Using the Geostreams API

- Step 1: Create an Account
- Step 2: Acquire Data from API by using CURL
    - Get all Sensors in JSON format
    - Authenticate
    - Get all Datapoints for Single Sensor

Step 1: Create an Account

- go to: https://greatlakestogulf.org/geostreams
- Click "Sign Up"
    - Fill out form
    - Ignore check email
    - You're done

Step 2: Acquire Data from API by using CURL

You can acquire the data from API by using curl command

Get all Sensors in JSON format

Currently, pulling sensors does not require authentication.

Inputs	Output type	Output Example

url	JSON	**Output JSON example** { "sensors":[{ "id":1445, "name":"03254520", "created":"2018-03-23T15:48:32Z", "geoType":"Feature", "geometry":{ "type":"Point", "coordinates":[-84.44799549,38.9203417,0] }, "properties":{ "name":"03254520", "huc":{ "huc8":{ "code":"05100101"},"huc2":{"code":"05" }, "huc4":{"code":"0510"}, "huc6":{"code":"051001"}, "huc_name":"Licking" }, "region":"0510", "location":"LICKING RIVER AT HWY 536 NEAR ALEXANDRIA, KY", "type":{ "title":"United States Geological Survey", "network":"NWIS", "id":"usgs" }, "popupContent":"03254520", "online_status":"online", "id":1445 }, "min_start_time":"2007-10-01T06:00:00Z", "max_end_time":"2020-02-05T12:30:00Z", "parameters":["discharge-ft3s", "discharge-ft3s-qc", "dissolved-oxygen-mgl", "dissolved-oxygen-mgl-qc", "nitrate-nitrite-as-n-mgl", "nitrate-nitrite-as-n-mgl-qc", "pH", "pH-qc", "specific-conductance-uScm", "specific-conductance-uScm-qc", "turbidity-fnu", "turbidity-fnu-qc", "water-temperature-c", "water-temperature-c-qc"], ...] }}

Get all Sensors

```
curl -X GET --compressed https://greatlakestogulf.org/geostreams/api/sensors
```

Authenticate

Inputs	Output	Details
• url • email • password	X-Auth-Token	Use the token for fetching datapoints

Authenticate

```
curl -X POST -H 'Content-Type: application/json' -d '{"password": "****", "identifier": "email"}' --compressed -
i https://greatlakestogulf.org/geostreams/api/authenticate
```

Get all Datapoints for Single Sensor

We request that a user not try to pull all datapoints concurrently. It is preferred that datapoints be pulled in series by sensor id.

Inputs	Output Type	Details	Example Return
• token • sensor_id • since	JSON	Use X-Auth-Token from authentication	**Example Output** [{ "id":96556536, "created":"2019-09-27T20:45:42Z", "start_time":"2018-06-25T00:00:00Z", "end_time":"2018-06-25T00:00:00Z", "properties":{ "nitrate-nitrite-inorganic-total-as-n-mgl":"4.16" }, "type":"Feature", "geometry":{ "type":"Point", "coordinates":[-90.645,42.5408333,0] }, "stream_id":"28", "sensor_id":"22", "sensor_name":"IL_EPA_WQX-M-13" }, ...]

Get Datapoints for Single Sensor

```
curl -X GET -H 'Content-Encoding: application/json' -H 'x-auth-token:token' --
compressed 'https://greatlakestogulf.org/geostreams/api/datapoints?sensor_id=22&since=2018-06-01'
```