bill	\$ 39.24	\$ 47.49	\$ 47.85	\$ 49.71	\$ 50.20	\$ 60.40	\$ 73.98	\$ 74.34	\$ 77.28	\$ 77.78
28	Proposed Bill	\$ 47.49	\$ 47.85	\$ 49.71	\$ 50.20	\$ 52.06	\$ 73.98	\$ 74.34	\$ 77.28	\$ 77.78	\$ 80.68
29	Change (Percent)	21.0%	0.8%	3.9%	1.0%	3.7%	22.5%	0.5%	4.0%	0.6%	3.7%
30	Change (Dollars)	\$ 8.25	\$ 0.36	\$ 1.86	\$ 0.49	\$ 1.86	\$ 13.58	\$ 0.36	\$ 2.94	\$ 0.50	\$ 2.90
31	Usage (Number of 100 Cubic Feet Units per Month):										
32	4										
33	Meter Size: 5/8"										
34	Current Bill	\$ 42.09	\$ 50.64	\$ 51.11	\$ 53.10	\$ 53.74	\$ 63.25	\$ 77.13	\$ 77.60	\$ 80.67	\$ 81.32
35	Proposed Bill	\$ 50.64	\$ 51.11	\$ 53.10	\$ 53.74	\$ 55.75	\$ 77.13	\$ 77.60	\$ 80.67	\$ 81.32	\$ 84.37
36	Change (Percent)	20.3%	0.9%	3.9%	1.2%	3.7%	21.9%	0.6%	4.0%	0.8%	3.8%
37	Change (Dollars)	\$ 8.55	\$ 0.47	\$ 1.99	\$ 0.64	\$ 2.01	\$ 13.88	\$ 0.47	\$ 3.07	\$ 0.65	\$ 3.05
38	Usage (Number of 100 Cubic Feet Units per Month):										
39	5										
40	Meter Size: 5/8"										
41	Current Bill	\$ 44.94	\$ 53.79	\$ 54.37	\$ 56.49	\$ 57.28	\$ 66.10	\$ 80.28	\$ 80.86	\$ 84.06	\$ 84.86
42	Proposed Bill	\$ 53.79	\$ 54.37	\$ 56.49	\$ 57.28	\$ 59.44	\$ 80.28	\$ 80.86	\$ 84.06	\$ 84.86	\$ 88.06
43	Change (Percent)	19.7%	1.1%	3.9%	1.4%	3.8%	21.5%	0.7%	4.0%	1.0%	3.8%
44	Change (Dollars)	\$ 8.85	\$ 0.58	\$ 2.12	\$ 0.79	\$ 2.16	\$ 14.18	\$ 0.58	\$ 3.20	\$ 0.80	\$ 3.20
45	Usage (Number of 100 Cubic Feet Units per Month):										
46	6										
47	Meter Size: 5/8"										
48	Current Bill	\$ 47.79	\$ 56.94	\$ 57.63	\$ 59.88	\$ 60.82	\$ 68.95	\$ 83.43	\$ 84.12	\$ 87.45	\$ 88.40
49	Proposed Bill	\$ 56.94	\$ 57.63	\$ 59.88	\$ 60.82	\$ 63.13	\$ 83.43	\$ 84.12	\$ 87.45	\$ 88.40	\$ 91.75
50	Change (Percent)	19.1%	1.2%	3.9%	1.6%	3.8%	21.0%	0.8%	4.0%	1.1%	3.8%
51	Change (Dollars)	\$ 9.15	\$ 0.69	\$ 2.25	\$ 0.94	\$ 2.31	\$ 14.48	\$ 0.69	\$ 3.33	\$ 0.95	\$ 3.35
52	Usage (Number of 100 Cubic Feet Units per Month):										
53	7										
54	Meter Size: 5/8"										
55	Current Bill	\$ 50.64	\$ 60.09	\$ 60.89	\$ 63.27	\$ 64.36	\$ 71.80	\$ 86.58	\$ 87.38	\$ 90.84	\$ 91.94
56	Proposed Bill	\$ 60.09	\$ 60.89	\$ 63.27	\$ 64.36	\$ 66.82	\$ 86.58	\$ 87.38	\$ 90.84	\$ 91.94	\$ 95.44
57	Change (Percent)	18.7%	1.3%	3.9%	1.7%	3.8%	20.6%	0.9%	4.0%	1.2%	3.8%
58	Change (Dollars)	\$ 9.45	\$ 0.80	\$ 2.38	\$ 1.09	\$ 2.46	\$ 14.78	\$ 0.80	\$ 3.46	\$ 1.10	\$ 3.50
59	Usage (Number of 100 Cubic Feet Units per Month):										
60	8										
61	Meter Size: 5/8"										
62	Current Bill	\$ 53.49	\$ 63.24	\$ 64.15	\$ 66.66	\$ 67.90	\$ 74.65	\$ 89.73	\$ 90.64	\$ 94.23	\$ 95.48
63	Proposed Bill	\$ 63.24	\$ 64.15	\$ 66.66	\$ 67.90	\$ 70.51	\$ 89.73	\$ 90.64	\$ 94.23	\$ 95.48	\$ 99.13
64	Change (Percent)	18.2%	1.4%	3.9%	1.9%	3.8%	20.2%	1.0%	4.0%	1.3%	3.8%
65	Change (Dollars)	\$ 9.75	\$ 0.91	\$ 2.51	\$ 1.24	\$ 2.61	\$ 15.08	\$ 0.91	\$ 3.59	\$ 1.25	\$ 3.65
66	Usage (Number of 100 Cubic Feet Units per Month):										
67	9										
68	Meter Size: 5/8"										
69	Current Bill	\$ 56.34	\$ 66.39	\$ 67.41	\$ 70.05	\$ 71.44	\$ 77.50	\$ 92.88	\$ 93.90	\$ 97.62	\$ 99.02
70	Proposed Bill	\$ 66.39	\$ 67.41	\$ 70.05	\$ 71.44	\$ 74.20	\$ 92.88	\$ 93.90	\$ 97.62	\$ 99.02	\$ 102.82
71	Change (Percent)	17.8%	1.5%	3.9%	2.0%	3.9%	19.8%	1.1%	4.0%	1.4%	3.8%
72	Change (Dollars)	\$ 10.05	\$ 1.02	\$ 2.64	\$ 1.39	\$ 2.76	\$ 15.38	\$ 1.02	\$ 3.72	\$ 1.40	\$ 3.80
73	Usage (Number of 100 Cubic Feet Units per Month):										
74	10										
75	Meter Size: 5/8"										
76	Current Bill	\$ 59.19	\$ 69.54	\$ 70.67	\$ 73.44	\$ 74.98	\$ 80.35	\$ 96.03	\$ 97.16	\$ 101.01	\$ 102.56
77	Proposed Bill	\$ 69.54	\$ 70.67	\$ 73.44	\$ 74.98	\$ 77.89	\$ 96.03	\$ 97.16	\$ 101.01	\$ 102.56	\$ 106.51
78	Change (Percent)	17.5%	1.6%	3.9%	2.1%	3.9%	19.5%	1.2%	4.0%	1.5%	3.9%
79	Change (Dollars)	\$ 10.35	\$ 1.13	\$ 2.77	\$ 1.54	\$ 2.91	\$ 15.68	\$ 1.13	\$ 3.85	\$ 1.55	\$ 3.95

**Table S7  
Sewer Rate Revenue Adequacy**

W&S rate study 2018 - final

	A	B	C	D	E
1	<b>FY 2019</b>				
2	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
3		Billing - Inside City	\$ 2.72	35,160	\$ 95,635
4		RTS - Inside City	\$ 35.32	47,070	\$ 1,662,512
5		Commodity - Inside City	\$ 3.15	318,148	\$ 1,002,166
6		Billing - Resort Twp	\$ 2.72	2,412	\$ 6,561
7		RTS - Resort Twp	\$ 61.81	3,396	\$ 209,907
8		Commodity - Resort Twp	\$ 3.15	42,475	\$ 133,796
9		Commodity - SVBC	\$ 3.00	52,677	\$ 158,031
10		Capital Charge - SVBC	\$ 14,928.00	12	\$ 179,136
11		RTS - Bayview	\$ 1,324.50	12	\$ 15,894
12		Commodity - Bayview	\$ 3.94	20,016	\$ 78,863
13	\$ 3,539,130	<b>TOTAL</b>			\$ 3,542,501
14	\$ 3,539,130			<b>CLOSURE:</b>	\$ 3,372
15	<b>FY 2020</b>				
16	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
17		Billing - Inside City	\$ 2.75	35,160	\$ 96,690
18		RTS - Inside City	\$ 35.32	47,070	\$ 1,662,512
19		Commodity - Inside City	\$ 3.26	318,148	\$ 1,037,162
20		Billing - Resort Twp	\$ 2.75	2,412	\$ 6,633
21		RTS - Resort Twp	\$ 61.81	3,396	\$ 209,907
22		Commodity - Resort Twp	\$ 3.26	42,475	\$ 138,469
23		Commodity - SVBC	\$ 3.10	52,677	\$ 163,299
24		Capital Charge - SVBC	\$ 14,705.66	12	\$ 176,468
25		RTS - Bayview	\$ 1,324.50	12	\$ 15,894
26		Commodity - Bayview	\$ 4.08	20,016	\$ 81,665
27	\$ 3,587,772	<b>TOTAL</b>			\$ 3,588,699
28	\$ 3,587,772			<b>CLOSURE:</b>	\$ 927
29	<b>FY 2021</b>				
30	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
31		Billing - Inside City	\$ 2.78	35,160	\$ 97,745
32		RTS - Inside City	\$ 36.76	47,070	\$ 1,730,293
33		Commodity - Inside City	\$ 3.39	318,148	\$ 1,078,522
34		Billing - Resort Twp	\$ 2.78	2,412	\$ 6,705
35		RTS - Resort Twp	\$ 64.33	3,396	\$ 218,465
36		Commodity - Resort Twp	\$ 3.39	42,475	\$ 143,990
37		Commodity - SVBC	\$ 3.23	52,677	\$ 170,147
38		Capital Charge - SVBC	\$ 15,779.17	12	\$ 189,350
39		RTS - Bayview	\$ 1,378.50	12	\$ 16,542
40		Commodity - Bayview	\$ 4.24	20,016	\$ 84,868
41	\$ 3,734,723	<b>TOTAL</b>			\$ 3,736,627
42	\$ 3,734,723			<b>CLOSURE:</b>	\$ 1,903
43	<b>FY 2022</b>				
44	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
45		Billing - Inside City	\$ 2.81	35,160	\$ 98,800
46		RTS - Inside City	\$ 36.77	47,070	\$ 1,730,764
47		Commodity - Inside City	\$ 3.54	318,148	\$ 1,126,244
48		Billing - Resort Twp	\$ 2.81	2,412	\$ 6,778
49		RTS - Resort Twp	\$ 64.35	3,396	\$ 218,533
50		Commodity - Resort Twp	\$ 3.54	42,475	\$ 150,382
51		Commodity - SVBC	\$ 3.37	52,677	\$ 177,521
52		Capital Charge - SVBC	\$ 15,542.43	12	\$ 186,509
53		RTS - Bayview	\$ 1,379.10	12	\$ 16,549
54		Commodity - Bayview	\$ 4.43	20,016	\$ 88,671
55	\$ 3,795,809	<b>TOTAL</b>			\$ 3,800,730
56	\$ 3,795,809			<b>CLOSURE:</b>	\$ 4,921
57	<b>FY 2023</b>				
58	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
59		Billing - Inside City	\$ 2.83	35,160	\$ 99,503
60		RTS - Inside City	\$ 38.16	47,070	\$ 1,796,191
61		Commodity - Inside City	\$ 3.69	318,148	\$ 1,173,966
62		Billing - Resort Twp	\$ 2.83	2,412	\$ 6,826
63		RTS - Resort Twp	\$ 66.78	3,396	\$ 226,785
64		Commodity - Resort Twp	\$ 3.69	42,475	\$ 156,733
65		Commodity - SVBC	\$ 3.51	52,677	\$ 184,896
66		Capital Charge - SVBC	\$ 16,529.79	12	\$ 198,357
67		RTS - Bayview	\$ 1,431.00	12	\$ 17,172
68		Commodity - Bayview	\$ 4.62	20,016	\$ 92,474
69	\$ 3,952,144	<b>TOTAL</b>			\$ 3,952,903
70	\$ 3,952,144			<b>CLOSURE:</b>	\$ 759
71	<b>FY 2019 to FY2023</b>				
72	<b>Revenue Required From Rates</b>	<b>Charge</b>	<b>Proposed Rate</b>	<b>Annual Billing Units</b>	<b>Projected Revenue</b>
73		Billing - Inside City			\$ 488,372
74		RTS - Inside City			\$ 8,582,273
75		Commodity - Inside City			\$ 5,418,060
76		Billing - Resort Twp			\$ 33,503
77		RTS - Resort Twp			\$ 1,083,596
78		Commodity - Resort Twp			\$ 723,349
79		Commodity - SVBC			\$ 853,894
80		Capital Charge - SVBC			\$ 929,821
81		RTS - Bayview			\$ 82,051
82		Commodity - Bayview			\$ 426,541
83	\$ 18,609,579	<b>TOTAL</b>			\$ 18,621,460
84	\$ 18,609,579			<b>CLOSURE:</b>	\$ 11,862

Table S8  
Local Replacement Value of Wastewater Facilities

W&S rate study 2018 - final

Asset No.	Facility Name/Location	Year Acquired	ENR	Useful Life (Yrs)	Total Amount Paid (\$)	Amount Locally Paid (\$)	Others Paid	ENR	Local
			Factor in Year Acquired					Factor to September r, 2018	Replacement Value September, 2018 (\$)
Pumping System									
592-025-321.01.01	10" Flow Control Valve	2001	6,342	5	4647	4,647	0	1.7813	8,185
592-025-321.01.02	Design & Install Relay	2001	6,342	2	641	641	0	1.7813	1,129
592-025-321.02.01	City/Fire Hall Lift Station	2002	6,538	25	129,585	129,585	0	1.7085	221,401
592-025-321.11.01	Bear River Lift Sta Replacement	2011	9,070	25	340,511	340,511	0	1.2316	419,369
592-025-321.03.01	City/Fire Hall Lift Station	2003	6,895	25	20,503	20,503	0	1.6885	34,210
592-025-321.71.01	Structures 1971	1971	1,581	42	14,000	14,000	0	7.0653	98,915
592-025-321.75.01	Structures 1975	1975	2,212	42	9,560	9,560	0	5.0499	48,277
592-025-321.76.01	Structures 1976	1976	2,400	42	1,998	1,998	0	4.6544	9,300
592-025-321.85.01	Structures Job 529 1985	1985	4,194	42	6,400	6,400	0	2.6637	17,047
592-025-321.88.01	Structures 1988	1988	4,519	42	17,587	17,587	0	2.4716	43,468
592-025-321.90.01	Structures 1990	1990	4,728	42	10,915	10,915	0	2.3628	25,790
592-025-321.91.01	Structures 1991	1991	4,834	42	17,647	17,647	0	2.3106	40,775
592-025-321.92.01	Structures Job 369	1992	4,985	42	2,543	2,543	0	2.2410	5,699
592-025-321.94.01	500K Heat Changer-Alfa	1994	5,410	20	19,100	19,100	0	2.0648	39,438
592-025-321.94.02	Improvements 1994	1994	5,410	20	5,827	5,827	0	2.0648	12,032
592-025-321.95.01	(2) Grinder Pumps & Drives	1995	5,471	5	14,028	14,028	0	2.0417	28,641
592-025-321.95.02	Lift Station/Bay Harbor (2)	1995	5,471	20	82,000	82,000	0	2.0417	167,419
592-025-321.96.01	Bay Harbor Lift Station	1996	5,818	20	13,400	13,400	0	1.9883	26,643
592-025-321.96.02	Job 77 Control Panel Fire Hall	1996	5,818	20	34,149	34,149	0	1.9883	67,898
592-025-321.96.03	Lift Station/Bay Harbor	1996	5,818	20	121,400	121,400	0	1.9883	241,377
592-025-321.98.01	Rosedale Lift Station	1998	5,920	20	52,636	52,636	0	1.8889	99,321
592-025-321.99.01	WWTP-Conduits, Cond Upgr	1999	6,059	20	46,607	46,607	0	1.8434	85,917
592-025-321.99.02	Magnus Lift Station Floor	1999	6,059	5	5,350	5,350	0	1.8434	9,882
592-025-321.81.01	Pump Equipment 1962 - 1981	1981	3,533	20	6,060	6,060	0	3.1614	19,158
592-025-321.91.01	Electric Pump Equip 1991	1991	4,834	33	9,256	9,256	0	2.3106	21,387
592-025-321.92.01	Electric Pump Equip 1992	1992	4,985	33	4,473	4,473	0	2.2410	10,024
592-025-321.94.01	Electric Pump Equip 1994	1994	5,410	10	2,538	2,538	0	2.0648	5,241
592-025-321.12.01	Bear River Lift Station	2012	9,308	25	463,391	463,391	0	1.2001	556,095
592-025-321.15.01	Pinebluff Lift Station	2015	10,031	25	116,946	116,946	0	1.1136	130,234
Treatment System									
592-025-321.02.02	WWTP Renovations	2002	6,538	40	5,172,455	5,172,455	0	1.7085	8,837,325
592-025-321.04.02	WWTP Renovations	2003	6,895	40	334,476	334,476	0	1.6685	558,087
592-025-330.00.00	Treatment Land & Rights	1960	824	0	20,702	20,702	0	1.0000	20,702
592-025-330.03.01	WWTP Renovations	2003	6,895	40	2,038,309	2,038,309	0	1.6685	3,397,664
592-025-330.04.01	Parking & Driveway Paving	2004	7,115	20	41,159	41,159	0	1.5700	64,619
592-025-330.11.01	WWTP Headworks Recon	2011	9,070	25	953,088	953,088	0	1.2316	1,173,811
592-025-330.11.02	WWTP Improvements 2001	2011	9,070	25	417,774	417,774	0	1.2316	514,525
592-025-331.00.01	WWTP Improvements 2001	2001	6,342	10	70,309	70,309	0	1.7613	123,835
592-025-331.73.01	Structures	1973	1,900	40	2,799,971	2,799,971	0	5.8791	16,461,295
592-025-331.74.01	Structures 1974	1974	2,020	40	10,000	10,000	0	5.5298	55,298
592-025-331.76.01	Structures 1976	1976	2,400	40	17,283	17,283	0	4.6544	80,442
592-025-331.77.01	Structures 1977	1977	2,577	40	13,326	13,326	0	4.3352	57,771
592-025-331.87.01	Structures 1987	1987	4,392	40	1,521	1,521	0	2.5432	3,888
592-025-331.88.01	Structures 1988	1988	4,519	40	11,700	11,700	0	2.4716	28,918
592-025-331.89.01	Structures 1989	1989	4,606	40	3,671	3,671	0	2.4250	8,902
592-025-331.91.01	Structures 1991	1991	4,834	40	1,000	1,000	0	2.3106	2,311
592-025-331.92.01	New Roof	1992	4,985	40	22,460	22,460	0	2.2410	50,333
592-025-331.93.01	Structures 1993	1993	5,211	20	18,681	18,681	0	2.1437	40,047
592-025-331.95.01	Air Diffusers Engineering	1995	5,471	5	5,002	5,002	0	2.0417	10,213
592-025-331.95.02	Air Diffuser	1995	5,471	5	82,417	82,417	0	2.0417	168,270
592-025-331.95.03	Circuit Breaker	1995	5,471	5	6,500	6,500	0	2.0417	13,271
592-025-331.96.01	Heating Unit - Chlorine Room	1996	5,818	10	5,489	5,489	0	1.9883	10,914
592-025-331.96.02	Muffin Monster	1996	5,818	10	32,132	32,132	0	1.9883	63,887
592-025-331.97.01	WWTP Addition	1997	5,823	30	92,286	92,286	0	1.9183	177,036
592-025-331.97.02	WWTP - Repair & Replace	1997	5,823	20	69,654	69,654	0	1.9183	133,620
592-025-331.98.01	WWTP - Addition	1998	5,920	20	96,476	96,476	0	1.8889	182,045
592-025-331.99.01	WWTP - Building Addition	1999	6,059	10	46,514	46,514	0	1.8434	85,748
592-025-332.93.01	Treatment Equip Lab 76 thru 93	1993	5,211	5	26,279	26,279	0	2.1437	56,335
592-025-330.12.12	WWTP Headworks Recon	2012	9,308	25	1,335,995	1,335,995	0	1.2001	1,603,268
592-025-330.17.01	WWTP Improvements	2017	10,737	25	1,660,062	1,660,062	0	1.0404	1,727,119
592-025-330.17.02	WWTP Improv pay#6 & retainage	2017	10,737	25	625,398	625,398	0	1.0404	650,661
Trans & Dist Mains									
592-025-343.03.01	Standish Avenue	2003	6,895	40	76,382	76,382	0	1.6685	127,446
592-025-343.03.02	Jackson Street	2003	6,895	40	81,036	81,036	0	1.6685	135,212
592-025-343.05.02	W. Lake Sanitary Sewer	2005	7,444	20	255,948	255,948	0	1.5005	384,062
592-025-343.06.03	Sewermain Liberty/W. Jeff	2006	7,751	20	75,805	75,805	0	1.4411	109,243
592-025-343.07.01	Sewermain - Riverbend	2007	7,967	20	29,447	29,447	0	1.4021	41,287
592-025-343.07.02	Sewer - Chx, Maple, Branch	2007	7,967	20	39,787	39,787	0	1.4021	55,784
592-025-343.07.03	Sewer - Lib, Madison, Grace	2007	7,967	20	49,069	49,069	0	1.4021	68,798
592-025-343.07.04	Sewermain - East Mitchell	2007	7,967	20	39,331	39,331	0	1.4021	55,145
592-025-343.08.01	East Mitchell Sewer Main	2008	8,310	20	521,581	521,581	0	1.3442	701,109
592-025-343.08.08	E. Mitchell - Sewer	2008	8,310	20	28,109	28,109	0	1.3442	37,784
592-025-343.09.01	Bay Harbor Village Lift Station	2009	8,570	20	620,945	620,945	0	1.3034	809,336
592-025-343.09.02	Intertown Wells - Meijer	2009	8,570	20	113,288	113,288	0	1.3034	147,659
592-025-343.10.09	Wachtel, Jackson, Ione Sewers	2010	8,799	20	85,806	85,806	0	1.2695	108,932
592-025-343.10.10	US 131 Sewer Lining	2010	8,799	20	128,738	128,738	0	1.2695	163,434
592-025-343.11.01	Atkins/Kalamazoo Sanitary	2011	9,070	25	119,724	119,724	0	1.2316	147,451
592-025-343.56.01	Collection Mains - 1956	1956	692	100	25,284	25,284	0	16.1420	408,135
592-025-343.56.02	Collection Mains - 1956	1956	692	100	10,959	10,959	0	16.1420	176,900
592-025-343.57.01	Collection Mains - 1957	1957	724	100	3,636	3,636	0	15.4286	56,098
592-025-343.58.01	Collection Mains - 1958	1958	759	100	7,198	7,198	0	14.7171	105,934
592-025-343.60.01	Collection Mains - 1960	1960	824	100	6,264	6,264	0	13.5562	84,916
592-025-343.61.01	Collection Mains - 1961	1961	847	100	868	868	0	13.1881	11,447
592-025-343.62.01	Collection Mains - 1962	1962	872	100	24,208	24,208	0	12.8100	310,103
592-025-343.63.01	Collection Mains - 1963	1963	901	100	7,312	7,312	0	12.3976	90,652
592-025-343.65.01	Collection Mains - 1965	1965	971	100	25,810	25,810	0	11.5039	296,915
592-025-343.66.01	Collection Mains - 1966	1966	1,019	100	637	637	0	10.9620	6,963
592-025-343.67.01	Collection Mains - 1967	1967	1,074	100	457	457	0	10.4006	4,753
592-025-343.68.01	Collection Mains - 1968	1968	1,155	100	5,445	5,445	0	9.6712	52,680
592-025-343.69.01	Collection Mains - 1969	1969	1,300	100	4,545	4,545	0	8.5925	39,053
592-025-343.70.01	Collection Mains - 1970	1970	1,450	100	1,572	1,572	0	7.7038	12,110
592-025-343.71.01	Collection Mains - 1971	1971	1,581	100	54,453	54,453	0	7.0653	384,728
592-025-343.72.01	Collection Mains - 1972	1972	1,753	10	335	335	0	6.3721	2,135
592-025-343.73.01	Collection Mains - 1973	1973	1,900	1					

Table S8  
Local Replacement Value of Wastewater Facilities

W&S rate study 2018 - final

Asset No.	Facility Name/Location	Year Acquired	ENR Factor in Year Acquired	Useful Life (Yrs)	Total Amount Paid (\$)	Amount Locally Paid (\$)	Others Paid	ENR Factor to September, 2018	Local Replacement Value September, 2018 (\$)
592-025-343.80.01	Collection Mains - 1980	1980	3,237	100	1,150	1,150	0	3.4505	3,968
592-025-343.81.01	Collection Mains - 1981	1981	3,533	100	45,884	45,884	0	3.1614	144,997
592-025-343.82.01	Job 381 Collection Mains	1982	3,816	100	3,975	3,975	0	2.9272	11,636
592-025-343.84.01	Job 469 Collection Mains	1984	4,148	100	104,047	104,047	0	2.6930	280,194
592-025-343.86.01	Sewer Line/Midtown Assoc	1986	4,287	100	47,029	47,029	0	2.8055	122,532
592-025-343.87.01	Job 661 Emmet St	1987	4,392	100	131,208	131,208	0	2.5432	333,689
592-025-343.88.01	Job 662 Mains	1988	4,519	100	11,753	11,753	0	2.4716	29,049
592-025-343.89.01	Job 911 SS Lake/Job 910 Jen	1989	4,606	100	27,633	27,633	0	2.4250	67,011
592-025-343.90.01	Jobs 159-1774.37/Job 163-3506.17	1990	4,728	100	5,280	5,280	0	2.3628	12,475
592-025-343.91.01	Jobs 257, 268 & 253	1991	4,834	100	291,656	291,656	0	2.3106	673,894
592-025-343.92.01	Collection Mains 1992	1992	4,985	100	12,307	12,307	0	2.2410	27,580
592-025-343.94.01	Job 565	1994	5,410	25	5,042	5,042	0	2.0648	10,411
592-025-343.96.01	Bay Harbor Mains	1996	5,618	30	1,330,491	1,330,491	0	1.9883	2,645,386
592-025-343.97.01	CBD Sanitary Sewer	1997	5,823	30	15,745	15,745	0	1.9183	30,204
592-025-343.12.14	System Wide Sanitary Upgrade	2012	9,308	25	42,196	42,196	0	1.2001	50,638
592-025-343.12.15	Howard Street Sanitary	2012	9,308	25	35,318	35,318	0	1.2001	42,384
592-025-343.12.13	Atkins/Kalamazoo Sanitary	2012	9,308	25	59,691	59,691	0	1.2001	71,632
592-025-343.13.01	Ingalls/Madison Sewermain	2013	9,547	25	136,517	136,517	0	1.1701	159,735
592-025-343.13.02	Connable/Monroe Sewermain	2013	9,547	25	43,014	43,014	0	1.1701	50,330
592-025-343.14.01	Connable Reconfiguration	2014	9,807	25	24,678	24,678	0	1.1391	28,110
592-025-343.14.02	Arlington Ave	2014	9,807	25	188,964	188,964	0	1.1391	215,243
592-025-343.15.01	CHX Ave MDOT Project	2015	10,031	25	313,150	313,150	0	1.1136	348,732
592-025-343.15.02	Pinebluff Station Sewermain	2015	10,031	25	116,589	116,589	0	1.1136	129,836
592-025-343.17.01	Emmett St - sewer upgrade	2017	10,737	25	187,684	187,684	0	1.0404	195,265
592-025-343.17.02	Bear River East Lift Station	2017	10,737	25	31,790	31,790	0	1.0404	33,074
<b>Furniture &amp; Equipment</b>									
592-025-382.86.01	Utilicorders, Mapping Sys.	1986	4,287	5	23,757	23,757	0	2.8055	61,898
592-025-391.90.01	Equipment 1972 thru 1990	1990	4,728	10	11,495	11,495	0	2.3628	27,160
592-025-391.96.01	Weight Scale	1996	5,618	5	2,835	2,835	0	1.9883	5,637
592-025-391.96.02	Software System	1996	5,618	5	1,671	1,671	0	1.9883	3,322
592-025-391.96.03	Computer system	1996	5,618	5	2,796	2,796	0	1.9883	5,559
592-025-391.98.01	WWTP Addition - Office Furniture	1998	5,920	5	7,890	7,890	0	1.8869	14,888
592-025-391.99.01	Gateway Computer	1999	6,059	5	2,888	2,888	0	1.8434	5,324
592-025-391.93.01	Garage Equipment 63 Thru	1993	5,211	3	10,286	10,286	0	2.1437	22,050
<b>Total</b>					<b>25,214,778</b>	<b>25,214,778</b>			<b>57,947,596</b>

**Table S9**  
**Wastewater System Development Charge Calculations**

W&S rate study 2018 - final

	B	C	D	E	F	G	H	I	J
				FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
1									
2	<b>CURRENT LOCAL REPLACEMENT VALUE</b>			57,947,596	57,947,596	57,947,596	57,947,596	57,947,596	57,947,596
3	<b>PROPOSED CAPITAL IMPROVEMENTS</b>	<b>Year to be Built</b>	<b>Cost</b>						
4	US-31 - Lewis Street to Boulder Lane. Utility upgrades include sanitary main highway crossings and sanitary main between McDonald Drive and Boulder Lane. Paid from operating revenue. Potential \$173,000 MDOT grant).	2019	350,000		350,000				
5	Greenwood Road - Sheridan to Charlevoix Avenue. Replace water main along Greenwood Road. Paid from operating revenue.	2020	75,000			75,000			
6	Sanitary - Jackson Street -West Mitchell Street to Hospital Ring Road. This project would include replacement of sanitary sewers and components	2020	215,000			215,000			
7	Upgrades - Sanitary sewer work will take place in conjunction with street resurfacing program. Paid from operating revenue.	2021	150,000				150,000		
8	Greenwood Road - Sheridan to Charlevoix Avenue. Utility upgrade to include sanitary sewer rehabilitation along Greenwood Road. Paid from operating revenue.	2021	125,000				125,000		
9	East Lake - Kalamazoo to Division. Replace sanitary sewers in conjunction with street reconstruction. Paid from operating revenue.	2022	231,000					231,000	
10	Howard Street and miscellaneous sewer main spot repairs and upgrades. Paid from operating revenue.	2023	250,000						250,000
11	Miscellaneous wastewater system capital improvements. Paid from operating revenue. To bring total annual wastewater CIP cost to \$500,000 beginning FY 2019.	2019	150,000		150,000				
12	Miscellaneous wastewater system capital improvements. Paid from operating revenue. To bring total annual wastewater CIP cost to \$500,000 beginning FY 2019.	2020	210,000			210,000			
13	Miscellaneous wastewater system capital improvements. Paid from operating revenue. To bring total annual wastewater CIP cost to \$500,000 beginning FY 2019.	2021	225,000				225,000		
14	Miscellaneous wastewater system capital improvements. Paid from operating revenue. To bring total annual wastewater CIP cost to \$500,000 beginning FY 2019.	2022	269,000					269,000	
15	Miscellaneous wastewater system capital improvements. Paid from operating revenue. To bring total annual wastewater CIP cost to \$500,000 beginning FY 2019.	2023	250,000						250,000
16	Total Cost (\$), 5 Year CIP (FY 2019 to FY 2023)		2,500,000		500,000	500,000	500,000	500,000	500,000
17	<b>TOTAL PROJECTED LOCAL REPLACEMENT VALUE</b>				58,447,596	58,947,596	59,447,596	59,947,596	60,447,596
18									
19	OUTSTANDING PRINCIPAL 2017 \$5,000,000 BOND			-	5,000,000	4,820,000	4,630,000	4,435,000	4,230,000
20	OUTSTANDING PRINCIPAL 2011 \$6,330,000 REFUNDING BOND			4,410,000	4,025,000	3,845,000	3,665,000	3,485,000	3,305,000
21	OUTSTANDING PRINCIPAL 2011 \$2,755,000 BOND			2,115,000	2,005,000	1,890,000	1,770,000	1,645,000	1,510,000
22	<b>TOTAL OUTSTANDING PRINCIPAL</b>			6,525,000	11,030,000	10,355,000	9,665,000	8,865,000	8,045,000
23									
24	<b>TOTAL LOCAL REPLACEMENT VALUE LESS TOTAL OUTSTANDING PRINCIPAL</b>				47,417,596	48,592,596	49,782,596	51,082,596	52,402,596
25									
26	Wastewater System Design Capacity, Gallons Per Day (GPD)				2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
27	System Development Charge (SDC) per GPD (Maximum)				\$ 18.97	\$ 19.44	\$ 19.91	\$ 20.43	\$ 20.96
28	GPD per Residential Equivalent Unit (REU)				240	240	240	240	240
29	Wastewater SDC per REU = Inside City and Outside City								
30	Wastewater SDC (Maximum, Rounded)				\$ 4,600	\$ 4,700	\$ 4,800	\$ 5,000	\$ 5,100
31	Inside-City and Outside- City SDC Per Meter Size (Maximum, Rounded)								
32	5/8"				\$ 4,800	\$ 4,700	\$ 4,800	\$ 5,000	\$ 5,100
33	3/4"				\$ 6,900	\$ 7,050	\$ 7,200	\$ 7,500	\$ 7,650
34	1"				\$ 11,500	\$ 11,750	\$ 12,000	\$ 12,500	\$ 12,750
35	1 1/2"				\$ 23,000	\$ 23,500	\$ 24,000	\$ 25,000	\$ 25,500
36	2"				\$ 36,800	\$ 37,600	\$ 38,400	\$ 40,000	\$ 40,800
37	3"				\$ 80,500	\$ 82,250	\$ 84,000	\$ 87,500	\$ 89,250
38	4"				\$ 138,000	\$ 141,000	\$ 144,000	\$ 150,000	\$ 153,000
39	6"				\$ 287,500	\$ 293,750	\$ 300,000	\$ 312,500	\$ 318,750

**Table S10**  
**Extra Strength Surcharge Calculations**

W&S rate study 2018 - final

	A	B	C	D	E
1	<b>FY 2019</b>				
2	Expenses Allocated to Treatment Plant Operation, Maintenance and Equipment Replacement	\$ 724,390			
3		Treatment Cost Allocation Percentage	Expenses	Influent Pounds Per Year	Proposed Surcharge Rates (\$ per pound)
4	Biochemical Oxygen Demand	30%	\$ 217,317	939,851	\$0.2312
5	Suspended Solids	35%	\$ 253,537	1,158,721	\$0.2188
6	Phosphorus	5%	\$ 36,220	16,717	\$2.1666
7	Total Kjeldahl Nitrogen	5%	\$ 36,220	65,713	\$0.5512
8					
9	<b>FY 2020</b>				
10	Expenses Allocated to Treatment Plant Operation, Maintenance and Equipment Replacement	\$ 752,348			
11		Treatment Cost Allocation Percentage	Expenses	Influent Pounds Per Year	Proposed Surcharge Rates (\$ per pound)
12	Biochemical Oxygen Demand	30%	\$ 225,704	939,851	\$0.2401
13	Suspended Solids	35%	\$ 263,322	1,158,721	\$0.2273
14	Phosphorus	5%	\$ 37,617	16,717	\$2.2502
15	Total Kjeldahl Nitrogen	5%	\$ 37,617	65,713	\$0.5724
16					
17	<b>FY 2021</b>				
18	Expenses Allocated to Treatment Plant Operation, Maintenance and Equipment Replacement	\$ 784,187			
19		Treatment Cost Allocation Percentage	Expenses	Influent Pounds Per Year	Proposed Surcharge Rates (\$ per pound)
20	Biochemical Oxygen Demand	30%	\$ 235,256	939,851	\$0.2503
21	Suspended Solids	35%	\$ 274,466	1,158,721	\$0.2369
22	Phosphorus	5%	\$ 39,209	16,717	\$2.3455
23	Total Kjeldahl Nitrogen	5%	\$ 39,209	65,713	\$0.5967
24					
32	<b>FY 2022</b>				
33	Expenses Allocated to Treatment Plant Operation, Maintenance and Equipment Replacement	\$ 820,645			
34		Treatment Cost Allocation Percentage	Expenses	Influent Pounds Per Year	Proposed Surcharge Rates (\$ per pound)
35	Biochemical Oxygen Demand	30%	\$ 246,193	939,851	\$0.2619
36	Suspended Solids	35%	\$ 287,226	1,158,721	\$0.2479
37	Phosphorus	5%	\$ 41,032	16,717	\$2.4545
38	Total Kjeldahl Nitrogen	5%	\$ 41,032	65,713	\$0.6244
39					
40	<b>FY 2023</b>				
41	Expenses Allocated to Treatment Plant Operation, Maintenance and Equipment Replacement	\$ 862,601			
42		Treatment Cost Allocation Percentage	Expenses	Influent Pounds Per Year	Proposed Surcharge Rates (\$ per pound)
43	Biochemical Oxygen Demand	30%	\$ 258,780	939,851	\$0.2753
44	Suspended Solids	35%	\$ 301,910	1,158,721	\$0.2606
45	Phosphorus	5%	\$ 43,130	16,717	\$2.5500
46	Total Kjeldahl Nitrogen	5%	\$ 43,130	65,713	\$0.6563

Table T1  
Current FY 2018 and Proposed FY 2019 to FY 2023 Total Inside City Water and Sewer Rates and System Development Charges

W&S rate study 2018 - final

	A	B	C	D	E	F	G
1		Current	Proposed				
2	<b>INSIDE-CITY</b>	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3		Effective January 1, 2014 (Water and Sewer)	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
4	Billing Charge, per Month	\$ 4.64	\$ 5.19	\$ 5.29	\$ 5.40	\$ 5.51	\$ 5.61
5	Readiness to Serve Charge, per Meter Size, per Month						
6	5/8"	\$ 46.21	\$ 49.22	\$ 49.45	\$ 51.13	\$ 51.41	\$ 53.09
7	3/4"	\$ 69.32	\$ 73.83	\$ 74.18	\$ 76.70	\$ 77.12	\$ 79.64
8	1"	\$ 115.53	\$ 123.05	\$ 123.63	\$ 127.83	\$ 128.53	\$ 132.73
9	1 1/2"	\$ 231.05	\$ 246.10	\$ 247.25	\$ 255.65	\$ 257.05	\$ 265.45
10	2"	\$ 369.68	\$ 393.76	\$ 395.60	\$ 409.04	\$ 411.28	\$ 424.72
11	3"	\$ 808.68	\$ 861.35	\$ 865.38	\$ 894.78	\$ 899.68	\$ 929.08
12	4"	\$ 1,386.30	\$ 1,476.60	\$ 1,483.50	\$ 1,533.90	\$ 1,542.30	\$ 1,592.70
13	6"	\$ 2,888.13	\$ 3,076.25	\$ 3,090.63	\$ 3,195.63	\$ 3,213.13	\$ 3,318.13
14	Commodity Charge, per 100 Cubic Feet	\$ 4.30	\$ 5.00	\$ 5.17	\$ 5.37	\$ 5.59	\$ 5.82
15							
16	Water System Development Charge ("Capital" Charge)	Current	Maximum Calculated				
17	Water Service Meter Size:	Effective January 1, 2011	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
18	5/8"	\$ 900	\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400	\$ 1,400
19	3/4"	\$ 1,350	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100	\$ 2,100
20	1"	\$ 2,250	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
21	1 1/2"	\$ 4,500	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
22	2"	\$ 7,200	\$ 11,200	\$ 11,200	\$ 11,200	\$ 11,200	\$ 11,200
23	3"	\$ 15,750	\$ 24,500	\$ 24,500	\$ 24,500	\$ 24,500	\$ 24,500
24	4"	\$ 27,000	\$ 42,000	\$ 42,000	\$ 42,000	\$ 42,000	\$ 42,000
25	6"	\$ 56,250	\$ 87,500	\$ 87,500	\$ 87,500	\$ 87,500	\$ 87,500
26							
27	Sewer System Development Charge ("Capital" Charge)	Current	Maximum Calculated				
28	Water Service Meter Size:	Effective January 1, 2011	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
29	5/8"	\$ 3,200	\$ 4,600	\$ 4,600	\$ 4,600	\$ 4,600	\$ 4,600
30	3/4"	\$ 4,800	\$ 6,900	\$ 6,900	\$ 6,900	\$ 6,900	\$ 6,900
31	1"	\$ 8,000	\$ 11,500	\$ 11,500	\$ 11,500	\$ 11,500	\$ 11,500
32	1 1/2"	\$ 16,000	\$ 23,000	\$ 23,000	\$ 23,000	\$ 23,000	\$ 23,000
33	2"	\$ 25,600	\$ 36,800	\$ 36,800	\$ 36,800	\$ 36,800	\$ 36,800
34	3"	\$ 56,000	\$ 80,500	\$ 80,500	\$ 80,500	\$ 80,500	\$ 80,500
35	4"	\$ 96,000	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000	\$ 138,000
36	6"	\$ 200,000	\$ 287,500	\$ 287,500	\$ 287,500	\$ 287,500	\$ 287,500
37							
38	Total Maximum Calculated Water and Sewer System Development Charge						
39		Current	Effective January 1, 2019	Effective January 1, 2020	Effective January 1, 2021	Effective January 1, 2022	Effective January 1, 2023
40	Water Service Meter Size:	Effective January 1, 2011					
41	5/8"	\$ 4,100	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000
42	3/4"	\$ 6,150	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000
43	1"	\$ 10,250	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
44	1 1/2"	\$ 20,500	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
45	2"	\$ 32,800	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000
46	3"	\$ 71,750	\$ 105,000	\$ 105,000	\$ 105,000	\$ 105,000	\$ 105,000
47	4"	\$ 123,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000
48	6"	\$ 256,250	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000



Table T2  
Example Total Water and Sewer Bills

W&S rate study 2018 - final

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Inside City</b>						<b>Outside City (Resort Township)</b>				
2		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	Usage (Number of 100 Cubic Feet Units per Month):										
4	0										
5	Meter Size: 5/8"										
6	Current Bill	\$ 50.85	\$ 54.41	\$ 54.74	\$ 56.53	\$ 56.92	\$ 82.09	\$ 89.09	\$ 89.57	\$ 92.60	\$ 93.17
7	Proposed Bill	\$ 54.41	\$ 54.74	\$ 56.53	\$ 56.92	\$ 58.70	\$ 89.09	\$ 89.57	\$ 92.60	\$ 93.17	\$ 96.18
8	Change (Percent)	7.0%	0.6%	3.3%	0.7%	3.1%	8.5%	0.5%	3.4%	0.6%	3.2%
9	Change (Dollars)	\$ 3.56	\$ 0.33	\$ 1.79	\$ 0.39	\$ 1.78	\$ 7.00	\$ 0.48	\$ 3.03	\$ 0.57	\$ 3.01
10	Usage (Number of 100 Cubic Feet Units per Month):										
11	5										
12	Meter Size: 5/8"										
13	Current Bill	\$ 72.35	\$ 79.41	\$ 80.59	\$ 83.38	\$ 84.87	\$ 107.24	\$ 118.74	\$ 120.22	\$ 124.40	\$ 126.27
14	Proposed Bill	\$ 79.41	\$ 80.59	\$ 83.38	\$ 84.87	\$ 87.80	\$ 118.74	\$ 120.22	\$ 124.40	\$ 126.27	\$ 130.63
15	Change (Percent)	9.8%	1.5%	3.5%	1.8%	3.5%	10.7%	1.2%	3.5%	1.5%	3.5%
16	Change (Dollars)	\$ 7.06	\$ 1.18	\$ 2.79	\$ 1.49	\$ 2.93	\$ 11.50	\$ 1.48	\$ 4.18	\$ 1.87	\$ 4.36
17	Usage (Number of 100 Cubic Feet Units per Month):	\$ 1.41	0.01951624								
18	10	\$0.0195									
19	Meter Size: 5/8"										
20	Current Bill	\$ 93.85	\$ 104.41	\$ 106.44	\$ 110.23	\$ 112.82	\$ 132.39	\$ 148.39	\$ 150.87	\$ 156.20	\$ 159.37
21	Proposed Bill	\$ 104.41	\$ 106.44	\$ 110.23	\$ 112.82	\$ 116.90	\$ 148.39	\$ 150.87	\$ 156.20	\$ 159.37	\$ 165.08
22	Change (Percent)	11.3%	1.9%	3.6%	2.3%	3.6%	12.1%	1.7%	3.5%	2.0%	3.6%
23	Change (Dollars)	\$ 10.56	\$ 2.03	\$ 3.79	\$ 2.59	\$ 4.08	\$ 16.00	\$ 2.48	\$ 5.33	\$ 3.17	\$ 5.71
24	Usage (Number of 100 Cubic Feet Units per Month):	\$ 2.11	0.022504								
25	50	\$0.0225									
26	Meter Size: 3/4"										
27	Current Bill	\$ 288.86	\$ 329.02	\$ 330.90	\$ 343.41	\$ 354.81	\$ 371.78	\$ 426.93	\$ 437.58	\$ 453.55	\$ 467.33
28	Proposed Bill	\$ 329.02	\$ 330.90	\$ 343.41	\$ 354.81	\$ 368.78	\$ 426.93	\$ 437.58	\$ 453.55	\$ 467.33	\$ 485.27
29	Change (Percent)	13.9%	0.6%	3.8%	3.3%	3.9%	14.8%	2.5%	3.6%	3.0%	3.8%
30	Change (Dollars)	\$ 40.06	\$ 1.88	\$ 12.51	\$ 11.40	\$ 13.97	\$ 55.15	\$ 10.65	\$ 15.97	\$ 13.78	\$ 17.94
31	Usage (Number of 100 Cubic Feet Units per Month):										
32	200										
33	Meter Size: 1"										
34	Current Bill	\$ 980.17	\$ 1,128.24	\$ 1,162.92	\$ 1,207.23	\$ 1,252.04	\$ 1,202.66	\$ 1,399.09	\$ 1,440.09	\$ 1,493.44	\$ 1,546.64
35	Proposed Bill	\$ 1,128.24	\$ 1,162.92	\$ 1,207.23	\$ 1,252.04	\$ 1,302.34	\$ 1,399.09	\$ 1,440.09	\$ 1,493.44	\$ 1,546.64	\$ 1,607.95
36	Change (Percent)	15.1%	3.1%	3.8%	3.7%	4.0%	16.3%	2.9%	3.7%	3.6%	4.0%
37	Change (Dollars)	\$ 148.07	\$ 34.68	\$ 44.31	\$ 44.81	\$ 50.30	\$ 196.43	\$ 41.00	\$ 53.35	\$ 53.20	\$ 61.31
38	Usage (Number of 100 Cubic Feet Units per Month):										
39	600										
40	Meter Size: 2"										
41	Current Bill	\$ 2,954.32	\$ 3,398.95	\$ 3,502.89	\$ 3,636.44	\$ 3,770.79	\$ 3,634.68	\$ 4,225.71	\$ 4,348.64	\$ 4,509.83	\$ 4,669.34
42	Proposed Bill	\$ 3,398.95	\$ 3,502.89	\$ 3,636.44	\$ 3,770.79	\$ 3,922.33	\$ 4,225.71	\$ 4,348.64	\$ 4,509.83	\$ 4,669.34	\$ 4,854.44
43	Change (Percent)	15.1%	3.1%	3.8%	3.7%	4.0%	16.3%	2.9%	3.7%	3.5%	4.0%
44	Change (Dollars)	\$ 444.63	\$ 103.94	\$ 133.55	\$ 134.35	\$ 151.54	\$ 591.03	\$ 122.93	\$ 161.19	\$ 159.51	\$ 185.10
45	Usage (Number of 100 Cubic Feet Units per Month):										
46	1,200										
47	Meter Size: 3"										
48	Current Bill	\$ 5,973.32	\$ 6,866.54	\$ 7,074.67	\$ 7,344.18	\$ 7,613.19	\$ 7,378.20	\$ 8,568.99	\$ 8,815.24	\$ 9,141.79	\$ 9,461.29
49	Proposed Bill	\$ 6,866.54	\$ 7,074.67	\$ 7,344.18	\$ 7,613.19	\$ 7,918.69	\$ 8,568.99	\$ 8,815.24	\$ 9,141.79	\$ 9,461.29	\$ 9,835.65
50	Change (Percent)	15.0%	3.0%	3.8%	3.7%	4.0%	16.1%	2.9%	3.7%	3.5%	4.0%
51	Change (Dollars)	\$ 893.22	\$ 208.13	\$ 269.51	\$ 269.01	\$ 305.50	\$ 1,190.79	\$ 246.25	\$ 326.55	\$ 319.50	\$ 374.36
52	Usage (Number of 100 Cubic Feet Units per Month):										
53	7,000										
54	Meter Sizes: 4", 4", 2", 5/8", 2", 2", 2"										
55	Current Bill	\$33,809.41	\$38,836.75	\$40,048.84	\$41,574.17	\$43,140.78	\$ 40,672.37	\$ 47,423.91	\$ 48,849.65	\$ 50,665.18	\$ 52,516.05
56	Proposed Bill	\$38,836.75	\$40,048.84	\$41,574.17	\$43,140.78	\$44,877.12	\$ 47,423.91	\$ 48,849.65	\$ 50,665.18	\$ 52,516.05	\$ 54,610.78
57	Change (Percent)	14.9%	3.1%	3.8%	3.8%	4.0%	16.6%	3.0%	3.7%	3.7%	4.0%
58	Change (Dollars)	\$ 5,027.34	\$ 1,212.09	\$ 1,525.33	\$ 1,566.61	\$ 1,736.34	\$ 6,751.54	\$ 1,425.74	\$ 1,815.53	\$ 1,850.87	\$ 2,094.73
59	Usage (Number of 100 Cubic Feet Units per Month):										
60	2,800										
61	Meter Size: 6"										
62	Current Bill	\$14,932.77	\$17,081.44	\$17,571.92	\$18,237.03	\$18,870.64	\$ 18,862.85	\$ 21,776.69	\$ 22,358.69	\$ 23,182.84	\$ 23,937.24
63	Proposed Bill	\$17,081.44	\$17,571.92	\$18,237.03	\$18,870.64	\$19,619.74	\$ 21,776.69	\$ 22,358.69	\$ 23,182.84	\$ 23,937.24	\$ 24,872.75
64	Change (Percent)	14.4%	2.9%	3.8%	3.5%	4.0%	15.4%	2.7%	3.7%	3.3%	3.9%
65	Change (Dollars)	\$ 2,148.67	\$ 490.48	\$ 665.11	\$ 633.61	\$ 749.10	\$ 2,913.84	\$ 582.00	\$ 824.15	\$ 754.40	\$ 935.51
66							<b>BAY VIEW ANNUAL BILL (TOTAL WATER AND SEWER)</b>				
67	Usage (Number of 100 Cubic Feet Units per Year):						FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
68	24,974	Water									
69	20,016	Sewer									
70	RTS Charge Meter Basis:										
71	Water provided thru a 6" and a 12" main. RTS billed as 6"	Water RTS									
72	Sewage pumped via 8" FM, RTS charge billed as meter size = 4"	Sewer RTS									
73	Current Bill						\$ 146,479.36	\$ 165,731.72	\$ 170,499.70	\$ 176,822.92	\$ 183,128.26
74	Proposed Bill						\$ 165,731.72	\$ 170,499.70	\$ 176,822.92	\$ 183,128.26	\$ 190,329.06
75	Change (Percent)						13.1%	2.9%	3.7%	3.6%	3.9%
76	Change (Dollars)						\$ 19,252.36	\$ 4,767.98	\$ 6,323.22	\$ 19,126.34	\$ 25PM7,200.80

Table T2 Residential  
Example Total Water and Sewer Bills

W&S rate study 2018 - final

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Inside City</b>					<b>Resort Township</b>					
2		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
3	Usage (Number of 100 Cubic Feet Units per Month):										
4	0										
5	Meter Size: 5/8"										
6	Current Bill	\$ 50.85	\$ 54.41	\$ 54.74	\$ 56.53	\$ 56.92	\$ 82.09	\$ 89.09	\$ 89.57	\$ 92.60	\$ 93.17
7	Proposed Bill	\$ 54.41	\$ 54.74	\$ 56.53	\$ 56.92	\$ 58.70	\$ 89.09	\$ 89.57	\$ 92.60	\$ 93.17	\$ 96.18
8	Change (Percent)	7.0%	0.6%	3.3%	0.7%	3.1%	8.5%	0.5%	3.4%	0.6%	3.2%
9	Change (Dollars)	\$ 3.56	\$ 0.33	\$ 1.79	\$ 0.39	\$ 1.78	\$ 7.00	\$ 0.48	\$ 3.03	\$ 0.57	\$ 3.01
10	Usage (Number of 100 Cubic Feet Units per Month):										
11	1										
12	Meter Size: 5/8"										
13	Current Bill	\$ 55.15	\$ 59.41	\$ 59.91	\$ 61.90	\$ 62.51	\$ 87.12	\$ 95.02	\$ 95.70	\$ 98.96	\$ 99.79
14	Proposed Bill	\$ 59.41	\$ 59.91	\$ 61.90	\$ 62.51	\$ 64.52	\$ 95.02	\$ 95.70	\$ 98.96	\$ 99.79	\$ 103.07
15	Change (Percent)	7.7%	0.8%	3.3%	1.0%	3.2%	9.1%	0.7%	3.4%	0.8%	3.3%
16	Change (Dollars)	\$ 4.26	\$ 0.50	\$ 1.99	\$ 0.61	\$ 2.01	\$ 7.90	\$ 0.68	\$ 3.26	\$ 0.83	\$ 3.28
17	Usage (Number of 100 Cubic Feet Units per Month):										
18	2										
19	Meter Size: 5/8"										
20	Current Bill	\$ 59.45	\$ 64.41	\$ 65.08	\$ 67.27	\$ 68.10	\$ 92.15	\$ 100.95	\$ 101.83	\$ 105.32	\$ 106.41
21	Proposed Bill	\$ 64.41	\$ 65.08	\$ 67.27	\$ 68.10	\$ 70.34	\$ 100.95	\$ 101.83	\$ 105.32	\$ 106.41	\$ 109.96
22	Change (Percent)	8.3%	1.0%	3.4%	1.2%	3.3%	9.5%	0.9%	3.4%	1.0%	3.3%
23	Change (Dollars)	\$ 4.96	\$ 0.67	\$ 2.19	\$ 0.83	\$ 2.24	\$ 8.80	\$ 0.88	\$ 3.49	\$ 1.09	\$ 3.55
24	Usage (Number of 100 Cubic Feet Units per Month):										
25	3										
26	Meter Size: 5/8"										
27	Current Bill	\$ 63.75	\$ 69.41	\$ 70.25	\$ 72.64	\$ 73.69	\$ 97.18	\$ 106.88	\$ 107.96	\$ 111.68	\$ 113.03
28	Proposed Bill	\$ 69.41	\$ 70.25	\$ 72.64	\$ 73.69	\$ 76.16	\$ 106.88	\$ 107.96	\$ 111.68	\$ 113.03	\$ 116.85
29	Change (Percent)	8.9%	1.2%	3.4%	1.4%	3.4%	10.0%	1.0%	3.4%	1.2%	3.4%
30	Change (Dollars)	\$ 5.66	\$ 0.84	\$ 2.39	\$ 1.05	\$ 2.47	\$ 9.70	\$ 1.08	\$ 3.72	\$ 1.35	\$ 3.82
31	Usage (Number of 100 Cubic Feet Units per Month):										
32	4										
33	Meter Size: 5/8"										
34	Current Bill	\$ 68.05	\$ 74.41	\$ 75.42	\$ 78.01	\$ 79.28	\$ 102.21	\$ 112.81	\$ 114.09	\$ 118.04	\$ 119.65
35	Proposed Bill	\$ 74.41	\$ 75.42	\$ 78.01	\$ 79.28	\$ 81.98	\$ 112.81	\$ 114.09	\$ 118.04	\$ 119.65	\$ 123.74
36	Change (Percent)	9.3%	1.4%	3.4%	1.6%	3.4%	10.4%	1.1%	3.5%	1.4%	3.4%
37	Change (Dollars)	\$ 6.36	\$ 1.01	\$ 2.59	\$ 1.27	\$ 2.70	\$ 10.60	\$ 1.28	\$ 3.95	\$ 1.61	\$ 4.09
38	Usage (Number of 100 Cubic Feet Units per Month):										
39	5										
40	Meter Size: 5/8"										
41	Current Bill	\$ 72.35	\$ 79.41	\$ 80.59	\$ 83.38	\$ 84.87	\$ 107.24	\$ 118.74	\$ 120.22	\$ 124.40	\$ 126.27
42	Proposed Bill	\$ 79.41	\$ 80.59	\$ 83.38	\$ 84.87	\$ 87.80	\$ 118.74	\$ 120.22	\$ 124.40	\$ 126.27	\$ 130.63
43	Change (Percent)	9.8%	1.5%	3.5%	1.8%	3.5%	10.7%	1.2%	3.5%	1.5%	3.5%
44	Change (Dollars)	\$ 7.06	\$ 1.18	\$ 2.79	\$ 1.49	\$ 2.93	\$ 11.50	\$ 1.48	\$ 4.18	\$ 1.87	\$ 4.36
45	Usage (Number of 100 Cubic Feet Units per Month):										
46	6										
47	Meter Size: 5/8"										
48	Current Bill	\$ 76.65	\$ 84.41	\$ 85.76	\$ 88.75	\$ 90.46	\$ 112.27	\$ 124.67	\$ 126.35	\$ 130.76	\$ 132.89
49	Proposed Bill	\$ 84.41	\$ 85.76	\$ 88.75	\$ 90.46	\$ 93.62	\$ 124.67	\$ 126.35	\$ 130.76	\$ 132.89	\$ 137.52
50	Change (Percent)	10.1%	1.6%	3.5%	1.9%	3.5%	11.0%	1.3%	3.5%	1.6%	3.5%
51	Change (Dollars)	\$ 7.76	\$ 1.35	\$ 2.99	\$ 1.71	\$ 3.16	\$ 12.40	\$ 1.68	\$ 4.41	\$ 2.13	\$ 4.63
52	Usage (Number of 100 Cubic Feet Units per Month):										
53	7										
54	Meter Size: 5/8"										
55	Current Bill	\$ 80.95	\$ 89.41	\$ 90.93	\$ 94.12	\$ 96.05	\$ 117.30	\$ 130.60	\$ 132.48	\$ 137.12	\$ 139.51
56	Proposed Bill	\$ 89.41	\$ 90.93	\$ 94.12	\$ 96.05	\$ 99.44	\$ 130.60	\$ 132.48	\$ 137.12	\$ 139.51	\$ 144.41
57	Change (Percent)	10.5%	1.7%	3.5%	2.1%	3.5%	11.3%	1.4%	3.5%	1.7%	3.5%
58	Change (Dollars)	\$ 8.46	\$ 1.52	\$ 3.19	\$ 1.93	\$ 3.39	\$ 13.30	\$ 1.88	\$ 4.64	\$ 2.39	\$ 4.90
59	Usage (Number of 100 Cubic Feet Units per Month):										
60	8										
61	Meter Size: 5/8"										
62	Current Bill	\$ 85.25	\$ 94.41	\$ 96.10	\$ 99.49	\$ 101.64	\$ 122.33	\$ 136.53	\$ 138.61	\$ 143.48	\$ 146.13
63	Proposed Bill	\$ 94.41	\$ 96.10	\$ 99.49	\$ 101.64	\$ 105.26	\$ 136.53	\$ 138.61	\$ 143.48	\$ 146.13	\$ 151.30
64	Change (Percent)	10.7%	1.8%	3.5%	2.2%	3.6%	11.6%	1.5%	3.5%	1.8%	3.5%
65	Change (Dollars)	\$ 9.16	\$ 1.69	\$ 3.39	\$ 2.15	\$ 3.62	\$ 14.20	\$ 2.08	\$ 4.87	\$ 2.65	\$ 5.17
66	Usage (Number of 100 Cubic Feet Units per Month):										
67	9										
68	Meter Size: 5/8"										
69	Current Bill	\$ 89.55	\$ 99.41	\$ 101.27	\$ 104.86	\$ 107.23	\$ 127.36	\$ 142.46	\$ 144.74	\$ 149.84	\$ 152.75
70	Proposed Bill	\$ 99.41	\$ 101.27	\$ 104.86	\$ 107.23	\$ 111.08	\$ 142.46	\$ 144.74	\$ 149.84	\$ 152.75	\$ 158.19
71	Change (Percent)	11.0%	1.9%	3.5%	2.3%	3.6%	11.9%	1.6%	3.5%	1.9%	3.6%
72	Change (Dollars)	\$ 9.86	\$ 1.86	\$ 3.59	\$ 2.37	\$ 3.85	\$ 15.10	\$ 2.28	\$ 5.10	\$ 2.91	\$ 5.44
73	Usage (Number of 100 Cubic Feet Units per Month):										
74	10										
75	Meter Size: 5/8"										
76	Current Bill	\$ 93.85	\$ 104.41	\$ 106.44	\$ 110.23	\$ 112.82	\$ 132.39	\$ 148.39	\$ 150.87	\$ 156.20	\$ 159.37
77	Proposed Bill	\$ 104.41	\$ 106.44	\$ 110.23	\$ 112.82	\$ 116.90	\$ 148.39	\$ 150.87	\$ 156.20	\$ 159.37	\$ 165.08
78	Change (Percent)	11.3%	1.9%	3.6%	2.5%	3.6%	12.1%	1.7%	3.5%	2.0%	3.6%
79	Change (Dollars)	\$ 10.56	\$ 2.03	\$ 3.79	\$ 2.59	\$ 4.08	\$ 16.00	\$ 2.48	\$ 5.33	\$ 3.17	\$ 5.71

**Table T3**  
**Total Water and Sewer Rate Revenue Adequacy**

W&S rate study 2018 - final

	A	B	C	D	E
1		Water			
2		Revenue Required From Rates	Projected Revenue		Closure
3	FY 2019	\$ 2,277,583	\$ 2,283,615		\$ 6,032
4	FY 2020	\$ 2,339,016	\$ 2,342,677		\$ 3,660
5	FY 2021	\$ 2,404,433	\$ 2,409,224		\$ 4,791
6	FY 2022	\$ 2,474,177	\$ 2,478,880		\$ 4,702
7	FY 2023	\$ 2,548,625	\$ 2,556,144		\$ 7,519
8	FY 2019 to FY 2023	\$ 12,043,835	\$ 12,070,540		\$ 26,705
9					
10		Wastewater			
11		Revenue Required From Rates	Projected Revenue		Closure
12	FY 2019	\$ 3,539,130	\$ 3,542,501		\$ 3,372
13	FY 2020	\$ 3,587,772	\$ 3,588,699		\$ 927
14	FY 2021	\$ 3,734,723	\$ 3,736,627		\$ 1,903
15	FY 2022	\$ 3,795,809	\$ 3,800,730		\$ 4,921
16	FY 2023	\$ 3,952,144	\$ 3,952,903		\$ 759
17	FY 2019 to FY 2023	\$ 18,609,579	\$ 18,621,460		\$ 11,882
18					
19		Total			
20		Revenue Required From Rates	Projected Revenue		Closure
21	FY 2019	\$ 5,816,713	\$ 5,826,116		\$ 9,404
22	FY 2020	\$ 5,926,788	\$ 5,931,376		\$ 4,587
23	FY 2021	\$ 6,139,157	\$ 6,145,851		\$ 6,694
24	FY 2022	\$ 6,269,987	\$ 6,279,610		\$ 9,623
25	FY 2023	\$ 6,500,769	\$ 6,509,048		\$ 8,278
26	FY 2019 to FY 2023	\$ 30,653,414	\$ 30,692,000		\$ 38,587

**Table ENR**  
**Engineering News Record Construction Cost Indices**

W&S rate study 2018 - final

	A	N	O	P
1		ANN.		
2	YEAR	AVG.		
3	1953	600		
4	1954	628		
5	1955	660		
6	1956	692		
7	1957	724		
8	1958	759		
9	1959	797		
10	1960	824		
11	1961	847		
12	1962	872		
13	1963	901		
14	1964	936		
15	1965	971		
16	1966	1,019		
17	1967	1,074		
18	1968	1,155		
19	1969	1,300		
20	1970	1,450		
21	1971	1,581		
22	1972	1,753		
23	1973	1,900		
24	1974	2,020		
25	1975	2,212		
26	1976	2,400		
27	1977	2,577		
28	1978	2,776		
29	1979	3,003		
30	1980	3,237		
31	1981	3,533		
32	1982	3,816		
33	1983	4,067		
34	1984	4,148		
35	1985	4,194		
36	1986	4,287		
37	1987	4,392		
38	1988	4,519		
39	1989	4,606		
40	1990	4,728		
41	1991	4,834		
42	1992	4,985		
43	1993	5,211		
44	1994	5,410		
45	1995	5,471		
46	1996	5,618		
47	1997	5,823		
48	1998	5,920		
49	1999	6,059		
50	2000	6,221		
51	2001	6,342		
52	2002	6,538		
53	2003	6,695		
54	2004	7,115		
55	2005	7,444		
56	2006	7,751		
57	2007	7,967		
58	2008	8,310		
59	2009	8,570		
60	2010	8,799		
61	2011	9,070		
62	2012	9,308		
63	2013	9,547		
64	2014	9,807	93.85	
65	2015	10,031	95.99	
66	2016	10,339	98.94	
67	2017	10,737	102.75	
68	2018		September-18	11,170.3



# City of Petoskey

## Agenda Memo

**BOARD:** City Council

**MEETING DATE:** December 17, 2018

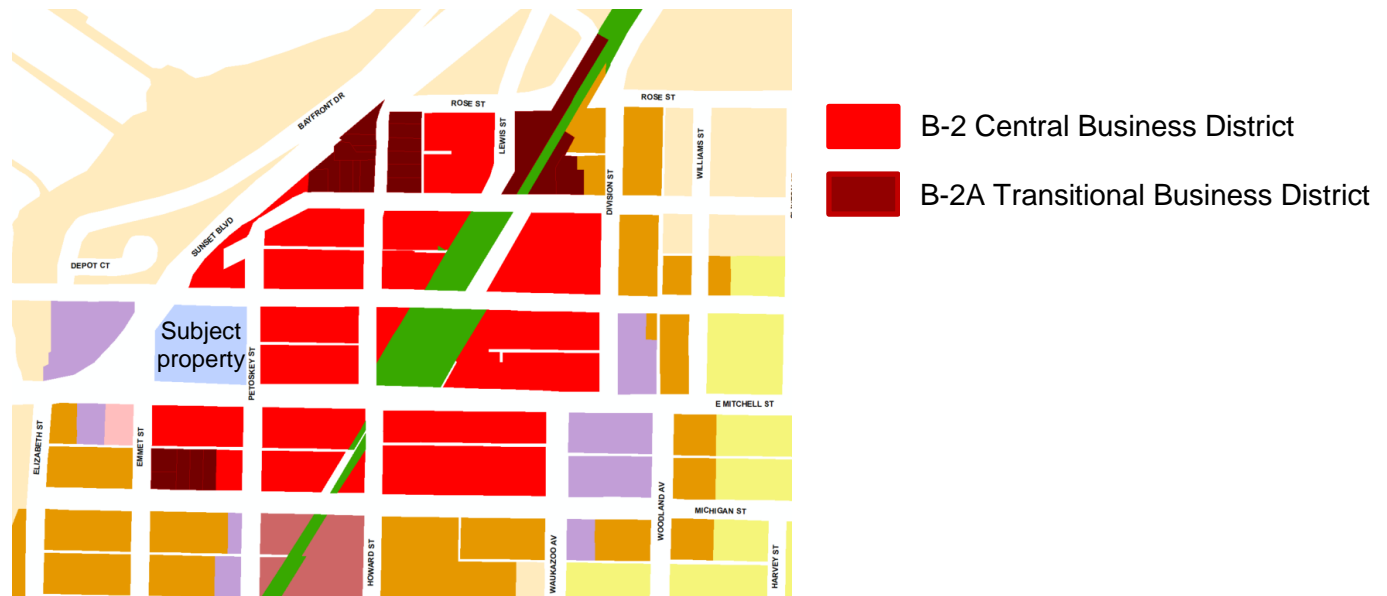
**DATE PREPARED:** December 6, 2018

**AGENDA SUBJECT:** Proposed rezoning of 200 East Lake Street (formerly known as Petoskey Pointe)

**RECOMMENDATION:** That City Council conduct a first reading of proposed ordinance

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**Background** At its November 15, 2018 meeting, City Council initiated the process of rezoning the subject property to B-2 Central Business District as a result of a Final Judgement being entered by the Circuit Court for Emmet County in the lawsuit between the City of Petoskey and LCA Enterprises, LLC, which terminated the Development Agreement and PUD Agreement for the Petoskey Pointe Project.



The Planning Commission scheduled a public hearing to rezone the property B-2 Central Business District at its November 15 meeting. The Commission is scheduled to hold a public hearing on the property rezoning at its December 13 meeting and make a recommendation to City Council. The enclosed proposed ordinance is worded as a recommendation to approve the rezoning.

**Action** As a zoning map amendment, City Council is being asked to conduct a first reading on the proposed ordinance.

at  
Enclosure

**ORDINANCE NO. \_\_\_\_\_**

**AN ORDINANCE TO AMEND THE ZONING DISTRICT MAP OF THE CITY OF PETOSKEY AS SET FORTH IN ORDINANCE NO. 451, THE ZONING ORDINANCE OF THE CITY OF PETOSKEY, TO RE-ZONE SPECIFIC PROPERTY TO B2 CENTRAL BUSINESS DISTRICT.**

WHEREAS, the City of Petoskey Master Plan has a goal of maintaining and enhancing downtown Petoskey as the regional economic and cultural center of the community; and

WHEREAS, the character of Downtown Petoskey as a dense, mixed-use district is essential to its success at meeting this goal; and

WHEREAS, the Central Business District has standards to ensure that future redevelopment is compatible with the form and character of existing structures and uses that are dense and mixed-use; and

WHEREAS, the subject property is at the gateway to Downtown Petoskey; and

WHEREAS, the subject property had been rezoned to Planned Unit Development PUD subject to the provisions of a PUD Agreement through Ordinance 692; and

WHEREAS, the PUD Agreement was terminated by the Circuit Court for the County in Case No. 18-106248-CK, pursuant to its Final Judgement dated October 25, 2018; and

WHEREAS, rezoning this property to B-2 Central Business District at this time will ensure that its redevelopment will enhance Downtown Petoskey as the regional economic and cultural center of the community; and

WHEREAS, the Petoskey Planning Commission held a public hearing on the rezoning December 13, 2018 and recommends to City Council that the Zoning District Map be amended to add the subject property to the B-2 Central Business District:

NOW THEREFORE, the City of Petoskey ordains:

1. The Zoning District Map of the City of Petoskey shall be, and the same hereby is, amended in order that the following described property be shown as located in the B-2 Central Business District and the Zoning classification hereafter for said property shall be B-2 Central Business. The property hereby re-zoned is described as follows:

Property located in the City of Petoskey, County of Emmet, State of Michigan, to-wit:

All of Lots 1, 2, 3, 4, 5, 6, 7 and 8 of Block 2, Ignatius & Lewis Petoskey's Addition to the Village of Petoskey City recorded in Liber 1, Page 2, AND all of Lots 1, 2, 3, 4, and that part of Lots 5 and 6 lying Southeasterly of U.S. 31 Highway as monumented, of Block 1, Ignatius Petoskey's Addition to the Village of Petoskey City Recorded in Liber 1, Page 7, Emmet County, Michigan, and the alley between Block 1 of Ignatius Petoskey's Addition and Block 2 of Ignatius & Lewis Petoskey's Addition, as vacated in Resolution recorded in Liber 1083, Page 976, Emmet County Records, all being more particularly described as follows:

Beginning at the southwest corner of Lot 1, Block 1, Ignatius Petoskey's Addition to the Village of Petoskey City; thence along the West line of said Block 1 North 00°26'45" East, 193.37 feet to the easterly right-of-way of Highway U.S. 31 as monumented; thence along said easterly right-of-way North 34°03'47" East, 111.36 feet to the north line of said Block 1, thence along said north line of Block 1 and said Block 2 of Ignatius & Lewis Petoskey's Addition to the Village of Petoskey City South 89°20'48" East, 269.10 feet to the northeast corner of said Lot 4, Block 2; thence along the East line of said Block 2 and the East line of said Petoskey Street Commons Condominium, now terminated in Liber 1083, Page 977, Emmet County Records, South 00°33'06" West, 285.91 feet to the Southeast corner of said Lot 5, Block 2; thence along the South line of said Block 2 of Ignatius and Lewis Petoskey's Addition and said Block 1 of Ignatius Petoskey's Addition to the Village of Petoskey City North 89°25'06" West, 330.22 feet to the Point of Beginning.

2. The various parts, sections and clauses of this Ordinance are hereby declared to be severable. If any part, sentence, paragraph, section, or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the Ordinance shall not be affected thereby.
3. This Ordinance shall take effect fifteen (15) days following its enactment and shall be published once within seven (7) days after its enactment as provided by Charter.

Adopted, enacted and ordained by the City of Petoskey City Council this \_\_\_\_\_ day of \_\_\_\_\_ 2019.

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John Murphy  
Its Mayor

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Alan Terry  
Its Clerk





**BOARD:** City Council

**MEETING DATE:** December 17, 2018

**PREPARED:** December 6, 2018

**AGENDA SUBJECT:** MDOT Construction Contract

**RECOMMENDATION:** That the City Council adopt the enclosed proposed resolution

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**Background** The 2019 Annual Budget and Capital Improvements Plan included \$873,000 within the Water and Sewer Fund for water main and sanitary sewer system improvements, along with \$190,000 within the Electric Fund for street lighting and traffic signal upgrades associated with the Michigan Department of Transportation's (MDOT) 2019 US-31 Reconstruction Project. Both these figures were cost estimates for underground utility work and lighting and signalization improvements.

Recently, MDOT has bid the project establishing actual amounts for City participation with overall costs to the City being within budgeted amounts. The City's water main participation cost is now estimated at \$296,300 with City sewer cost estimated at \$334,600 for a total utility costs to the City of \$630,900, well below the City budgeted amount of \$873,000. MDOT will be contributing \$193,600 to fund the underground utility work. The signalization improvements at MacDonald Drive included \$56,800 participation from the City for mast arms with MDOT paying for \$203,400 for other signal improvements. MDOT will also be paying for \$368,000 for widening of the Little Traverse Wheelway to 10', from the Bayfront Tunnel east through the new retaining wall reconstruction area as well as new sidewalk additions.

Limits for this project include 1.3 miles of the US-31 corridor beginning at the Mitchell Street Bridge and continuing north to Bay View's main entrance at Fairview Avenue. MDOT has estimated this project at over \$11M dollars based on the scope of work which includes shifting the alignment of the highway away from the bluff due to erosion issues.

**Scope** Planned upgrades and improvements as part of this project include new pavements, curb and gutter installations, replacement of water and sanitary sewer mains and components, LED street lighting, traffic signal mast arm installations at MacDonald Drive and US-31 intersection, realignment of Lewis Street, retaining wall reconstruction along Bayfront Drive, sidewalk and bike path additions, landscaping and reconstruction of storm water drainage systems.

**Summary** The enclosed resolution would authorize the Mayor and City Clerk to execute a contract and maintenance agreements with MDOT for participating costs and fees associated with water and sanitary sewer upgrades, installations and maintenance of traffic signal mast arms and other related necessary work. The work under this contract would be performed by MDOT on behalf of the City of Petoskey as part of the 2019 US-31 Reconstruction Project. For reference, similar contracts and agreements between the City and MDOT have been executed in the past and include such projects as the 2014 US-31/West Mitchell Street reconstruct and the 2015 US-31/Charlevoix Avenue rebuild.

**Recommendation** City staff recommends that City Council approve the enclosed resolution that would authorize the Mayor and City Clerk to execute a contract with the Michigan Department of Transportation for construction of work associated with the 2019 US-31 Reconstruct Project.

mr  
Enclosures



WHEREAS, the City Council adopted the 2019 Annual Budget and Capital Improvement Plan 2019-2024 which included \$873,000 within the Water and Sewer Fund for water main and sanitary sewer system improvements, along with \$190,000 within the Electric Fund for street lighting and traffic signal upgrades associated with the Michigan Department of Transportation's (MDOT) 2019 US-31 Reconstruction Project; and

WHEREAS, limits for this project include 1.3 miles of the US-31 corridor beginning at the Mitchell Street Bridge and continuing north to Bay View's main entrance at Fairview Avenue; and

WHEREAS, MDOT has estimated this project at over \$11M dollars based on the scope of the work which includes shifting the alignment of the highway away from the bluff due to erosion issues; and

WHEREAS, planned upgrades and improvements as part of this project include new pavements, curb and gutter installations, replacement of water and sanitary sewer mains and components, LED street lighting, traffic signal mast arm installations at MacDonald Drive and US-31 intersection, realignment of Lewis Street, retaining wall reconstruction along Bayfront Drive, sidewalk and bike path additions, landscaping and reconstruction of storm water drainage systems; and

WHEREAS, the City Council authorizes to enter into a contract and maintenance agreements with MDOT for participating costs and fees associated with the project including water and sanitary sewer upgrades, installations and maintenance of traffic signal mast arms, storm sewer improvements, LED street lighting and any other necessary work as required; and

WHEREAS, the work under this contract would be performed by MDOT on behalf of the City of Petoskey as part of the 2019 US-31 Reconstruction Project:

NOW, THEREFORE BE IT RESOLVED that the Mayor and City Clerk are authorized to execute contract number 18-5351, Control Section NH 24011, Job Number 120219CON and 120219PE with MDOT, and take all other necessary steps to complete the US-31 Reconstruction Project.

State of Michigan       )  
County of Emmet       ) ss.  
City of Petoskey       )

I, Alan Terry, Clerk of the City of Petoskey, do hereby certify that the foregoing is a true copy of a resolution adopted by the City Council of the City of Petoskey in regular session assembled on the 17<sup>th</sup> day of December, 2018, and of the whole thereof.

In witness whereof, I have here unto set my hand and affirmed the corporate seal of said City this \_\_\_\_ day of December, 2018.

---

Alan Terry, City Clerk

SPECIAL TRUNKLINE  
NON-ACT-51  
ADDED WORK

DA	
Control Section	NH 24011
Job Number	120219CON; 120219PE
Fed Project #	1900(023); 1424(005)
Contract	18-5351

THIS CONTRACT is made and entered into this date of \_\_\_\_\_, by and between the MICHIGAN DEPARTMENT OF TRANSPORTATION, hereinafter referred to as the "DEPARTMENT"; and the CITY OF PETOSKEY, a Michigan municipal corporation, hereinafter referred to as the "CITY"; for the purpose of fixing the rights and obligations of the parties in agreeing to construction improvements in conjunction with the DEPARTMENT'S construction on Highway US-31, within the corporate limits of the CITY.

WITNESSETH:

WHEREAS, the DEPARTMENT is planning reconstruction and realignment work along Highway US-31 from Mitchell Street Bridge to Fairview Avenue within the corporate limits of the CITY; and

WHEREAS, the CITY has requested that the DEPARTMENT perform additional work for and on behalf of the CITY in connection with the Highway US-31 construction, which additional work is hereinafter referred to as the "PROJECT" and is located and described as follows:

**PART A – FEDERAL AND STATE PARTICIPATION**

Non-motorized path construction along Bayfront Drive from approximately 450 feet northeast of Lake Street northeasterly approximately 800 feet and sidewalk construction along Highway US-31 from the Mitchell Street Bridge northerly to Fairview Avenue, watermain and sanitary sewer work along Highway US-31 from the Mitchell Street Bridge north to Fairview Avenue and traffic signal work Highway US-31 and MacDonald Drive intersection, including brick paver work; together with necessary related work, located within the corporate limits of the CITY; and

**PART B – 100% CITY PARTICIPATION**

Watermain and sanitary sewer work along Highway US-31 from the Mitchell Street Bridge northerly to Fairview Avenue and signal mast arm betterment work at the Highway US-31 and MacDonald Drive intersection; together with necessary related work, located within the corporate limits of the CITY; and

WHEREAS, the DEPARTMENT presently estimates the PROJECT COST as hereinafter defined in Section 1 to be:

PART A	\$ 765,000
PART B	<u>\$ 687,700</u>
TOTAL	\$1,452,700

WHEREAS, the parties hereto have reached an understanding with each other regarding the performance of the PROJECT work and desire to set forth this understanding in the form of a written Contract.

NOW, THEREFORE, in consideration of the premises and of the mutual undertakings of the parties and in conformity with applicable law, it is agreed:

1. The CITY hereby consents to the designation of the PROJECT as a state trunkline highway. The parties shall undertake and complete the construction of the PROJECT in accordance with this Contract. The term "PROJECT COST", as herein used, is hereby defined as the cost of the construction of the PROJECT including the costs of preliminary engineering (PE), plans and specifications; physical construction necessary for the completion of the PROJECT as determined by the DEPARTMENT; and construction engineering (CE), and any and all other expenses in connection with any of the above.

2. The cost of alteration, reconstruction and relocation, including plans thereof, of certain publicly owned facilities and utilities which may be required for the construction of the PROJECT, shall be included in the PROJECT COST; provided, however, that any part of such cost determined by the DEPARTMENT, prior to the commencement of the work, to constitute a betterment to such facility or utility, shall be borne wholly by the owner thereof.

3. The CITY will approve the design intent of the PROJECT and shall accept full responsibility for the constructed PROJECT functioning as a part of the CITY'S facilities. The CITY is solely responsible for any input which it provides as it relates to the design of the PROJECT functioning as part of the CITY'S facilities.

4. The DEPARTMENT will administer all phases of the PROJECT and will cause to be performed all the PROJECT work.

Any items of PROJECT COST incurred by the DEPARTMENT may be charged to the PROJECT.

5. The PART A portion of the PROJECT COST shall be met in part by contributions from agencies of the Federal Government. The balance of the PART A and B portions of the PROJECT COST, after deduction of Federal Funds, shall be charged to and paid by the DEPARTMENT and the CITY in the following proportions and in the manner and at the times hereinafter set forth:

	<u>PART A</u>	<u>PART B</u>
DEPARTMENT -	100%	0%
CITY -	0%	100%

The PROJECT COST and the respective shares of the parties, after Federal-aid, is estimated to be as follows:

	<u>TOTAL ESTIMATED COST</u>	<u>FED AID</u>	<u>BALANCE AFTER FED AID</u>	<u>DEPT'S SHARE</u>	<u>CITY'S SHARE</u>
<b>PART A</b>					
Watermain	\$ 138,800	\$113,600	\$ 25,200	\$ 25,200	\$ 0
Sanitary Sewer	\$ 54,800	\$ 44,900	\$ 9,900	\$ 9,900	\$ 0
Traffic Signal	\$ 203,400	\$166,500	\$ 36,900	\$ 36,900	\$ 0
Non-motorized Path and Sidewalk	<u>\$ 368,000</u>	<u>\$301,200</u>	<u>\$ 66,800</u>	<u>\$ 66,800</u>	<u>\$ 0</u>
<b>TOTAL PART A</b>	\$ 765,000	\$626,200	\$138,800	\$138,800	\$ 0
<b>PART B</b>					
Watermain	\$ 296,300	\$ 0	\$296,300	\$ 0	\$296,300
Sanitary Sewer	\$ 334,600	\$ 0	\$334,600	\$ 0	\$334,600
Mast Arm	<u>\$ 56,800</u>	<u>\$ 0</u>	<u>\$ 56,800</u>	<u>\$ 0</u>	<u>\$ 56,800</u>
<b>TOTAL PART B</b>	\$ 687,700	\$ 0	\$687,700	\$ 0	\$687,700
<b>TOTAL</b>	<b>\$1,452,700</b>	<b>\$626,200</b>	<b>\$826,500</b>	<b>\$138,800</b>	<b>\$687,700</b>

The PE costs will be apportioned in the same ratio as the actual construction award and the CE costs will be apportioned in the same ratio as the actual direct construction costs.

6. The DEPARTMENT shall maintain and keep accurate records and accounts relative to the cost of the PROJECT. The DEPARTMENT may submit progress billings to the CITY on a monthly basis for the CITY'S share of the cost of work performed to date, less all payments previously made by the CITY not including payments made for a working capital deposit. No monthly billings of a lesser amount than \$1,000 shall be made unless it is a final or end of fiscal year billing. All billings will be labeled either "Progress Bill Number \_\_\_\_\_", or "Final Billing". Payment is due within 30 days of receipt of invoice. Upon completion of the PROJECT, payment of all items of PROJECT COST and receipt of all Federal Aid, the DEPARTMENT shall make a final billing and accounting to the CITY.

The CITY will deposit with the DEPARTMENT the following amount which will be used by the DEPARTMENT as working capital and applied toward the end of the project for the contracted work and cost incurred by the DEPARTMENT in connection with the PROJECT:

DEPOSIT PART B - \$99,700

The total deposit will be billed to the REQUESTING PARTY by the DEPARTMENT and shall be paid by the REQUESTING PARTY within 30 days after receipt of invoice.

7. Pursuant to the authority granted by law, the CITY hereby irrevocably pledges a sufficient amount of funds received by it from the Michigan Transportation Fund to meet its obligations as specified herein. If the CITY shall fail to make any of its required payments when due, as specified herein, the DEPARTMENT shall immediately notify the CITY of the fact of such default and the amount thereof, and, if such default is not cured by payment within ten (10) days, the DEPARTMENT is then authorized and directed to withhold from the first of such monies thereafter allocated by law to the CITY from the Michigan Transportation Fund sufficient monies to remove the default, and to credit the CITY with payment thereof, and to notify the CITY in writing of such fact.

8. Upon completion of the PART A and B portions of the PROJECT, the CITY shall accept the facilities constructed as built to specifications within the construction documents. It is understood the CITY shall own the facilities and shall operate and maintain the facilities in accordance with applicable law at no cost to the DEPARTMENT. The traffic signal portion of the PART B portion of the PROJECT shall be owned, operated and maintained by the DEPARTMENT.

9. Any and all approvals of, reviews of, and recommendations regarding contracts, agreements, permits, plans, specifications, or documents, of any nature, or any inspections of work by the DEPARTMENT pursuant to the terms of this Contract are done to assist the CITY. Such approvals, reviews, inspections and recommendations by the DEPARTMENT shall not relieve the CITY of its ultimate control and shall not be construed as a warranty of their propriety or that the DEPARTMENT is assuming any liability, control or jurisdiction.

When providing approvals, reviews and recommendations under this Contract, the DEPARTMENT is performing a governmental function, as that term is defined in MCL 691.1401 et seq., as amended, which is incidental to the completion of the PROJECT.

10. In connection with the performance of PROJECT work under this Contract the parties hereto (hereinafter in Appendix "A" referred to as the "contractor") agree to comply with the State of Michigan provisions for "Prohibition of Discrimination in State Contracts", as set forth in Appendix A, attached hereto and made a part hereof. The parties further covenant that they will comply with the Civil Rights Acts of 1964, being P.L. 88-352, 78 Stat. 241, as amended, being Title 42 U.S.C. Sections 1971, 1975a-1975d, and 2000a-2000h-6 and the Regulations of the United States Department of Transportation (49 C.F.R. Part 21) issued pursuant to said Act, including Appendix "B", attached hereto and made a part hereof, and will require similar covenants on the part of any contractor or subcontractor employed in the performance of this Contract. The parties will carry out the applicable requirements of the DEPARTMENT'S Disadvantaged Business Enterprise (DBE) program and 49 CFR, Part 26, including, but not limited to, those requirements set forth in Appendix C.

11. This Contract shall become binding on the parties hereto and of full force and effect upon the signing thereof by the duly authorized officials for the CITY and for the DEPARTMENT; upon the adoption of a resolution approving said Contract and authorizing the signatures thereto of the respective officials of the CITY, a certified copy of which resolution shall be attached to this Contract.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed the day and year first above written.

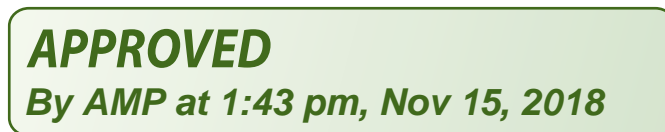
CITY OF PETOSKEY

MICHIGAN DEPARTMENT  
OF TRANSPORTATION

By \_\_\_\_\_  
Title:

By \_\_\_\_\_  
Department Director MDOT

By \_\_\_\_\_  
Title:





## **APPENDIX A**

### **PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS**

In connection with the performance of work under this contract; the contractor agrees as follows:

1. In accordance with Public Act 453 of 1976 (Elliott-Larsen Civil Rights Act), the contractor shall not discriminate against an employee or applicant for employment with respect to hire, tenure, treatment, terms, conditions, or privileges of employment or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight, or marital status. A breach of this covenant will be regarded as a material breach of this contract. Further, in accordance with Public Act 220 of 1976 (Persons with Disabilities Civil Rights Act), as amended by Public Act 478 of 1980, the contractor shall not discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment or a matter directly or indirectly related to employment because of a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. A breach of the above covenants will be regarded as a material breach of this contract.
2. The contractor hereby agrees that any and all subcontracts to this contract, whereby a portion of the work set forth in this contract is to be performed, shall contain a covenant the same as hereinabove set forth in Section 1 of this Appendix.
3. The contractor will take affirmative action to ensure that applicants for employment and employees are treated without regard to their race, color, religion, national origin, age, sex, height, weight, marital status, or any disability that is unrelated to the individual's ability to perform the duties of a particular job or position. Such action shall include, but not be limited to, the following: employment; treatment; upgrading; demotion or transfer; recruitment; advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
4. The contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, sex, height, weight, marital status, or disability that is unrelated to the individual's ability to perform the duties of a particular job or position.
5. The contractor or its collective bargaining representative shall send to each labor union or representative of workers with which the contractor has a collective bargaining agreement or other contract or understanding a notice advising such labor union or workers' representative of the contractor's commitments under this Appendix.
6. The contractor shall comply with all relevant published rules, regulations, directives, and orders of the Michigan Civil Rights Commission that may be in effect prior to the taking of bids for any individual state project.

7. The contractor shall furnish and file compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission; said forms may also elicit information as to the practices, policies, program, and employment statistics of each subcontractor, as well as the contractor itself, and said contractor shall permit access to the contractor's books, records, and accounts by the Michigan Civil Rights Commission and/or its agent for the purposes of investigation to ascertain compliance under this contract and relevant rules, regulations, and orders of the Michigan Civil Rights Commission.
8. In the event that the Michigan Civil Rights Commission finds, after a hearing held pursuant to its rules, that a contractor has not complied with the contractual obligations under this contract, the Michigan Civil Rights Commission may, as a part of its order based upon such findings, certify said findings to the State Administrative Board of the State of Michigan, which State Administrative Board may order the cancellation of the contract found to have been violated and/or declare the contractor ineligible for future contracts with the state and its political and civil subdivisions, departments, and officers, including the governing boards of institutions of higher education, until the contractor complies with said order of the Michigan Civil Rights Commission. Notice of said declaration of future ineligibility may be given to any or all of the persons with whom the contractor is declared ineligible to contract as a contracting party in future contracts. In any case before the Michigan Civil Rights Commission in which cancellation of an existing contract is a possibility, the contracting agency shall be notified of such possible remedy and shall be given the option by the Michigan Civil Rights Commission to participate in such proceedings.
9. The contractor shall include or incorporate by reference, the provisions of the foregoing paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Michigan Civil Rights Commission; all subcontracts and purchase orders will also state that said provisions will be binding upon each subcontractor or supplier.

Revised June 2011

## **APPENDIX B**

### **TITLE VI ASSURANCE**

During the performance of this contract, the contractor, for itself, its assignees, and its successors in interest (hereinafter referred to as the “contractor”), agrees as follows:

1. **Compliance with Regulations:** For all federally assisted programs, the contractor shall comply with the nondiscrimination regulations set forth in 49 CFR Part 21, as may be amended from time to time (hereinafter referred to as the Regulations). Such Regulations are incorporated herein by reference and made a part of this contract.
2. **Nondiscrimination:** The contractor, with regard to the work performed under the contract, shall not discriminate on the grounds of race, color, sex, or national origin in the selection, retention, and treatment of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices, when the contractor covers a program set forth in Appendix B of the Regulations.
3. **Solicitation for Subcontracts, Including Procurements of Materials and Equipment:** All solicitations made by the contractor, either by competitive bidding or by negotiation for subcontract work, including procurement of materials or leases of equipment, must include a notification to each potential subcontractor or supplier of the contractor’s obligations under the contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and facilities as may be determined to be pertinent by the Department or the United States Department of Transportation (USDOT) in order to ascertain compliance with such Regulations or directives. If required information concerning the contractor is in the exclusive possession of another who fails or refuses to furnish the required information, the contractor shall certify to the Department or the USDOT, as appropriate, and shall set forth the efforts that it made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of the contractor’s noncompliance with the nondiscrimination provisions of this contract, the Department shall impose such contract sanctions as it or the USDOT may determine to be appropriate, including, but not limited to, the following:
  - a. Withholding payments to the contractor until the contractor complies; and/or
  - b. Canceling, terminating, or suspending the contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor shall include the provisions of Sections (1) through (6) in every subcontract, including procurement of material and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department or the USDOT may direct as a means of enforcing such provisions, including sanctions for non-compliance, provided, however, that in the event a contractor becomes involved in or is threatened with litigation from a subcontractor or supplier as a result of such direction, the contractor may request the Department to enter into such litigation to protect the interests of the state. In addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Revised June 2011

## **APPENDIX C**

### **TO BE INCLUDED IN ALL FINANCIAL ASSISTANCE AGREEMENTS WITH LOCAL AGENCIES**

#### **Assurance that Recipients and Contractors Must Make (Excerpts from US DOT Regulation 49 CFR 26.13)**

- A. Each financial assistance agreement signed with a DOT operating administration (or a primary recipient) must include the following assurance:**

**The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any US DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of US DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR Part 26 and as approved by US DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).**

- B. Each contract MDOT signs with a contractor (and each subcontract the prime contractor signs with a subcontractor) must include the following assurance:**

**The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of US DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.**



# City of Petoskey

## Agenda Memo

**BOARD:** City Council

**MEETING DATE:** December 17, 2018

**PREPARED:** December 11, 2018

**AGENDA SUBJECT:** Budget-Amendment Resolution

**RECOMMENDATION:** That the City Council adopt the enclosed proposed resolution

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**Summary** At the end of each fiscal year, the City Council is routinely asked to formally adopt amendments to the Annual Budget. As noted below, these amendments are necessitated by a variety of circumstances, and in many cases are administrative changes to formally reflect previously approved actions and priorities.

### **Proposed Amendments**

**General Fund** Amendments to the Parks and Recreation portion of the General Fund budget is necessary due to exterior work performed on City Hall (\$60,000), increased costs for the downtown restroom construction (\$50,000) and increased marina gas sales (\$115,000), which is offset in increased revenues.

**Library Fund** Additional expenditures include Building Repair and Maintenance for roof repairs to the Carnegie Building, gutters on the main building, along with an LED lighting project for a total of \$52,000. Contracted services also increased by \$13,800 from \$30,700 to \$44,500.

**Amendments** The City Council will be asked to adopt the enclosed proposed resolution that would amend total budget amounts in 2018 for the General Fund and Library Fund.

at  
Enclosure



# City of Petoskey

## Resolution

WHEREAS, at the close of the City's 2018 fiscal year, the City staff has determined that expenditures within one City fund is anticipated to differ from amounts that had been budgeted for:

NOW, THEREFORE, BE IT RESOLVED that expenditures within the General Fund and Library Fund be adjusted as follows:

	<u>Original</u>	<u>Amendment</u>	<u>Difference</u>
<b>General Fund</b>			
Expenditures:			
Parks and Recreation	<u>\$2,632,200</u>	<u>\$2,857,200</u>	<u>\$225,000</u>
Total General Fund	<u>\$8,414,400</u>	<u>\$8,639,400</u>	<u>\$225,000</u>
 <b>Library Fund</b>			
Expenditures:			
Library	<u>\$1,406,800</u>	<u>\$1,492,000</u>	<u>\$ 85,200</u>