

Table 1.BT. Beltline Interceptor Monitoring Station Information



Station Address: Intersection of U.S. Highway 61 and Warner Road, St. Paul, MN
County: Ramsey
Major Basin: Mississippi River Basin
Watershed: Keller-Phalen
Drainage Area: 27.97 square miles

Station Operator: Ramsey-Washington-Metro Watershed District

Metropolitan Council Environmental Services Contact Information:

Contact Person: Casandra Champion
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Watershed District or Watershed Management Organization:

Ramsey-Washington-Metro Watershed District

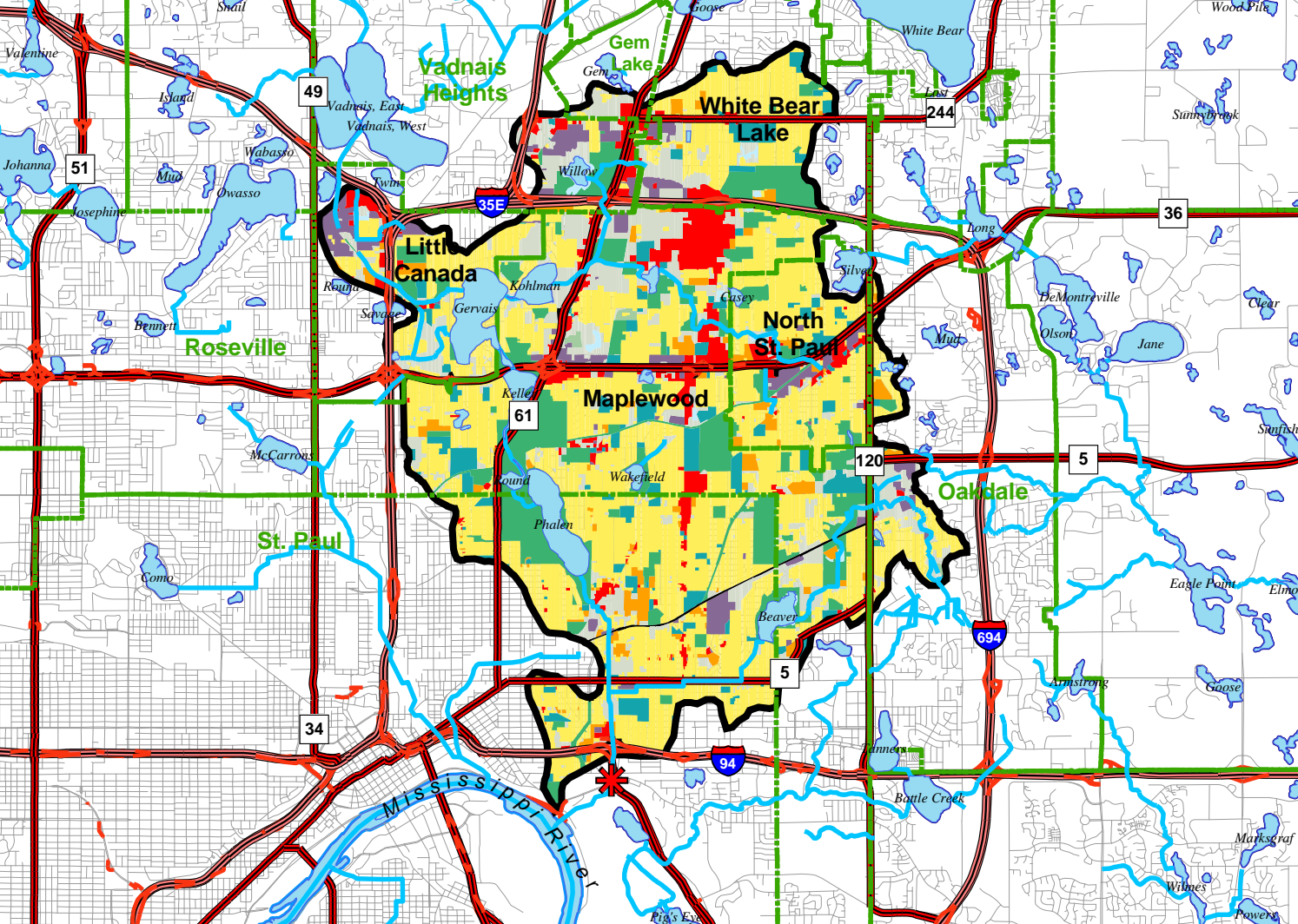
Station Overview: MCES has supported water quality monitoring of the Beltline Interceptor since 1995. The monitoring station is located in St. Paul, Minnesota, 2.2 miles upstream from the interceptor discharge to the Mississippi River. MCES partners with the Ramsey-Washington-Metro Watershed District to operate the Beltline Interceptor monitoring station. Major improvements were made to the monitoring station during the 2001 monitoring season. The station improvements, which included re-location of all the monitoring equipment to an above-ground shelter, were completed in

late 2001, so that the Beltline Interceptor monitoring station was again functional in 2002. There is no rain gauge at this station; however, precipitation data are obtained from the Minnesota Climatology Working Group, St. Paul Airport Station Number 217386.

2003 Monitoring Year: Beltline Interceptor flow data for 2003 are not currently available. In 2003, Barr Engineering developed a new XPSWMM model of the 100-year storm at this location. The modeling information will be used to create a rating curve for this station. The rating curve will be applied to the historical stage data to develop an annual hydrograph and annual pollutant loads for 2003.

Fourteen samples were collected for water quality analysis during 2003, including 8 composite samples and 6 grab samples. Runoff event-based composite sampling began in early May 2003 and continued through late June. The MCES annual water quality monitoring plan includes 12 monthly baseflow (“non-event”) grab samples and approximately 10 to 15 flow-weighted composite samples collected during all runoff events in the open-water season (March-November). However, the MCES sampling scheme is modified for this monitoring station because of its unique hydrologic situation.

For additional stream monitoring information and monitoring methods regarding this site, see www.metrocouncil.org/environment/RiversLakes.



Vadnais Heights

White Bear Lake

Little Canada

North St. Paul

Maplewood

Oakdale

St. Paul

MISSISSIPPI RIVER

49

51

35E

244

36

61

120

5

34

5

94

694

Pike's Est.

Sunshine

Clear

Sunfish

Eagle Point

Elmo

Gause

Marksgraf

Wilmes

Powers

Valentine

Snail

Island

Wabasso

Johanna

Mud

Owasso

Josephine

Benner

Roseville

McCarron

Como

Gem Lake

Gem

Goose

White Bear

Willow

Silver

Ragna

Savage

Gervais

Kohman

Casey

DeMontreville

Olson

Jane

Mug

Kelle

Round

Wakefield

Phalen

Beaver

Linna

Battle Creek

Armstrong

Eagle Point

Elmo

Gause

Marksgraf

Wilmes

Powers

Table 2.BELT. Beltline Interceptor 2003 Water Chemistry Information

Variable	N	Mean	Median	Minimum	Maximum	25%	75%	STD
Chloride, mg/L	13	184	66	27	1551	39	113	412
Hardness, mg/L	2	230	na	114	346	na	na	na
Cadmium, ug/L	0	nd	nd	nd	nd	nd	nd	nd
Chromium, ug/L	0	nd	nd	nd	nd	nd	nd	nd
Copper, ug/L	0	nd	nd	nd	nd	nd	nd	nd
Lead, ug/L	0	nd	nd	nd	nd	nd	nd	nd
Nickel, ug/L	0	nd	nd	nd	nd	nd	nd	nd
Zinc, ug/L	0	nd	nd	nd	nd	nd	nd	nd
Total Kjeldahl Nitrogen, mg/L	14	1.54	1.10	0.77	7.10	0.81	1.43	1.63
Total Nitrate Nitrogen, mg/L	14	0.62	0.20	0.03	2.64	0.16	0.77	0.90
Total Phosphorus, mg/L	14	0.22	0.13	0.03	1.30	0.07	0.22	0.32
Total Dissolved Phosphorus, mg/L	14	0.04	0.04	0.01	0.09	0.02	0.07	0.03
Total Suspended Solids, mg/L	14	87	32	1	670	5	87	174
Volatile Suspended Solids, mg/L	14	36	11	1	330	4	30	85
Turbidity, NTU	14	11	5	2	40	2	17	11

na: Data are insufficient to calculate these statistics.

nd: No data are available.

N: Sample Count

25%, 75%: 25th and 75th Percentiles

STD: Standard Deviation

Table 3.BELT. Beltline Interceptor 2003 Annual Loading Information* for Suspended Solids and Nutrients

Variable	Annual Load (tons)	Annual Yield (lbs/acre)	Annual Normalized Yield (lbs/acre/in of water)	Flow Weighted Mean Concentration (mg/L)
Total Suspended Solids	nd	nd	nd	nd
Total Phosphorus	nd	nd	nd	nd
Total Dissolved Phosphorus	nd	nd	nd	nd
Total Nitrate Nitrogen	nd	nd	nd	nd

* 2003 Annual Loading Information is not available.