

**Hamilton County, Ohio
The Metropolitan Sewer District of
Greater Cincinnati
Additional Requested Information**



November 18, 2015





Customers Below Minimum Usage

Q: Please provide the percentage of average residential customers which fall below the minimum usage (9 CCF per quarter).

A: 28.82% of residential customers have usage that is below 9 CCF per quarter on average.

Source: MSD



Sewer in Basement

Q: Please provide more information regarding the sewer in basement cost of service figure shown in Black and Veatch's presentation.

A: The cost of service for the Sewer in Basement is the product of system-wide costs of service per unit times the units of service. Equivalent meters are calculated by multiplying the number of meters by an equivalent meter ratio, as summarized in the table below.

Meter Size	Equivalent Meter Ratio
5/8"	1.00
3/4"	1.50
1"	2.20
1.5"	4.20
2"	6.20
3"	15.00
4"	25.00
6"	50.00
8"	75.00
10"	100.00
12"	115.00

System wide Sewer in Basement equivalent meters total 330,700, and the sewer in basement unit cost of service total \$47.90. The product of these two numbers is \$15,839,159, as shown on page 28 of Black and Veatch's presentation.

Source: Black and Veatch



Comparable City Bond Ratings

Q: Please provide the bond ratings for the comparable cities.

A: The table below lists the Moody's and S&P ratings for the comparable cities. Please note that the City of Akron's sewer revenue credit is not rated, although the City's general obligation credit is rated "AA-" by S&P.

City	Moody's	S&P
Cincinnati	Aa2	AA+
Cleveland	Aa1	AA+
Columbus	Aa1	AA+
Toledo	Aa3	A+

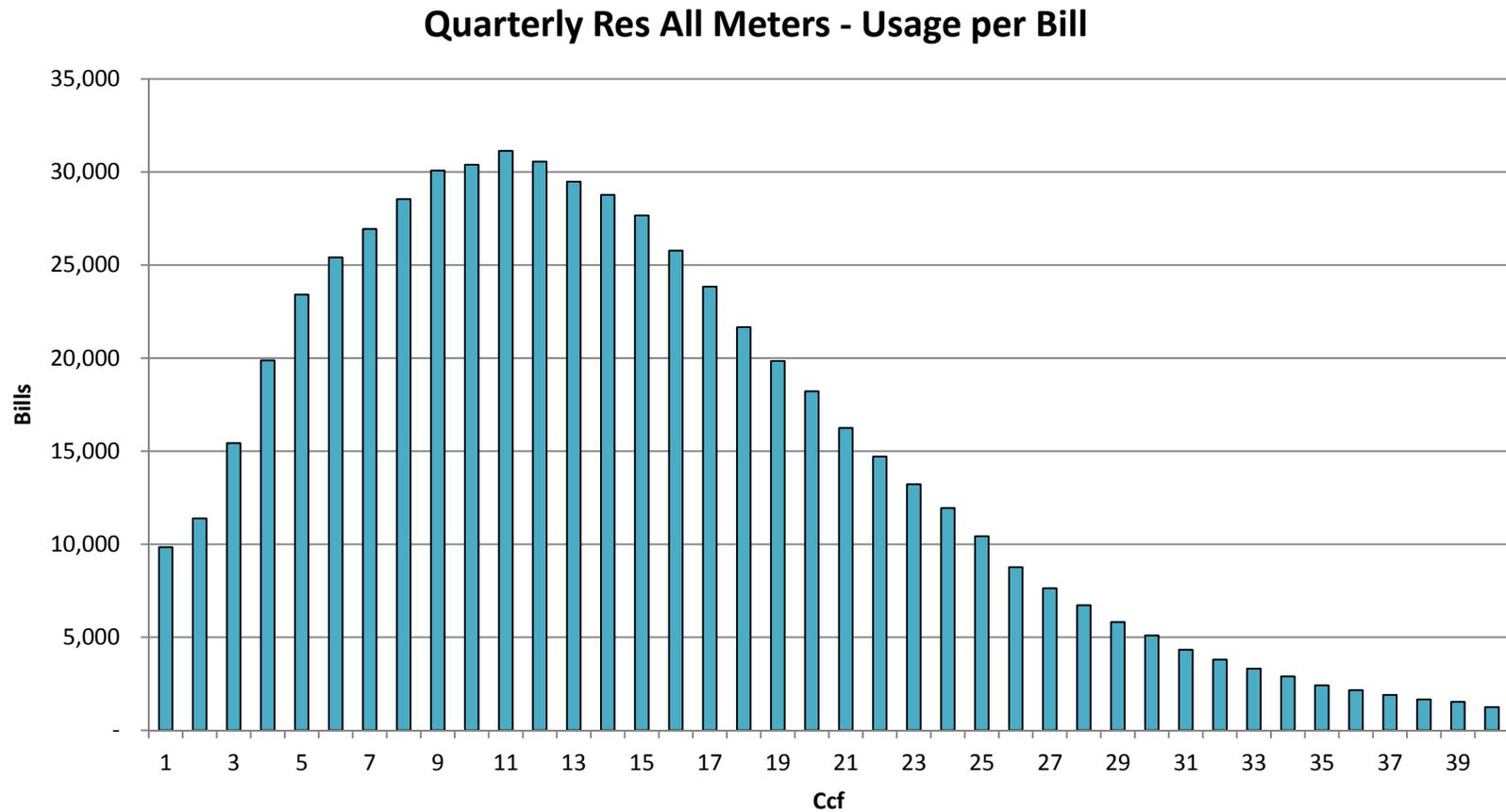
Fitch rates Columbus sewer revenue as "AA" and Toledo sewer revenue as "A+".

Source: Public Financial Management



Water Usage Bell Curves - Residential

Q: Please provide water usage bell curves based on class.

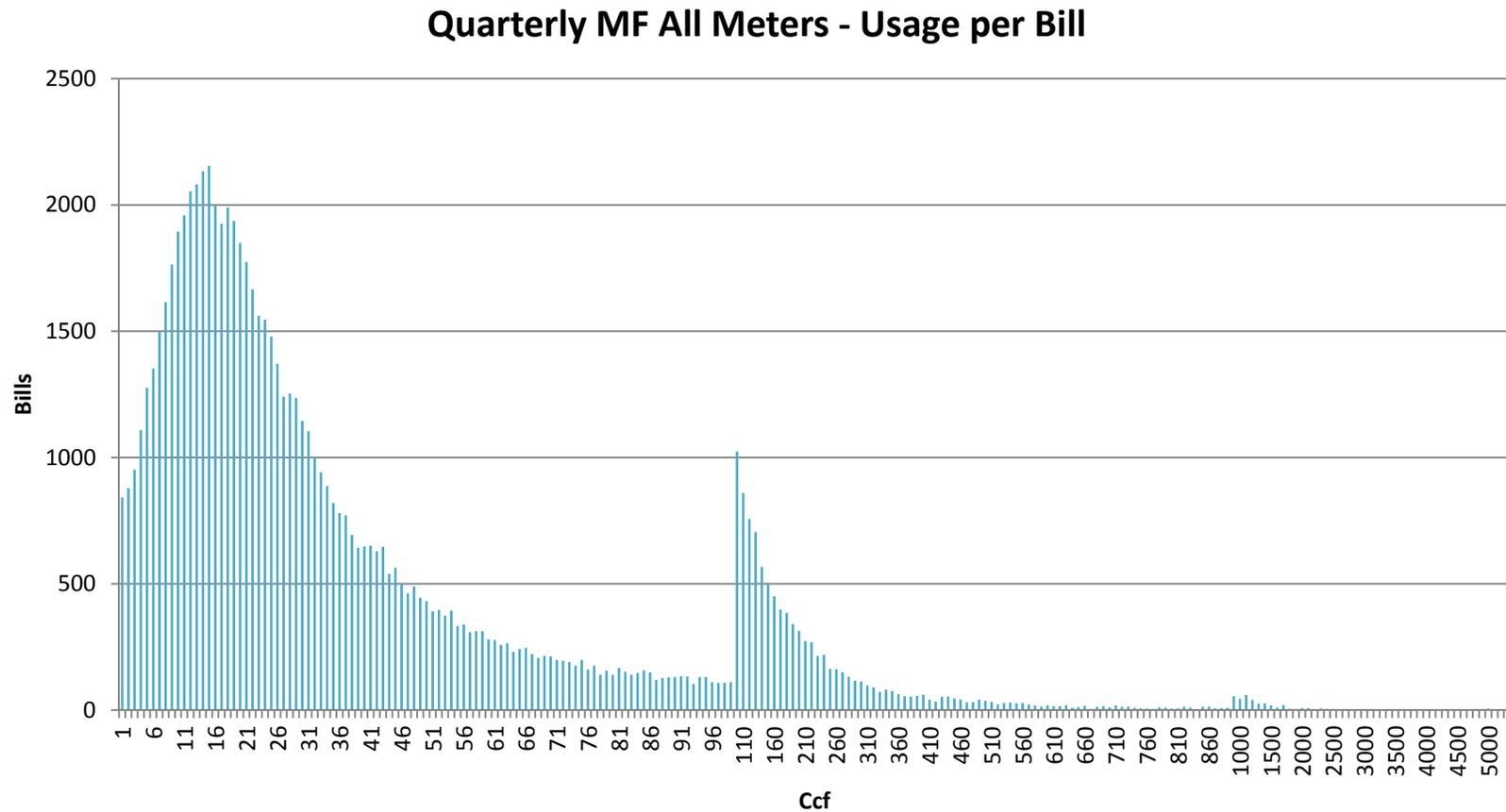


Source: MSD



Water Usage Bell Curves – Multifamily

Q: Please provide water usage bell curves based on class.

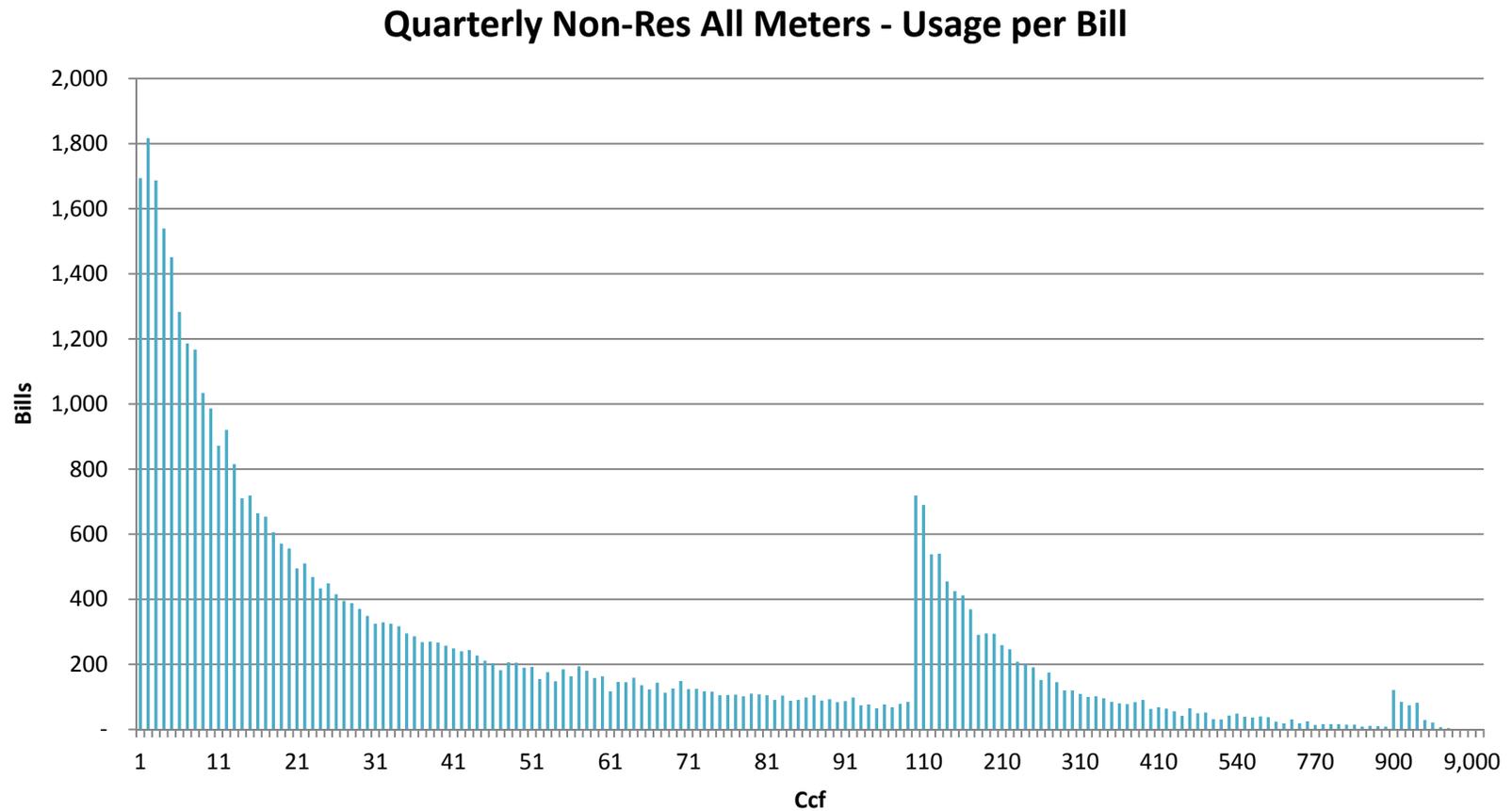


Source: MSD

Water Usage Bell Curves – Non Residential



Q: Please provide water usage bell curves based on class.



Source: MSD



Operating Efficiency

Q: Please provide a comparison of the operating of efficiency of MSD to other cities.

A: A comprehensive benchmarking assessment is being uploaded to the Affordability Task Force page on the Hamilton County website, which can be found through the following link.

http://www.hamiltoncountyohio.gov/boards_commissions/docs/MSDRateAffordabilityTaskForce.asp

Source: MSD



Other Funds Obtained - Loans

Q: Please provide a summary of other funds that MSD has obtained other than rate charges.

A: The table below shows the principal amount of loans borrowed from the Ohio Water Development Authority since 2007.

Year	Loan Principal
2007	25,000,000
2008	11,795,730
2009	88,676,778
2010	11,709,626
2011	91,034,163
2012	9,071,494
2013	37,681,315
2014	--
2015	13,261,537
Total	288,230,643

Source: MSD



Other Funds Obtained - Grants

Q: Please provide a summary of other funds that MSD has obtained other than rate charges.

A: The table below shows grants received from the Ohio Water Development Authority since 2009.

Year	Grants
2009	1,326,550
2010	4,809,472
2011	200,000
2012	1,499,420
2013	270,886
2014	150,000
2015	--
Total	8,256,328

Source: MSD



Watershed Maps

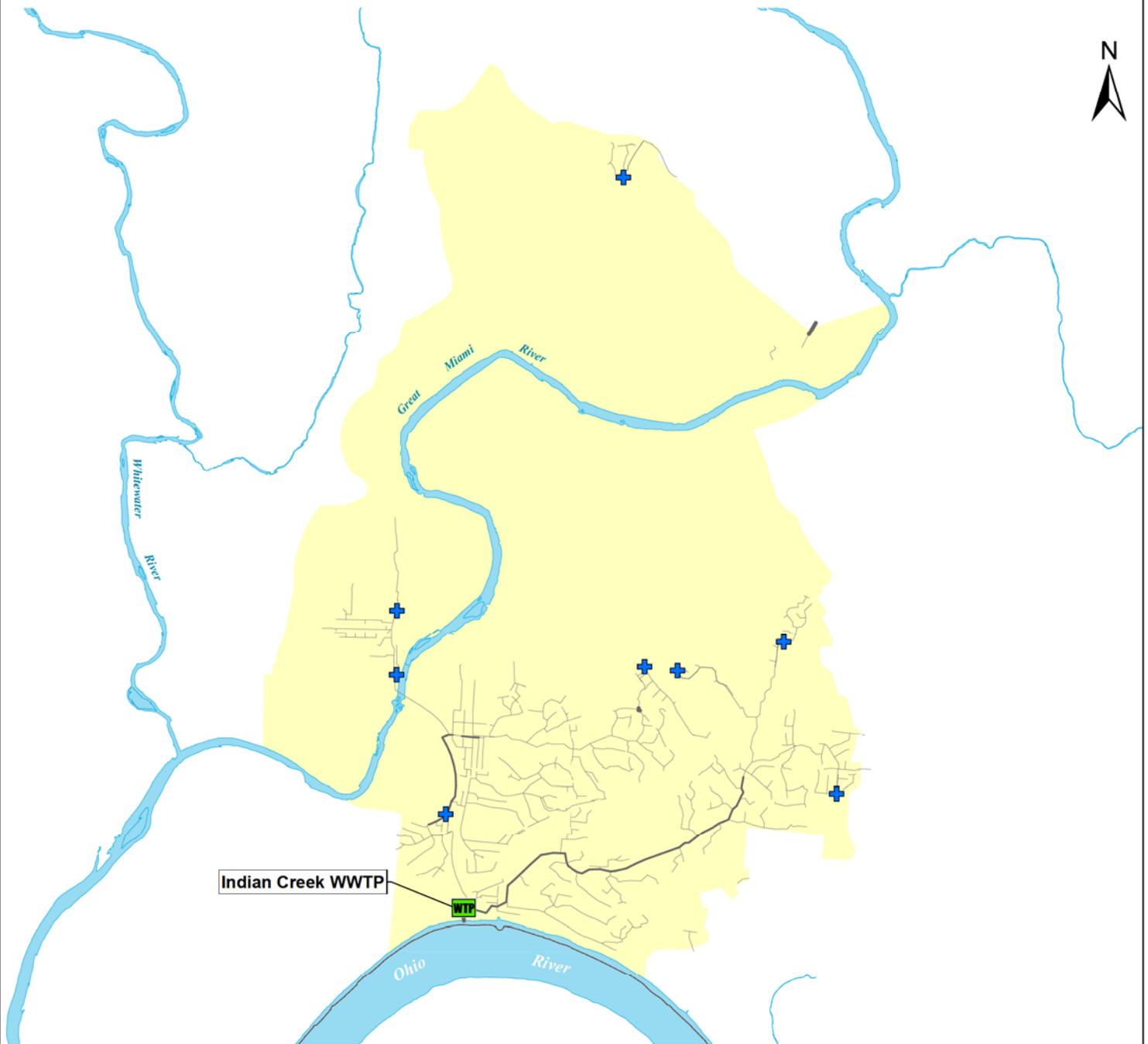
Q: Please provide a summary of the size of the system.

A: Please see the following pages which show the maps of the watersheds of the system with additional statistics.

Source: MSD

Indian Creek WWTP & Collection System Characteristics

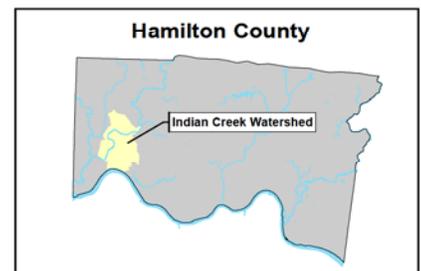
11/2015



-  Pump Stations
-  Indian Creek WWTP
- MSD Sewers**
-  1" - 17"
-  18" - 29"
-  30" - 48"
-  Indian Creek Watershed
-  Rivers and Lakes
-  County Boundary

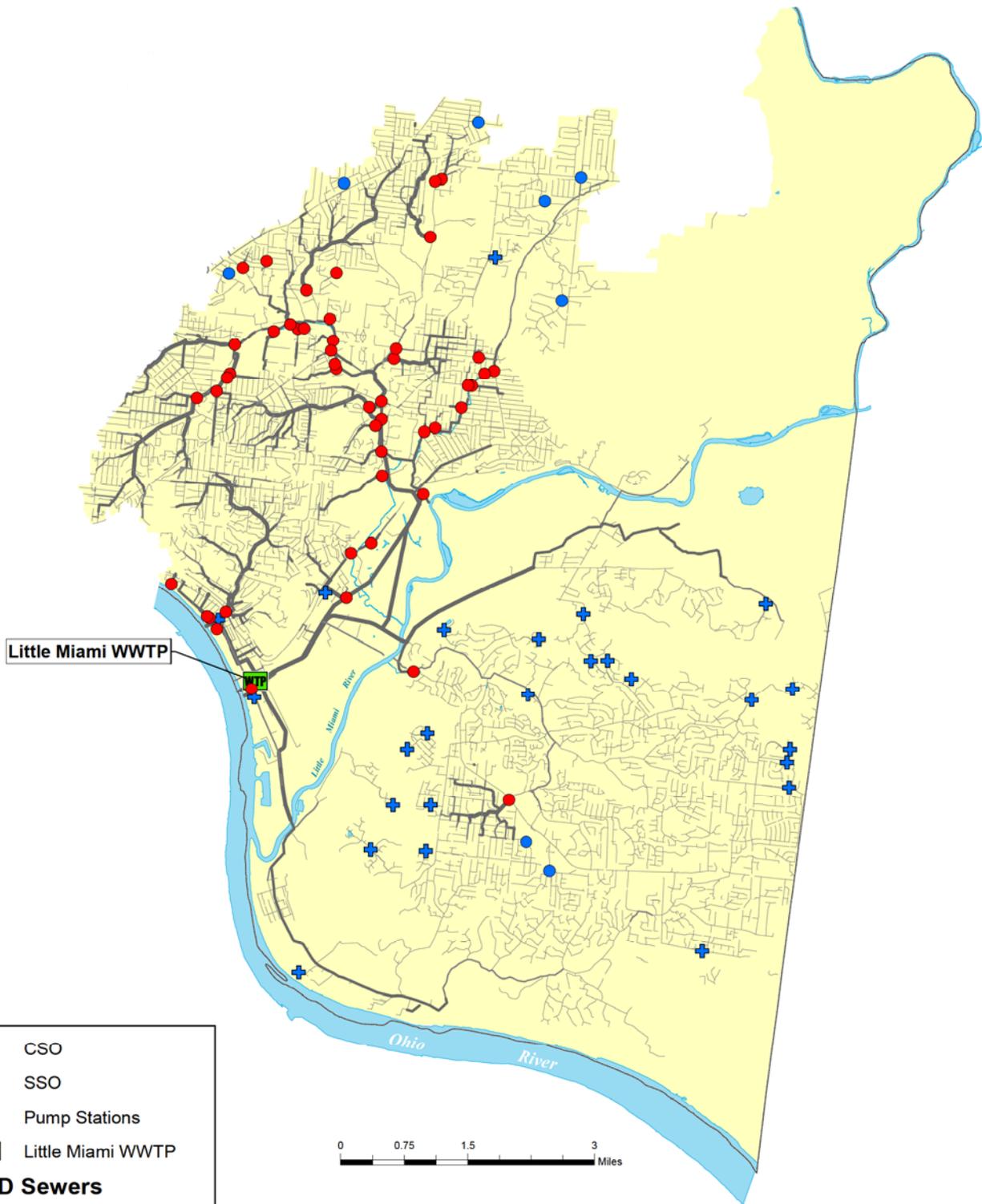


Statistic	Quantity
WWTP	1
Pump Stations	8
Miles of Pipe	49
Manholes	1,304
CSOs	0
SSOs	0



Little Miami WWTP & Collection System Characteristics

11/2015

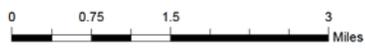


- CSO
- SSO
- + Pump Stations
- WTP Little Miami WWTP

MSD Sewers

- 1" - 23"
- 24" - 35"
- 36" - 59"
- 60" - 180"

- Little Miami Watershed
- Rivers and Lakes
- County Boundary

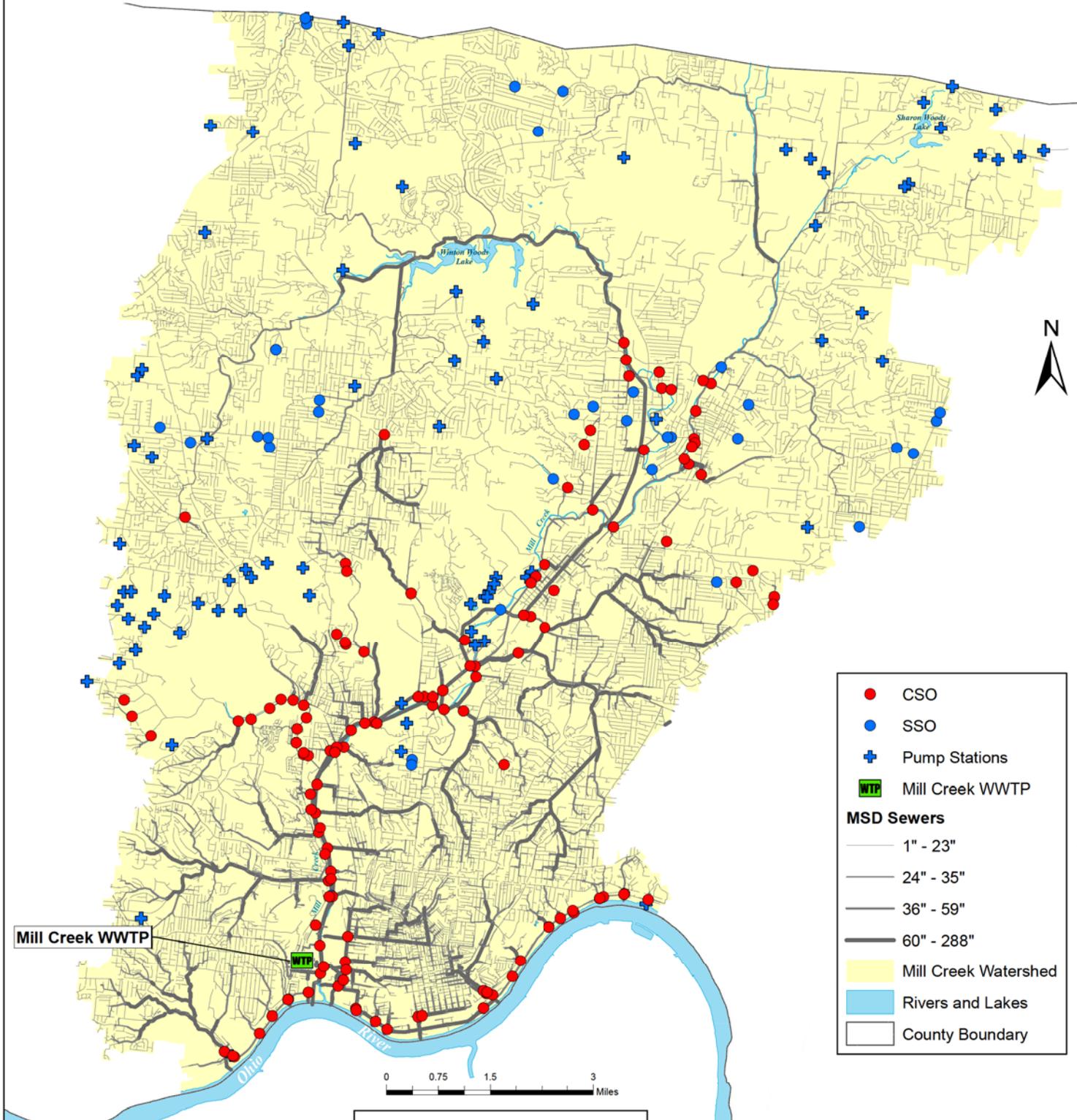


Statistic	Quantity
WWTP	1
Pump Stations	25
Miles of Pipe	653
Manholes	17,834
CSOs	49
SSOs	8



Mill Creek WWTP & Collection System Characteristics

11/2015



- CSO
- SSO
- + Pump Stations
- WTP Mill Creek WWTP

MSD Sewers

- 1" - 23"
- 24" - 35"
- 36" - 59"
- 60" - 288"

- Mill Creek Watershed
- Rivers and Lakes
- County Boundary

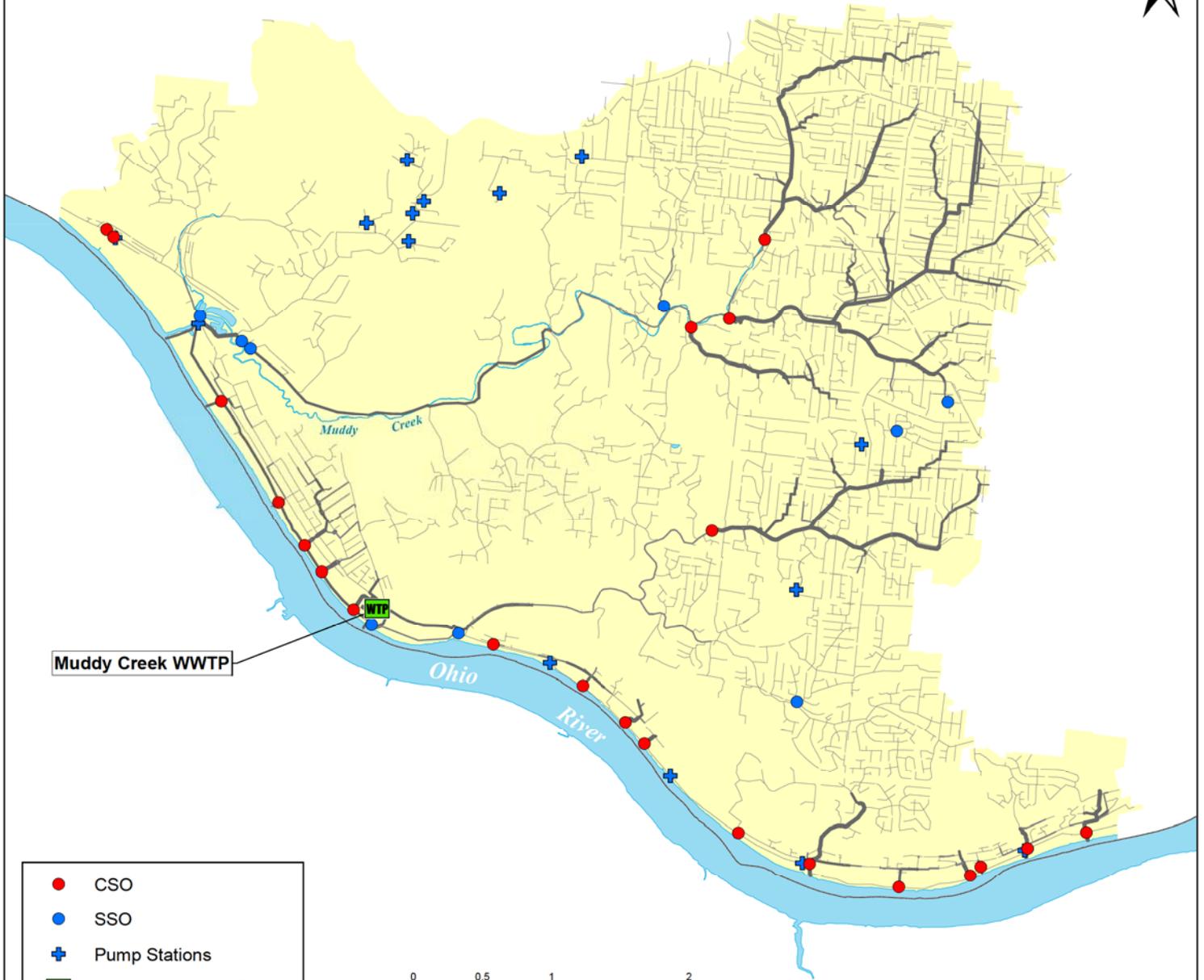


Statistic	Quantity
WWTP	1
Pump Stations	82
Miles of Pipe	1,768
Manholes	51,220
CSOs	134
SSOs	34



Muddy Creek WWTP & Collection System Characteristics

11/2015



- CSO
- SSO
- + Pump Stations
- WTP Muddy Creek WWTP

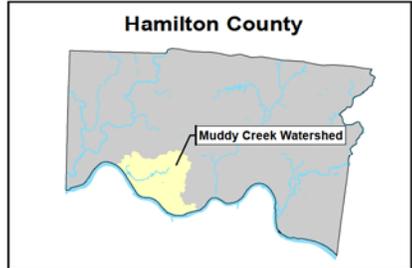
MSD Sewers

- 1" - 23"
- 24" - 35"
- 36" - 59"
- 60" - 180"

- Muddy Creek Watershed
- Rivers and Lakes
- County Boundary

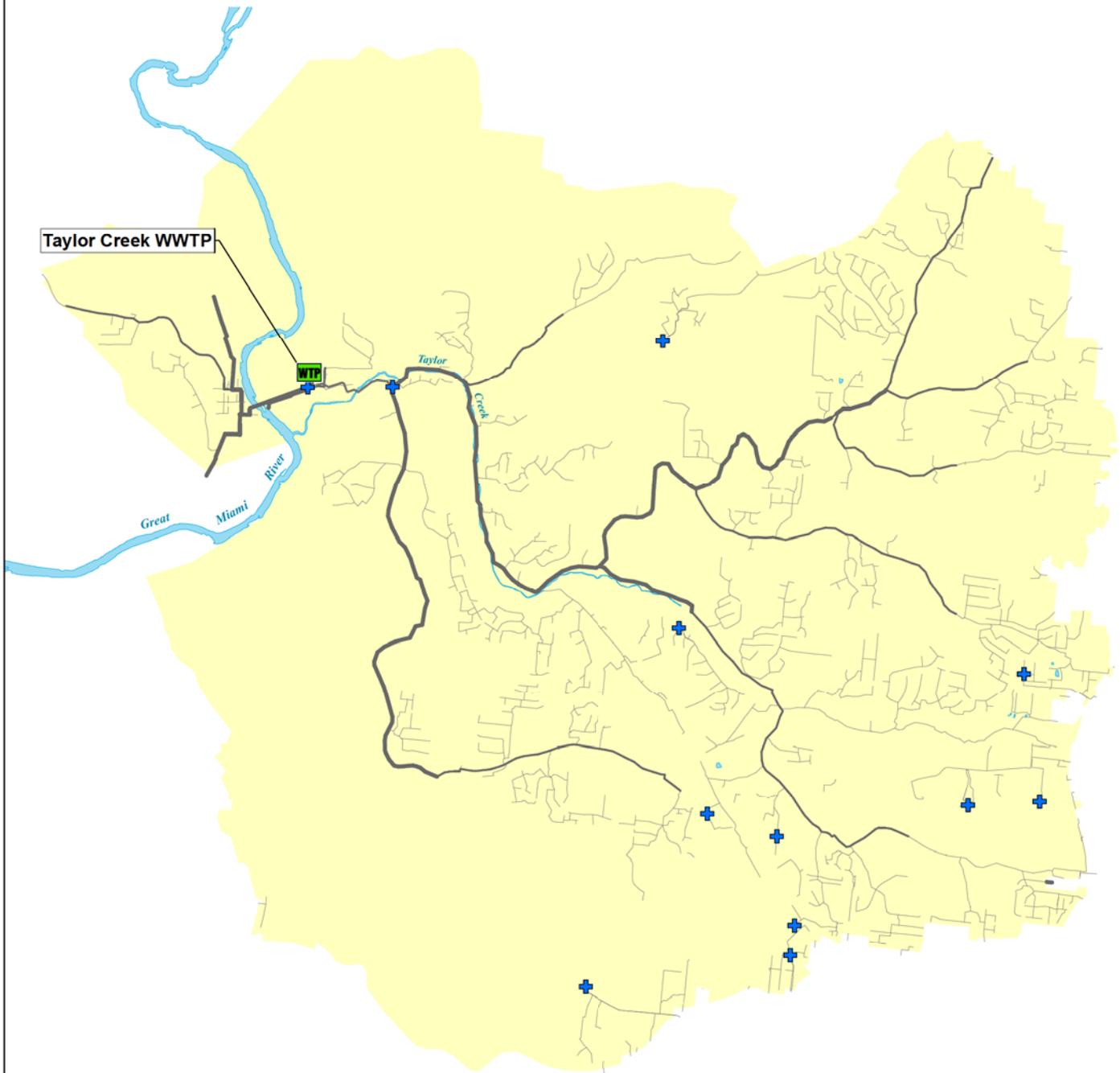


Statistic	Quantity
WWTP	1
Pump Stations	15
Miles of Pipe	323
Manholes	8,799
CSOs	22
SSOs	9



Taylor Creek WWTP & Collection System Characteristics

11/2015



-  Pump Stations
-  Taylor Creek WWTP

SIZE_

-  1" - 17"
-  18" - 29"
-  30" - 48"
-  Taylor Creek Watershed
-  Rivers and Lakes
-  County Boundary



Statistic	Quantity
WWTP	1
Pump Stations	12
Miles of Pipe	130
Manholes	3,413
CSOs	0
SSOs	0

