2013

Monitoring the Health of Glen Helen Nature Preserve: Fall 2012 Sediment and Water

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E. coli Data

<table>
<thead>
<tr>
<th>Sampling Site</th>
<th>E. coli Count (CFU/100 mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow Spring</td>
<td>362</td>
</tr>
<tr>
<td>Birch Creek</td>
<td>161</td>
</tr>
<tr>
<td>Yellow Spring</td>
<td>26</td>
</tr>
</tbody>
</table>

Background

Fall 2012 marks the beginning of the 2nd year of environmental monitoring at Glen Helen by the WSU Environmental Chemistry service learning course. Below is a compilation of the results of sediment sampling that was collected from Fall 2012 to Fall 2013.

Temperature (°C)


Dissolved Oxygen (mg/L)

Graph 1

Dissolved Oxygen (mg/L)

Graph 2

Metal Analysis Using Inductively Coupled Plasma (ICP)

Metals in water samples

The Yellow Spring was the only site with metals (Co, Fe, and Ni) in ironic concentrations. The Yellow Spring was the only site with metals (Co, Fe, and Ni) in ironic concentrations. The Yellow Spring was the only site with metals (Co, Fe, and Ni) in ironic concentrations.

Metals in sediment samples

The Yellow Spring showed the highest levels of metals (Co, Fe, and Ni) in ironic concentrations. The Yellow Spring showed the highest levels of metals (Co, Fe, and Ni) in ironic concentrations. The Yellow Spring showed the highest levels of metals (Co, Fe, and Ni) in ironic concentrations.

Metal Analysis Using Petrof Film

Table 1

<table>
<thead>
<tr>
<th>Site</th>
<th>Metals Detected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow Spring</td>
<td>Co, Fe, Ni</td>
</tr>
<tr>
<td>Birch Creek</td>
<td>Co, Fe, Ni</td>
</tr>
<tr>
<td>Yellow Spring</td>
<td>Co, Fe, Ni</td>
</tr>
</tbody>
</table>

Anion Analysis of Water Samples Using Ion Chromatography (IC)

Anions: phosphate, nitrate, nitrite, bromide, chloride, fluoride, sulfate & silicate

Some compounds in the Yellow Spring were detected at levels higher than the EPA limit. The Yellow Spring was the only site with metals (Co, Fe, and Ni) in ironic concentrations. The Yellow Spring was the only site with metals (Co, Fe, and Ni) in ironic concentrations. The Yellow Spring was the only site with metals (Co, Fe, and Ni) in ironic concentrations.

Polar Organic Chemical Integrative Sampler (POCIS) Data Using Gas Chromatography-Mass Spectrometry (GC-MS)

Graph 3

Results:

The WSU CHM 420 lab was deployed at the WWTP site for two years. Compounds identified by the sample were then compared to the POCIS database. The POCIS database contained information on 400 compounds. The POCIS database contained information on 400 compounds. The POCIS database contained information on 400 compounds.

Metal analysis by ICP-MS was performed on the sample. The ICP-MS was performed on the sample. The ICP-MS was performed on the sample.

Graph 4

The yellow Spring was the only site that showed metals (Co, Fe, and Ni) in ironic concentrations. The yellow Spring was the only site that showed metals (Co, Fe, and Ni) in ironic concentrations. The yellow Spring was the only site that showed metals (Co, Fe, and Ni) in ironic concentrations.

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Graph 5

Anions: phosphate, nitrate, nitrite, bromide, chloride, fluoride, & sulfate

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