

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

CONTACT INFORMATION

Name of Utility: City of Bay City

Public Water Supply Identification Number (PWS ID): TX1610001

Certificate of Convenience and Necessity (CCN) Number: 10721

Surface Water Right ID Number: _____

Wastewater ID Number: 20296

Contact: First Name: Krystal Last Name: Mason

Title: Code Compliance Officer

Address: 1901 5th Street City: Bay City State: TX

Zip Code: 77414 Zip+4: _____ Email: kmason@cityofbaycity.org

Telephone Number: 9793231659 Date: _____

Is this person the designated Conservation Coordinator? Yes No

Regional Water Planning Group: K

Groundwater Conservation District: _____

- Our records indicate that you:
- Received financial assistance of \$500,000 or more from TWDB
 - Have 3,300 or more retail connections
 - Have a surface water right with TCEQ

A. Population and Service Area Data

1. Current service area size in square miles: 11

Attached file(s):

File Name	File Description
1610001 water service boundary 2019.pdf	

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2. Historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Water Service
2018	17,614	0	17,614
2017	17,614	0	17,614
2016	17,614	0	17,614
2015	17,614	0	17,614
2014	17,614	0	17,614

3. Projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Water Service
2020	19,285	0	19,285
2030	20,300	0	20,300
2040	20,950	0	20,950
2050	21,453	0	21,453
2060	21,810	0	21,810

4. Described source(s)/method(s) for estimating current and projected populations.

Current population from 2010 Census Data. Projected populations were gathered from the TWDB 2021 Regional Water Plan.

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B. System Input

System input data for the previous five years.
 Total System Input = Self-supplied + Imported – Exported

Year	Water Produced in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2018	693,864,919	0	0	693,864,919	108
2017	805,710,290	0	0	805,710,290	125
2016	832,784,216	0	0	832,784,216	130
2015	842,419,227	0	0	842,419,227	131
2014	785,813,131	0	0	785,813,131	122
Historic Average	792,118,357	0	0	792,118,357	123

C. Water Supply System

1. Designed daily capacity of system in gallons 8,919,360
2. Storage Capacity
 - 2a. Elevated storage in gallons: 1,450,000
 - 2b. Ground storage in gallons: 2,750,000

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D. Projected Demands

1. The estimated water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

Year	Population	Water Demand (gallons)
2020	19,285	788,888,888 846,997,200
2021	19,387	849,150,600
2022	19,488	853,574,400
2023	19,590	858,042,000
2024	19,691	864,828,720
2025	19,793	866,933,400
2026	19,894	871,357,200
2027	19,996	875,824,800
2028	20,097	882,660,240
2029	20,199	884,716,200

2. Description of source data and how projected water demands were determined.

Bay City saw a high demand in 2015 with the Tenaris and Dunn Heat Exchange industrial developments. Since 2015 demands have steadily declined. At this time there are no other confirmed industrial or large developments that will directly impact the City's water supply.

E. High Volume Customers

1. The annual water use for the five highest volume **RETAIL** customers.

Customer	Water Use Category	Annual Water Use	Treated or Raw
City of Bay City - WWTP	Commercial	19,261,800	Treated
Matagorda Regional Hospital	Commercial	11,006,000	Treated
Bay City ISD - High School	Commercial	5,506,660	Treated
Pinnacle Health Facility (Legacy)	Commercial	3,884,460	Treated
Bay Villa/Mariner H C	Commercial	3,768,640	Treated

2. The annual water use for the five highest volume **WHOLESALE** customers.

Customer	Water Use Category	Annual Water Use	Treated or Raw
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F. Utility Data Comment Section

Additional comments about utility data.

Attached file(s):

File Name	File Description
top 5 consumption - 5 year average.pdf	

Section II: System Data

A. Retail Water Supplier Connections

1. List of active retail connections by major water use category.

Water Use Category Type	Total Retail Connections (Active + Inactive)	Percent of Total Connections
Residential - Single Family	6,916	68.08 %
Residential - Multi-Family	2,246	22.11 %
Industrial	2	0.02 %
Commercial	877	8.63 %
Institutional	118	1.16 %
Agricultural	0	0.00 %
Total	10,159	100.00 %

2. Net number of new retail connections by water use category for the previous five years.

	Net Number of New Retail Connections						
Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
2018	0	0	0	0	1	0	1
2017	0	0	0	0	0	0	0
2016	44	0	2	17	0	0	63
2015	0	0	0	60	0	0	60
2014	0	0	0	0	0	0	0

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B. Accounting Data

The previous five years' gallons of RETAIL water provided in each major water use category.

Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
2018	340,323,074	65,158,500	11,062,200	131,448,300	23,540,200	0	571,532,274
2017	355,774,200	86,784,500	5,310,100	134,519,300	26,979,300	0	609,367,400
2016	354,741,500	96,969,900	2,334,900	168,520,400	0	0	622,566,700
2015	363,878,200	110,413,800	0	253,379,700	0	0	727,671,700
2014	362,271,600	109,498,000	0	169,299,000	0	0	641,068,600

C. Residential Water Use

The previous five years residential GPCD for single family and multi-family units.

Year	Total Residential GPCD
2018	67
2017	73
2016	75
2015	78
2014	78
Historic Average	74

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D. Annual and Seasonal Water Use

1. The previous five years' gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Water				
	2018	2017	2016	2015	2014
January	69,933,000	64,550,000	66,387,000	63,213,000	59,658,000
February	55,696,000	60,425,000	62,138,000	55,710,000	50,672,000
March	65,539,000	56,724,000	66,273,000	67,026,000	58,705,000
April	61,355,000	66,822,000	65,988,000	64,764,000	65,697,000
May	44,707,000	79,482,000	73,054,000	73,602,000	68,019,000
June	55,639,000	70,552,000	70,774,000	70,394,000	69,994,000
July	72,222,000	74,813,000	83,641,000	87,953,000	75,723,000
August	75,399,000	68,025,000	77,829,000	88,007,000	85,641,000
September	47,630,000	71,875,000	67,836,000	70,801,000	60,415,000
October	33,690,000	66,420,000	72,661,000	75,590,000	65,494,000
November	46,280,000	67,378,000	65,049,000	69,828,000	61,319,000
December	60,224,000	59,450,000	61,987,000	63,113,000	56,618,000
Total	688,314,000	806,516,000	833,617,000	850,001,000	777,955,000

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2. The previous five years' gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Water				
	2018	2017	2016	2015	2014
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Total					

3. Summary of seasonal and annual water use.

	Summer RETAIL (Treated + Raw)	Total RETAIL (Treated + Raw)
2018	203,260,000	688,314,000
2017	213,390,000	806,516,000
2016	232,244,000	833,617,000
2015	246,354,000	850,001,000
2014	231,358,000	777,955,000
Average in Gallons	225,321,200.00	791,280,600.00

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E. Water Loss

Water Loss data for the previous five years.

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2018	112,981,893	18	16.28 %
2017	185,695,511	29	23.05 %
2016	199,171,393	31	23.92 %
2015	103,447,039	16	12.28 %
2014	138,700,696	22	17.65 %
Average	147,999,306	23	18.64 %

F. Peak Day Use

Average Daily Water Use and Peak Day Water Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2018	1,885,791	2209347	1.1716
2017	2,209,632	2319456	1.0497
2016	2,283,882	2524391	1.1053
2015	2,328,769	2677760	1.1499
2014	2,131,383	2514760	1.1799

G. Summary of Historic Water Use

Water Use Category	Historic Average	Percent of Connections	Percent of Water Use
Residential - Single Family	355,397,714	68.08 %	56.02 %
Residential - Multi-Family	93,764,940	22.11 %	14.78 %
Industrial	3,741,440	0.02 %	0.59 %
Commercial	171,433,340	8.63 %	27.02 %
Institutional	10,103,900	1.16 %	1.59 %
Agricultural	0	0.00 %	0.00 %

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H. System Data Comment Section

Section III: Wastewater System Data

A. Wastewater System Data

1. Design capacity of wastewater treatment plant(s) in gallons per day: 4,300,000

2. List of active wastewater connections by major water use category.

Water Use Category	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal	0	9,162	9,162	90.18 %
Industrial	2	0	2	0.02 %
Commercial	0	878	878	8.64 %
Institutional	0	118	118	1.16 %
Agricultural	0	0	0	0.00 %
Total	2	10,158	10,160	100.00 %

3. Percentage of water serviced by the wastewater system: 100.00 %

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4. Number of gallons of wastewater that was treated by the utility for the previous five years.

Month	Total Gallons of Treated Water				
	2018	2017	2016	2015	2014
January	52,018,000	51,559,000	58,638,000	63,626,000	39,700,000
February	50,122,000	52,554,000	49,586,000	38,829,000	35,537,000
March	43,841,000	52,995,000	58,298,000	72,185,000	43,709,000
April	41,613,000	45,415,000	67,589,000	65,848,000	39,200,000
May	47,355,000	45,673,000	76,027,000	68,719,000	46,460,000
June	71,544,000	60,188,000	58,402,000	61,376,000	46,062,000
July	61,154,000	44,060,000	47,929,000	45,245,000	45,595,000
August	45,132,000	41,367,000	76,882,000	55,878,000	49,005,000
September	109,101,000	44,118,000	62,014,000	53,220,000	56,750,000
October	82,793,000	46,392,000	47,731,000	64,390,000	47,888,000
November	63,783,000	40,922,000	43,234,000	49,048,000	63,452,000
December	59,070,000	47,845,000	52,717,000	48,826,000	56,789,000
Total	727,526,000	573,088,000	699,047,000	687,190,000	570,147,000

5. Could treated wastewater be substituted for potable water?

Yes
 No

B. Reuse Data

1. Data by type of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site Irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (park,golf courses)	0
Agricultural	
Discharge to surface water	
Evaporation Pond	
Other	
Total	0

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C. Wastewater System Data Comment

Additional comments and files to support or explain wastewater system data listed below.

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