For years, the Still River running through Danbury, Brookfield, and New Milford has had the reputation of being extremely dirty and polluted (Fig. 1b).

By testing water quality variables at certain locations along the river, we hoped to better understand how polluted the river actually is, as it could help with educating the Town of Brookfield on ways to improve water quality and prevent further contamination.

### Methods

- We tested water quality in the Still River at 3 sites near Four Corners in Brookfield, CT (Fig. 1a).
- We created an Epicollect5 mobile data form to record our data.
- We tested a variety of factors at each location, including: total dissolved solids (TDS), conductivity, temp, ammonia, pH, nitrate, macroinvertebrates, presence of pollution, stream depth/width, and land usage around the segment of river being tested.
- We assessed the effect of season on water quality by testing in Fall 2018 and Winter 2019.

### Brookfield Still River Water Quality

**Physical, Land Use, and Degradation Traits of Sites**

<table>
<thead>
<tr>
<th>Site</th>
<th>Brookfield Craft Center</th>
<th>Site 2 Behind Panchos &amp; Gringos</th>
<th>Site 3 Kayak Launch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape</td>
<td>Curved</td>
<td>Straight</td>
<td>Curved</td>
</tr>
<tr>
<td>Look of Water</td>
<td>Clear</td>
<td>Clear</td>
<td>Clear</td>
</tr>
<tr>
<td>Land Use</td>
<td>Forest</td>
<td>Greenway &amp; Development</td>
<td>Greenway &amp; Development</td>
</tr>
<tr>
<td>Type of Trash</td>
<td>Metals (cans, lids, containers)</td>
<td>Plastics (bottles, bags, containers)</td>
<td>Plastics (bottles, bags, containers)</td>
</tr>
<tr>
<td>Habitat Degradation</td>
<td>Trash</td>
<td>Erosion</td>
<td>Erosion</td>
</tr>
<tr>
<td>Stream Width/Depth</td>
<td>W: 35’</td>
<td>W: 40’</td>
<td>W: 30’</td>
</tr>
<tr>
<td>Macrroinvent.</td>
<td>Caddisflies</td>
<td>Stoneflies</td>
<td>Freshwater calms</td>
</tr>
</tbody>
</table>

### Water Quality Parameters of Sites in Fall & Winter

- **Total Dissolved Solids (TDS)** Interpretation:
  - 0-100: Clear drinking water
  - 100-200: Hard water
  - 200-300: Average tap water, marginally acceptable
  - 300-500: High tap or mineral springs
  - 500+: Unfit for drinking water

- **Conductivity**:
  - 0 - 200: Pristine
  - 200 - 1,000: “Normal” for most major rivers
  - 1,000 - 10,000: Saline/impacted condition

- **Phosphorus (ppm)** Interpretation:
  - 0.002 - 0.02: Oligotrophic
  - 0.02 - 0.1: Mesotrophic
  - 0.1 - 1.0: Eutrophic

- **Nitrate**:
  - 0 - 10: Low
  - 10 - 20: Moderate
  - 20 - 30: High

- **Ammonia**:
  - 0 - 2: Low
  - 2 - 6: Moderate
  - >6: High

### Objectives

- See how seasonal changes affect water quality variables along the Still River.
- Use the results from the study to educate Brookfield Parks & Rec on ways to limit pollution and degradation of the river and surrounding environment.

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[Image: (A) Map of the locations tested along the Still River in Brookfield, CT. All three locations were near development. However, each differed slightly in the amount and type of development. (B) Photo of Still River near Four Corners of Brookfield. Photo from www.newstimes.com.]