



OFFICE OF
THE MAYOR
CHRISTINA M. MURYN

Rob Martin, BSN, MBA
Service-Safety Director

July 13, 2023

RE: Water Transmitter Project

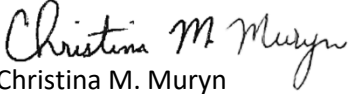
Dear Honorable Council,

As we near the finish line of the water transmitter project, questions have arisen regarding how bills are reconciled for the period of December 2021- time of transmitter installation.

The attached documents outline the process the Findlay Water Department uses to determine water bills. After transmitters are installed the department is able to get a true read of usage during the period of time that bills were being estimated based on historical monthly usage data. This results in either a credit or additional charge being applied to each bill. Moving forward, the bills will be based on actual usage. Please remember it is the responsibility of the homeowner/resident to check their plumbing system for leaks and make repairs accordingly. We look forward to having the ability to assist our users in monitoring for water leaks.

If you have additional questions regarding the process please reach out to me to schedule a conversation.

Best regards,


Christina M. Muryn
Mayor

The Utility Billing Department has been estimating water consumption since December 2021. As the Department comes into the home stretch of installation of the new transmitters, we are working to clarify the information provided on your water bill.

The first area to look on your bill is in the bottom payment portion. The word “Book” is in the middle of the stub. If the letter “A” appears after the number (i.e., 47A), then you have a new transmitter. If not, your bill is still being estimated. After the new transmitter has been installed, a billing clerk reviews the account to determine if the account was overestimated or underestimated.

Example of Bill and Worksheet for an Overestimated Account

CITY OF FINDLAY
 CITY OF FINDLAY
 WATER/SEWER BILLING OFFICE
 136 N BLANCHARD STREET
 FINDLAY OH 45840-5808

UTILITY BILL



Customer Name:

<i>Public Service Announcements</i>	ACCOUNT NUMBER	SEVICE DATES 4/10/2023 to 6/9/2023	SERVICE ADDRESS		
	SERVICE	PREVIOUS READING	CURRENT READING	USAGE	CHARGES
	WATER	1301	1307	101	275.95
	SEWER	1301	1307	101	215.71
	STORM WATER				6.00
	CREDIT				-423.70
Amount Due If Paid By Due Date →				TOTAL DUE \$73.96	
AMOUNT DUE AFTER DUE DATE		DUE DATE 7/12/23	AMOUNT DUE \$73.96		

Book: 47A

CITY OF FINDLAY
 CITY OF FINDLAY
 WATER/SEWER BILLING OFFICE
 136 N BLANCHARD STREET
 FINDLAY OH 45840-5808

Account Number	
Due Date	7/12/23
Amount Due	\$73.96
After Due Date	

Worksheet for an Overestimated Water Bill

Start Date	Begin Read	End Date	End Read	Read Type	Consumption	Minimum Consumption During Estimated Billing Cycle	
8/10/2021	1145	10/1/2021	1170	Actual	25		
10/1/2021	1170	12/8/2021	1182	Estimate	12	4	8
12/8/2021	1182	2/8/2022	1196	Estimate	14	4	10
2/8/2022	1196	4/7/2022	1211	Estimate	15	4	11
4/7/2022	1211	6/7/2022	1226	Estimate	15	4	11
6/7/2022	1226	8/9/2022	1241	Estimate	15	4	11
8/9/2022	1241	10/6/2022	1256	Estimate	15	4	11
10/6/2022	1256	12/8/2022	1271	Estimate	15	4	11
12/8/2022	1271	2/9/2023	1286	Estimate	15	4	11
2/9/2023	1286	4/10/2023	1301	Estimate	15	4	11
4/10/2023	1301	5/12/2023	1300	Actual	-1		95
5/12/2023	1301	5/16/2023	1307	Actual	6		

Calculation #1	
Actual Consumption	
1300-1170=	130
4x9=	36
	130
	<u>-36</u>
	94

Calculation #2	
Billed Consumption	
Total of Units Charged During Estimation	95

Calculation #3		
Amount Credited		
Water Charge	95x2.67=	\$(253.65)
Sewer Charge	95x1.79=	<u>\$(170.05)</u>
	Credit	\$(423.70)

Calculation #4		
Additional Usage after installation of Transmitter		
1301	1307	6
		95
		101

Calculation #5		
Amount shown on bill		
Water	97x2.67=	\$ 258.99
Sewer	97x1.79=	\$ 173.63
Storm		<u>\$ 6.00</u>
		\$ 438.62
Water Base		\$ 16.96
Sewer Base		<u>\$ 42.08</u>
		\$ 497.66

Calculation #6	
Water Bill	
Billed	\$ 497.66
Credit	<u>\$ (423.70)</u>
Owed	\$ 73.96

The example below depicts how the Water Department calculates a reimbursement for a residential user with a 5/8" water meter that has been over-charged for their water consumption.

1. The last actual water meter reading that took place at the residence was for the 8/10/21-10/1/21 billing cycle. Beginning on 10/1/21 and ending on 4/10/2023 the resident was billed based on historical monthly averages for their property. Once the transmitter was installed on their water meter, the water department was able to track their actual usage for the 4/10/23-5/12/23 billing cycle. The transmitter showed that they had used one less unit of water (-1 units of water) during this period (8/10/21-5/12/23) than they had been billed for.

Consumption Calculation

$$(End\ Read) - (Starting\ Read) = Units\ of\ Water\ Used$$

$$1300 - 1170 = 130$$

Each water user is billed for a minimum of 4 units per billing cycle (2 units/month) which is included in their base fee. The base fee is dependent on the size of the water meter.

Base Unit Calculation

$$(Base\ Units) \times (Estimated\ Billing\ Cycles) = Number\ of\ Units\ Charged\ to\ the\ Base\ Rate$$

$$4 \times 9 = 36$$

The number of base units are subtracted from the actual consumption which provides the number of units that the user should be billed for.

Actual Consumption Calculation

$$(Consumption\ Total) - (Base\ Units\ Total) = Actual\ Consumption\ Total$$

$$130 - 36 = 94$$

2. Billed Consumption is the total units of water used during the billing cycles that estimated monthly averages were used.

$$(Estimated\ Monthly\ Usage) - (Minimum\ Units\ During\ Billing\ Cycle) = Number\ of\ Units\ Billed$$

$$131 - 36 = 95$$

3. The amount credited is based on multiplying the units of water used by the water rate and sewer rate. In this case, the user is located within the City of Findlay limits.

Amount Credited

$$(Units\ of\ Water\ Used) \times (Water\ Rate) = WINB\ Charge$$

$$95 \times 2.67 = \$253.65$$

$$(Units\ of\ Water\ Used) \times (Sewer\ Rate) = Sewer\ Charge$$

$$95 \times 1.79 = \$170.05$$

The total amount credited is the sum of these two charges.

$$\text{\$ } (253.65) + \text{\$ } (170.05) = \text{\$ } (423.70)$$

4. The additional usage after the installation of the transmitter is then calculated. This will show the units that have been used from the date of the transmitter installation to the date of actual billing.

Additional Usage

$$\text{(Units Used on Date of Billing)} - \text{(Units Used on Date of Transmitter Installation)} = \text{Additional Usage}$$

$$1307 - 1301 = 6$$

The total additional usage is then added to the actual consumption total.

$$\text{(Actual Consumption)} + \text{(Additional Usage)} = \text{Total Usage}$$

$$6 + 95 = 101$$

The four (4) units that are included in the water base charge are then subtracted.

$$\text{(Total Usage)} - \text{(Base Units)} = \text{Total Units to be Charged}$$

$$101 - 4 = 97$$

5. Water, sewer and storm charges are shown separately on a water bill.

Water Charge

$$\text{(Units of Water Used)} \times \text{(Water Rate)} = \text{Water Charge}$$

$$97 \times 2.67 = \text{\$}258.99$$

Sewer Charge

$$\text{(Units of Water Used)} \times \text{(Sewer Rate)} = \text{Sewer Charge}$$

$$97 \times 1.79 = \text{\$}173.63.63$$

Storm Charge

The storm charge is a flat rate of \$6.00 for this property.

Total Charge for Additional Units Used

$$\text{(Water Charge)} + \text{(Sewer Charge)} + \text{(Storm Charge)} = \text{Total Water Bill}$$

$$\text{\$}258.99 + \text{\$}173.63 + \text{\$}6.00 = \text{\$}438.62$$

Water Base Charge

5/8" Meter Inside Corporation Limits is \$8.48 Monthly

$$2 \times \text{\$}8.48 = \text{\$}16.96$$

Sewer Base Charge

5/8" Meter Inside Corporation Limits is \$21.04 Monthly

2 x \$21.04 = \$42.08

Total

(Total Charge for Additional Units) + (Water Base Charge) + (Sewer Base Charge) = Total Bill

\$438.62 + \$16.96 + \$42.08 = \$497.66

6. The final water bill will show what was billed, credited, and what is owed by the user.

Final Calculation

Billed \$497.66

Credit \$423.70

Owed \$73.96

The next billing cycle, will reflect usage and charges for actual consumed water during that two-month billing period the usage and charges will return back to a regular bill. Please be aware that your bill may increase based on your measure consumption now being actual.

Example of Bill and Worksheet for an Underestimated Account

If the water bill has been underestimated the clerk reviews the account and if usage is higher than the estimated readings, the amount due will be greater than normal. The usage reflects water that was consumed, but not billed during the estimation period along with the current billing cycle.



CITY OF FINDLAY
 WATER/SEWER BILLING OFFICE
 136 N BLANCHARD STREET
 FINDLAY OH 45840-5808

UTILITY BILL



Customer Name:

Public Service Announcements

ACCOUNT NUMBER	SEVICE DATES 4/10/2023 to 6/9/2023		SERVICE ADDRESS	
SERVICE	PREVIOUS READING	CURRENT READING	USAGE	CHARGES
WATER	1306	1312	102	302.65
SEWER	1306	1312	102	233.61
STORM WATER				6.00
CREDIT				-423.70
Amount Due if Paid By Due Date →				TOTAL DUE \$118.56
AMOUNT DUE AFTER DUE DATE	DUE DATE 7/12/23		AMOUNT DUE \$118.56	

Book: 47A



CITY OF FINDLAY
 WATER/SEWER BILLING OFFICE
 136 N BLANCHARD STREET
 FINDLAY OH 45840-5808

Account Number	
Due Date	7/12/23
Amount Due	\$118.56
After Due Date	

Worksheet for an Underestimated Water Bill

Start Date	Begin Read	End Date	End Read	Read Type	Consumption	Estimated Billing Cycle	
8/10/2021	1145	10/1/2021	1170	Actual	25		
10/1/2021	1170	12/8/2021	1182	Estimate	12	4	8
12/8/2021	1182	2/8/2022	1196	Estimate	14	4	10
2/8/2022	1196	4/7/2022	1211	Estimate	15	4	11
4/7/2022	1211	6/7/2022	1226	Estimate	15	4	11
6/7/2022	1226	8/9/2022	1241	Estimate	15	4	11
8/9/2022	1241	10/6/2022	1256	Estimate	15	4	11
10/6/2022	1256	12/8/2022	1271	Estimate	15	4	11
12/8/2022	1271	2/9/2023	1286	Estimate	15	4	11
2/9/2023	1286	4/10/2023	1301	Estimate	15	4	11
4/10/2023	1301	5/12/2023	1306	Actual	5		95
5/12/2023	1306	5/16/2023	1312	Actual	6		

Calculation #1

Actual Consumption

1306-1170=136	
4x9=36	
	136
	<u>-36</u>
	100

Calculation #2

Billed Consumption

Total of Units Charged During Estimation	95
--	----

Calculation #3

Amount Credited

Water Charge	95x2.67=	\$ (253.65)
Sewer Charge	95X1.79=	<u>\$ (170.05)</u>
Credit		\$ (423.70)

Calculation #4

Additional Usage after installation of Transmitter

1306	1312	6
		<u>100</u>
		106

Calculation #5

Amount shown on bill

Water	102x2.67=	\$ 285.69
Sewer	102x1.79=	\$ 191.53
Storm		<u>\$ 6.00</u>
		\$ 483.22
Water Base		\$ 16.96
Sewer Base		<u>\$ 42.08</u>
		\$ 542.26

Calculation #6

Water Bill

Billed	\$	542.26
Credit	\$	<u>(423.70)</u>
Owed	\$	118.56

The example below depicts how the Water Department calculates a payment for a residential user with a 5/8" water meter that has been under-charged for their water consumption.

1. The last actual water meter reading that took place at the residence was for the 8/10/21-10/1/21 billing cycle. Beginning on 10/1/21 and ending on 4/10/23 the resident was billed based on historical monthly averages for their property. Once the transmitter was installed on their water meter, the water department was able to track their actual usage for the 4/10/23-5/12/23 billing cycle. The transmitter showed that they had used five more units of water during this period (8/10/21-5/12/23) than they had been billed for.

Consumption Calculation

$$(End\ Read) - (Starting\ Read) = Units\ of\ Water\ Used$$

$$1306 - 1170 = 136$$

Each water user is billed for a minimum of 4 units per billing cycle (2 units/month) which is included in their base fee. The base fee is dependent on the size of the water meter.

Base Unit Calculation

$$(Base\ Units) \times (Estimated\ Billing\ Cycles) = Number\ of\ Units\ Charged\ to\ the\ Base\ Rate$$

$$4 \times 9 = 36$$

The number of base units are subtracted from the actual consumption which provides the number of units that the user should be billed for.

Actual Consumption Calculation

$$(Consumption\ Total) - (Base\ Units\ Total) = Actual\ Consumption\ Total$$

$$136 - 36 = 100$$

2. Billed Consumption is the total units of water used during the billing cycles that estimated monthly averages were used.

$$(Estimated\ Monthly\ Usage) - (Minimum\ Units\ During\ Billing\ Cycle) = Number\ of\ Units\ Billed$$

$$131 - 36 = 95$$

3. The amount credited is based on multiplying the units of water used by the water rate and sewer rate. In this case, the user is located within the City of Findlay limits.

Amount Credited

$$(Units\ of\ Water\ Used) \times (Water\ Rate) = WINB\ Charge$$

$$95 \times 2.67 = \$253.65$$

$$(Units\ of\ Water\ Used) \times (Sewer\ Rate) = Sewer\ Charge$$

$$95 \times 1.79 = \$170.05$$

The total amount credited is the sum of these two charges.

$$\$ (253.65) + \$ (170.05) = \$ (423.70)$$

4. The additional usage after the installation of the transmitter is then calculated. This will show the units that have been used from the date of the transmitter installation to the date of actual billing.

Additional Usage

$$(Units\ Used\ on\ Date\ of\ Billing) - (Units\ Used\ on\ Date\ of\ Transmitter\ Installation) = Additional\ Usage$$

$$1312 - 1306 = 6$$

The total additional usage is then added to the actual consumption total.

$$(Actual\ Consumption) + (Additional\ Usage) = Total\ Usage$$

$$6 + 100 = 106$$

The four (4) units that are included in the water base charge are then subtracted.

$$(Total\ Usage) - (Base\ Units) = Total\ Units\ to\ be\ Charged$$

$$106 - 4 = 102$$

5. Water, sewer and storm charges are shown separately on a water bill.

Water Charge

$$(Units\ of\ Water\ Used) \times (Water\ Rate) = Water\ Charge$$

$$102 \times 2.67 = \$285.69$$

Sewer Charge

$$(Units\ of\ Water\ Used) \times (Sewer\ Rate) = Sewer\ Charge$$

$$102 \times 1.79 = \$191.53$$

Storm Charge

The storm charge is a flat rate of \$6.00 for this property.

Total Charge for Additional Units Used

(Water Charge) + (Sewer Charge) + (Storm Charge) = Total Water Bill

$$\$285.69 + \$191.53 + \$6.00 = \$483.22$$

Water Base Charge

5/8" Meter Inside Corporation Limits is \$8.48 Monthly

$$2 \times \$8.48 = \$16.96$$

Sewer Base Charge

5/8" Meter Inside Corporation Limits is \$21.04 Monthly

$$2 \times \$21.04 = \$42.08$$

Total

(Total Charge for Additional Units) + (Water Base Charge) + (Sewer Base Charge) = Total Bill

$$\$483.22 + \$16.96 + \$42.08 = \$542.26$$

- 6. The final water bill will show what was billed, credited, and what is owed by the user.

Final Calculation

Billed \$542.26

Credit \$423.70

Owed \$118.56

The next billing cycle, will reflect usage and charges for actual consumed water during that two-month billing period the usage and charges will return back to a regular bill. Please be aware that your bill may increase based on your measure consumption now being actual.

Please remember it is the responsibility of the homeowner/resident to check their plumbing system for leaks and make repairs accordingly.