Little Cuyahoga River
Water Quality Data
2012/2013

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**Graphs developed by Clean Water, Fellow of Awesome**
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LCR Monitoring Project

- Goal 1: Monitor the Little Cuyahoga River and its tributaries for signs of pollution using visual and chemical parameters.

- Goal 2: Monitor 36 sites every three months to establish trends and better understand seasonal variation (sites chosen based on OEPA historical sampling).

- Goal 3: Partner with NEFCO and provide copies of data to help promote a Balanced Growth Initiative Plan.

- Goal 4: Increase public awareness through watershed festivals, cleanup events, and educational workshops.
LCR Monitoring Team

- **12 volunteers** led by Lead Water Sentinels Mary Trent and Jack O’Toole

- **Chemical Parameters:**
  - Conductivity/TDS/Salinity
  - Water Temperature
  - Nitrate/Nitrite
  - pH, Alkalinity, Hardness, and Chlorine

- **Visual Parameters:**
  - Flow Rate
  - Turbidity
  - 48 Hr Rainfall
  - General Observations
Precipitation Records for Akron

Sources:
Average Precipitation: www.weather.com
Actual 2012 Precipitation: wunderground.com/history
NEFCO Sites and Water Temperature

Water Temperature at time sample collected

Seasonal Variation in Water Temperature Present
NEFCO Sites and Conductivity

Conductivity indicates amount of metals and salt

Seasonal Variation in Conductivity Less Present
NEFCO Sites and Conductivity

Individual Points show potential “Outliers” across Seasons
NEFCO Sites and pH

pH indicates acidic or basic conditions

- All NEFCO sites, pH range: 7.5 – 8.5
- Spring: 8.4 with little variation
- Fall and Winter: both have large variation
NEFCO Sites and pH Frequency

pH higher than 8.0: 71 times (basic conditions)
pH lower than 6.2: 10 times (acidic conditions)
NEFCO Sites and Nitrate

Nitrate indicates level of nutrients, sewage, fertilizer, and/or runoff

Spring/Summer Nitrate Averages: 0
Fall/Winter Nitrate Averages: 0 – 0.5
NEFCO sites and Nitrate

Date Sample Taken:

- 2/11/12
- 4/1/12
- 5/21/12
- 7/10/12
- 8/29/12
- 10/18/12
- 12/7/12
- 1/26/13
- 3/17/13

Nitrate (ppm):

- 0
- 0.5
- 1
- 1.5
- 2
- 2.5
NEFCO sites and Nitrate

Nitrate less than 0.2: 94 times
OEPA and NEFCO Comparisons (1996 vs. 2013/2013): Water Temperature & Spring and Summer
OEPA and NEFCO Comparisons (1996 vs. 2013/2013): Conductivity & Spring and Summer
OEPA and NEFCO Comparisons (1996 vs. 2013/2013): pH & Spring and Summer
OEPA and NEFCO Comparisons (1996 vs. 2013/2013): Nitrate & Spring and Summer

![Graph showing nitrate concentrations for NEFCO Spring, OEPA Spring, NEFCO Summer, and OEPA Summer, with a comparison for winter.](image-url)
Room for Improvement and Growth

- Goal 1: Improve monitoring, training, and data collection methods

- Goal 2: Split-test monitoring with OEPA 😊

- Goal 3: Examine usefulness of current parameters and research to determine if there are better parameters to monitor

- Goal 4: Increase number of monitors…
  Looking at you!