

Little Sewickley Creek Watershed Association Water Quality Report

Franklin Park Borough | March 2022

Mission

The mission of the Little Sewickley Creek Watershed Association ([LSCWA](#)) is to protect and conserve the natural beauty and the environmental health of Little Sewickley Creek and its watershed.



Watershed Assessment 2017-2018



In 2017 LSCWA engaged CEC (Civil and Environmental Consultants, Inc.) to coordinate a field watershed assessment of the physical, chemical, and biological conditions in the streams of the Little Sewickley Creek watershed.

Based on the results of the watershed assessment and on data collected from a previous survey in 1981-82, LSCWA engaged CEC to do a water quality study of selected streams in the watershed.

Water Quality Study 2020-2021

Based on a preliminary survey of water samples taken from 115 separate locations in the watershed during July 2020:

Site Selection

CEC selected 20 sites where specific conductance was abnormally high. High specific conductance is an indicator of possible water pollution.

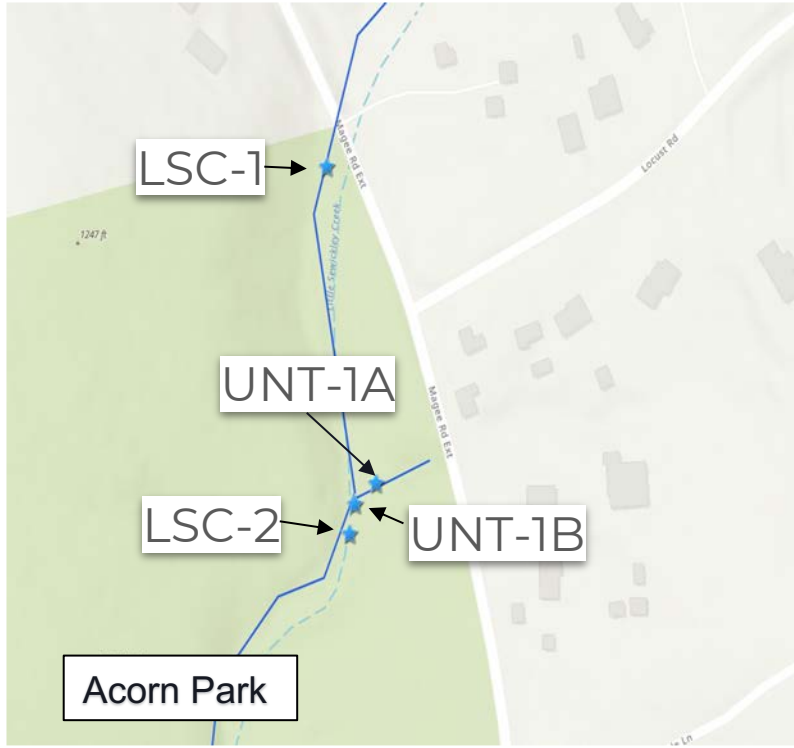
Repeat Testing

CEC collected water samples from each of these 20 sites four times. September & December 2020
March & June of 2021

Results Analysis

An independent laboratory tested all samples for 17 different pollutants. CEC analyzed the results and issued a report to LSCWA in July 2021.

Acorn Park Testing Sites



UNT-1 Tributary



Downstream of LSC-1

Acorn Park Site UNT-1A | Chloride & Total Dissolved Solids

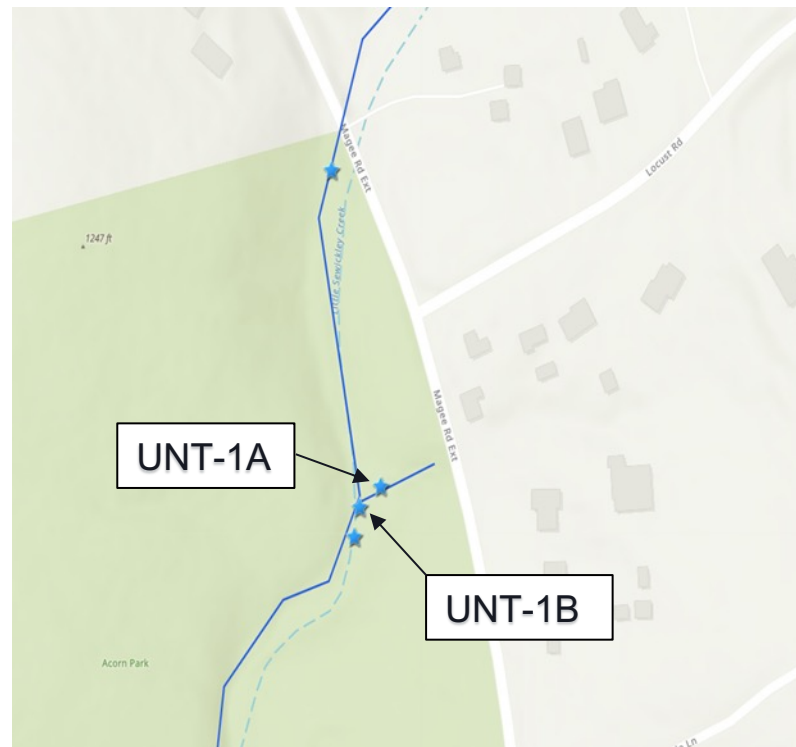
Water samples at [UNT-1A](#) consistently exceeded the [Chap. 93 PA State Water Quality Standards](#) for chloride (250 mg/L), and total dissolved solids (750 mg/L).

Date	Chloride	Chloride Excess %	Total Dissolved Solids	TDS Excess %
Sept. 2020	331	32%	890	19%
Dec. 2020	311	24%	820	9%
Mar. 2021	452	81%	960	28%
Jun. 2021	371	49%	970	29%



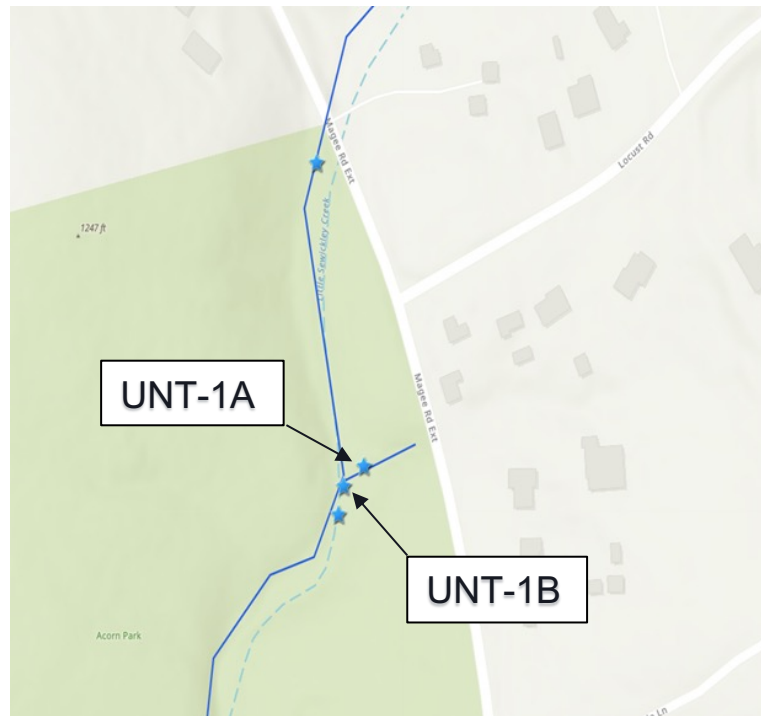
Acorn Park Site UNT-1A & UNT-1B | Nitrates

In September and December 2020 samples collected at [UNT-1A](#) and [UNT-1B](#) had elevated nitrate levels averaging 4.48 mg/L compared with the samples from all twenty observed sites in September and December 2020 averaging 2.84 mg/L.



Acorn Park Site UNT-1A & UNT-1B | Phosphates

In September and December 2020 samples collected at [UNT-1A](#) and [UNT-1B](#) had elevated phosphate levels averaging 0.98 mg/L compared with the samples from all twenty observed sites in September and December 2020 averaging 0.35 mg/L.



Possible Conclusions

Chloride & Total Dissolved Solids

Road salt mixing with precipitation and entering streams would be the most likely source of elevated chloride and total dissolved solids at [UNT-1A](#)

Nitrates & Phosphates

Elevated levels of nitrates and phosphates observed could be related to **surface water runoff** from nearby residents. Nitrate and phosphate are common **turf fertilizer** components.

Possible Large Scale Mitigation Projects

Runoff Controls

Evidence of sediment accumulation was observed in many of the study areas. Installation of erosion, sediment and runoff controls could help in reducing the sedimentation loading and could reduce chloride concentrations.

Infiltration Trenches

Infiltration trenches are permanent excavated trenches three to eight feet deep that are backfilled with stone to create precipitation retention and percolation into the subsoil. Properly designed infiltration trenches are the best management practice and effectively remove sediment and other runoff pollutants.

Possible Small Scale Mitigation Projects

Municipal authorities and neighboring property owners could work together to:

Identify

Identify sources of nitrates and phosphates impacting runoff and shallow groundwater.

Develop

Develop plans to remove the sources and/or control the infiltration of the impacted water

Resources

Watershed Restoration and Protection Program

<https://dced.pa.gov/programs/watershed-restoration-protection-program-wrpp/>

Civil and Environmental Consultants, Inc., 333 Baldwin Road, Pittsburgh, PA 15205, phone: 412-429-2324 or Brianne Hastings (bhastings@cecinc.com)

[Interactive map](#) of Little Sewickley Creek watershed

EPA www.epa.gov



Thank You

*“In every walk
with nature one
receives far more
than he seeks.”*

—John Muir