

Benton Harbor Water Filtration Plant
601 Ridgeway
St. Joseph, Mi. 49085

ANNUAL REPORT Year of 2017

DISTRIBUTION:

MGD

Total Gallons	363.9918	MG
Average Day	1.0414	MG
Maximum Day	1.7960	MG
Minimum Day	0.6220	MG

TREATMENT:

Total Low Service MG	379.2714	MG
Wash Water Gals. MG	2.4050	MG
Wash Water %	0.58%	
Plant Use to Sanitary MG	0.2658	MG
Total Plant Use MG	12.6898	MG
Total Plant Use to Lagoon MG	12.4240	MG
Total Plant Use %	3.28%	

FILTRATION:

Ave. Filter Run	226.8	hours
Ave. Filter Rate	1.79	gal/sqft/min

LABORATORY REPORT

<i>Average of</i>	<i>Raw</i>	<i>Tap</i>
Chlorides mg/L	22.0	25.2
Fluoride mg/L	0.20	0.44
Alkalinity mg/L	119	112
Hardness mg/L	158	150
pH	8.2	8.0
Calcium mg/L	44	42
Magnesium mg/L	12	11
Turbidity NTU	3.52	0.11
Temperature C	11.49	13.12
Temperature F	52.69	55.61
Lake MI Temp F Highest	75	
Lake MI Temp F Lowest	35	

Chlorine Residual Average	mg/L Free
Mixing Basin	2.04
Applied	1.70
Tap	1.66
Distribution	1.05
Distribution Maximum	1.99
Distribution Minimum	0.25

Treatment Chemical Summary:

CHEMICAL	Applied mg/L Total Lbs.		Cost	Inventory (lbs.)	Days
	ION	chem.			
Alum (Al3+)	1.50	107,569	\$15,059.66	86,579	236
Chlorine (Cl2) pre	3.93	101,230	\$10,297.80	Total Chlorine Inv	
Chlorine (Cl2) post	0.52	13,190		34,845	111
Fluoride (F2)	0.36				

Total Cost of all Chemicals		\$1,825.56
Chemical Cost per Million Gallons Treated		\$59.17

Remarks: