Updated 5/6/2020

METROPOLITAN COUNCIL CONTINUOUS DATA WEB SERVICE

The Council's EIMS website includes a web service that can be used to retrieve continuous (generally 15-minute) data from continuous monitoring sites in the MCES stream and river monitoring network. The service provides the same information that can be obtained from the Metropolitan Council EIMS website (https://eims.metc.state.mn.us), but can be built independently to retrieve information without human interaction. The service can be leveraged to automate scripts and transfer data between systems. This service provides continuous data in tab separated (.tsv) format, comma separated (.csv) format, Excel (.xlsx) and JSON (.json) format.

URL Format

The URL must always be in this format:

http://eims.metc.state.mn.us/Download?<*arguments*>

where <arguments> are one or more pieces of metadata based on the information below.

Specifying the URL Arguments

You specify the arguments that go in <arguments>.

Each URL argument name is followed by an equal sign and one or more values for that argument. Where multiple values are allowed for the same argument (Site and Parameter), separate the values with semi-colons.

- URL arguments are separated by ampersands (&)
- The order of the URL arguments does not matter
- If a URL argument name does not fit the format, an HTTP 500 error code is returned

Required filters

A query requires 5 things: at least one site, at least one parameter, start and end dates, and file format.

Site

A query requires a least one site to execute. Sites are queried by SiteID, with the argument name of *SiteIDs* in the URL. Sites with available continuous data to be downloaded are included in the following table:

Site Name	SiteId	Latitude	Longitude
Bassett Creek at Irving Ave	BS0019	44.98	-93.30
Battle Creek below Hwy-61	BA0022	44.94	-93.03
Beltline Interceptor above Warner Rd	BELT0005	44.95	-93.04
Bevens Creek at Co Rd 40	BE0020	44.71	-93.68
Bevens Creek at Maplewood Rd	BE0050	44.73	-93.71
Bluff Creek Inlet to Rice Lake	BL0035	44.81	-93.54
Browns Creek at Dellwood Rd	BR0003	45.08	-92.81
Cannon River at Welch	CN0119	44.56	-92.73
Carver Creek at Co Rd 40	CA0017	44.75	-93.65
Credit River near 126th St in Savage	CR0009	44.77	-93.34
Crow River below Hwy 55	CW0231	45.09	-93.73
Eagle Creek above 126th Street	EA0008	44.78	-93.39
Fish Creek above Hwy-61	FC0002	44.90	-93.01
Minnesota River at Fort Snelling	MI0035	44.87	-93.19
Mississippi River above Lock and Dam No. 2	UM8156	44.77	-92.87
Mississippi River at Grey Cloud Island	UM8267	44.80	-93.01
Mississippi River at Newport	UM8310	44.87	-93.01
Mississippi River upstream of Metro WWTP	UM8368	44.93	-93.05
Nine Mile Creek below 106th St	NM0018	44.81	-93.30
Purgatory Creek at Pioneer Trail in Eden Prairie	PU0039	44.83	-93.42
Riley Creek at Eden Prairie Road	RI0022	44.83	-93.49
Riley Creek Creek Inlet to Grass Lake	RI0013	44.82	-93.48
Rum River at Anoka Dam	RUM0007	45.20	-93.39
Sand Creek upstream of Louisville Swamp	SA0082	44.67	-93.63
Silver Creek at Hwy 95	SI0001	45.08	-92.80
Valley Creek at Putnam Blvd	VA0010	44.92	-92.79
Vermillion River below Hwy-61	VR0020	44.73	-92.85
Vermillion River near Empire	VR0156	44.67	-93.06

Parameter

A query requires at least one water quality parameter to execute. Parameters are queried by ParameterID, with the argument name of *ParameterIDs* in the URL. The EIMS website (*https://eims.metc.state.mn.us*) can be used to investigate parameter availability for individual sites prior to building a query. The following continuous parameters are available for at least one of the above sites:

Parameter	ParameterID
Conductivity	2251
Dissolved Oxygen	2253
Flow	2255
pH	2257
Stage	2261
Temperature	2263
Total Nitrate/Nitrite N, Unfiltered	2265
Turbidity (FNU)	2266
Turbidity (NTU)	2268

Start & End Date

A query requires both start and end date to execute. These must to be of the form MM-DD-YYYY. The URL argument names are *startDate* and *endDate*. To include all data from the beginning of the data record, include the start date as: 01-01-0001. To include all data to the end of the data record, include the end date as 12-31-9999.

Format

A query requires a format type to execute. The URL argument name is *format*. Four formats are available to download data:

Format	Type	Description
csv	Comma separated values	Single file with one parameter result per row.
tsv	Tab separated values	Single file with one parameter result per row.
xlsx	Excel 2007+ format	3 sheets of information: 1 with disclaimer and metadata, one with one parameter result per row, one with one sample result per row
json	Javascript Object Notation (JSON)	Format easily parsed by programming languages, while also being readable and reasonably compact.

Examples of valid queries

1. This query will retrieve data from one site (Bassett Creek at Irving Ave) and one parameter (stage) for the period 1/1/2020 through present into a csv formatted file.

   http://eims.metc.state.mn.us/Download?siteIds=BS0019&parameterIds=2261&startDate=01-01-2020&endDate=12-31-9999&format=csv

2. This query will retrieve data for 3 sites (Riley Creek, Purgatory Creek and Bluff Creek) and two parameters (flow and stage) for the period 1/1/2020 to 4/1/2020 into a csv formatted file.

   http://eims.metc.state.mn.us/Download?siteIds=RI0013;PU0039;BL0035&parameterIds=2255;2261&startDate=01-01-2020&endDate=04-01-2020&format=xlsx

3. This query will retrieve data for one site (Mississippi River upstream of Metro WWTP) and one parameter (pH) from the beginning of the data record through the end of the data record into a json formatted file.

   http://eims.metc.state.mn.us/Download?siteIds=UM8368&parameterIds=2257&startDate=01-01-0001&endDate=12-31-9999&format=json