Lehigh Valley Group
Sierra Club

May 11, 2020

Virtual Meeting

Agenda

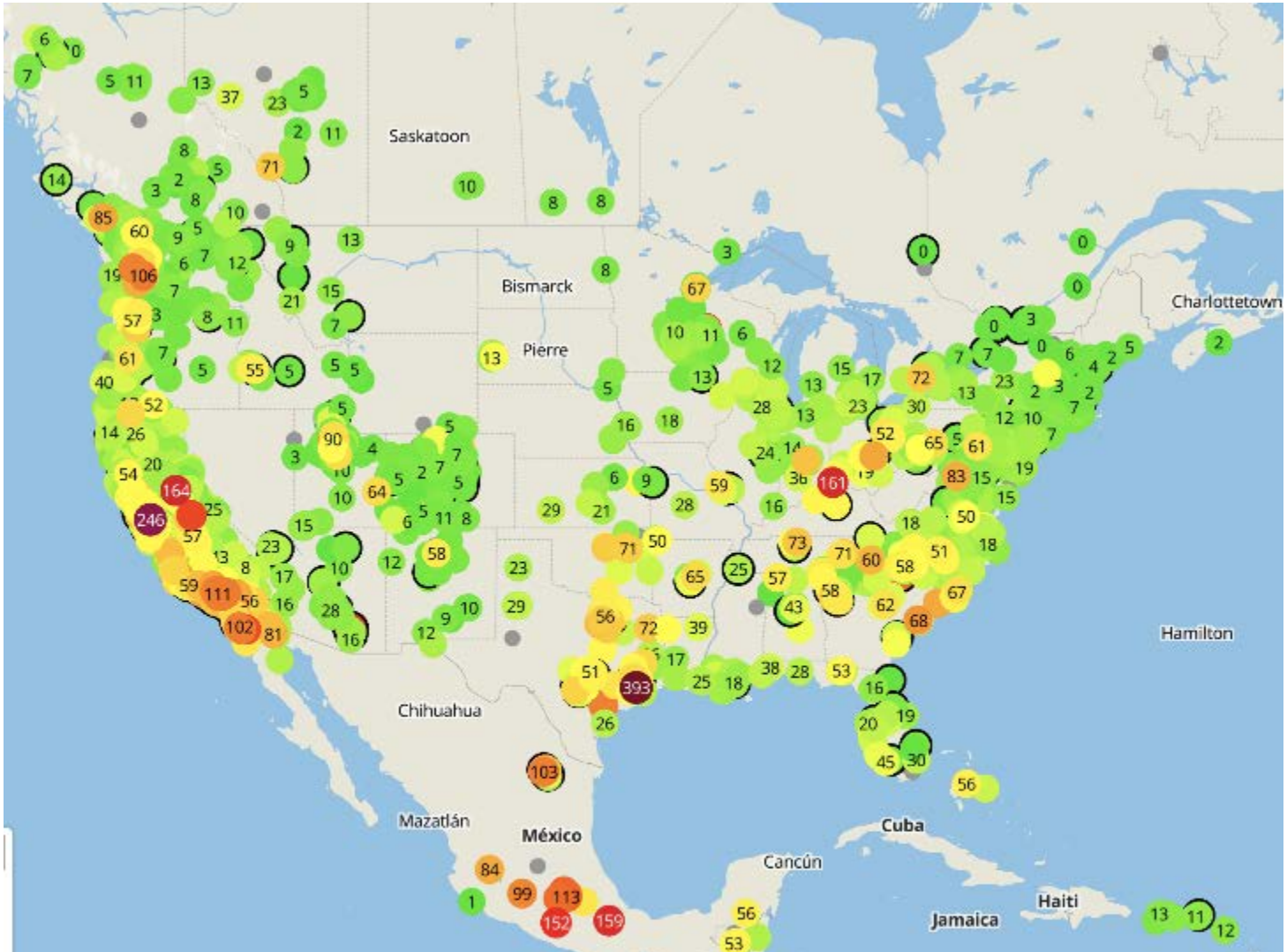
- Welcome to all attending and introductions – (10 min)
- Approval of the Minutes from the last meeting – (5 min) *Thank you for preparing them Marilyn Jordan*
- Conservation Presentation Part 1 – (10 min) *Matt MacConnell* to Ricky Park Update and Toxic Tributary Study Results
- Conservation Presentation Part 2 – (10 min) *Matt Air Quality Monitoring Project status*
- East Penn Pipeline Status – (5 min) *Don Miles*
- PA Chapter staff Report (10 min) *Rachel Rosenfeld*
- Treasurer Report (5 min) *Dave Reber*
- Political Report (10 min) *Al Wurth*
- Climate Change Related (10 min) *Brian Hillard*
- Group Webpage (5 min) *Nanci McGonigal*
- Discussion of any other topics

Conservation Report

Project Update:

- Ricky Park – Electrical Power being installed this spring for fountain and circulation pump (50/50 cost sharing with UMT, UMT to pay electrical bill)
- Air Monitoring – 4 units to be installed
- Two Toxic Tributaries to the Lehigh River

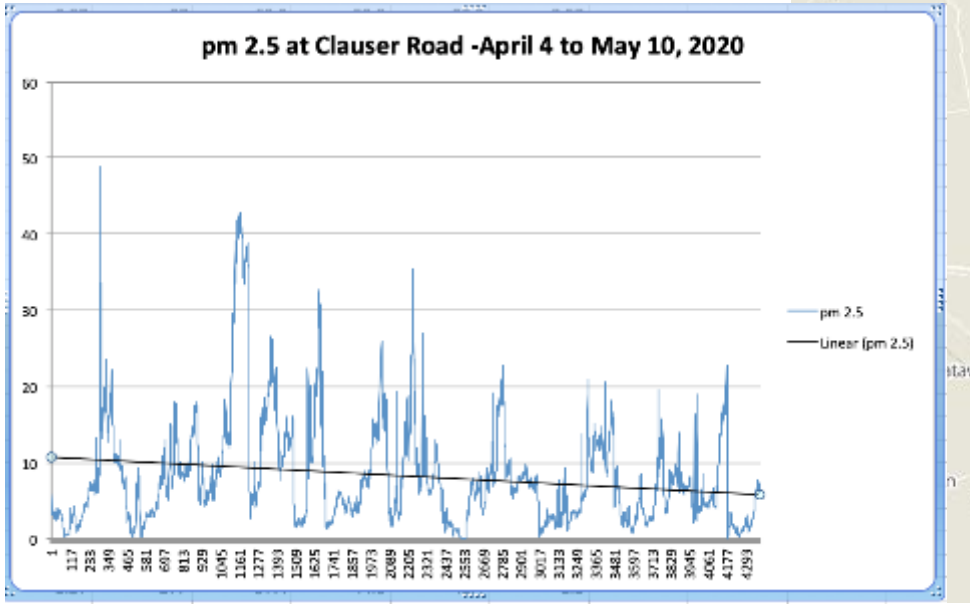
Purpleair.com map view

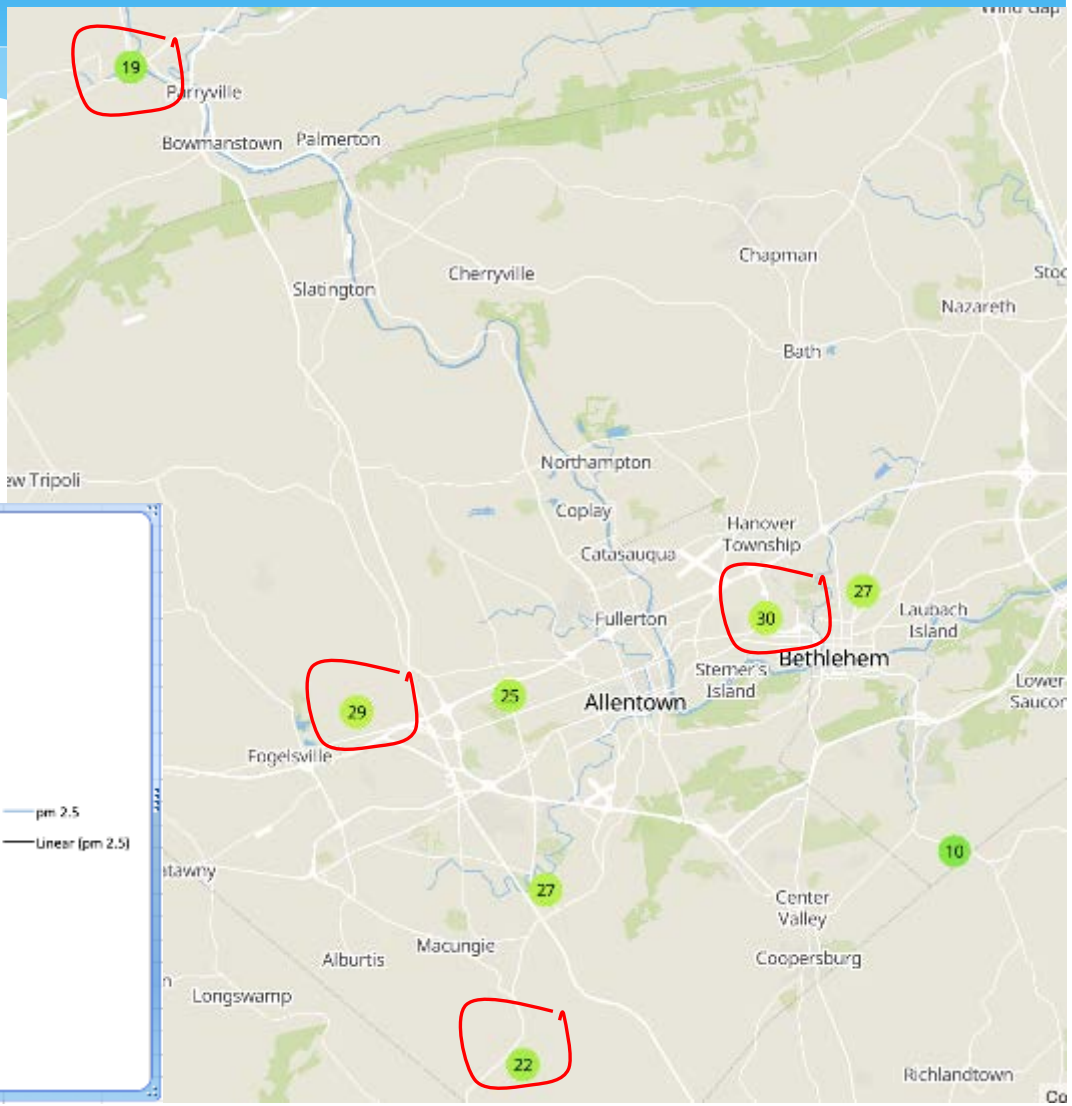


Lehigh Valley Group has 4 units

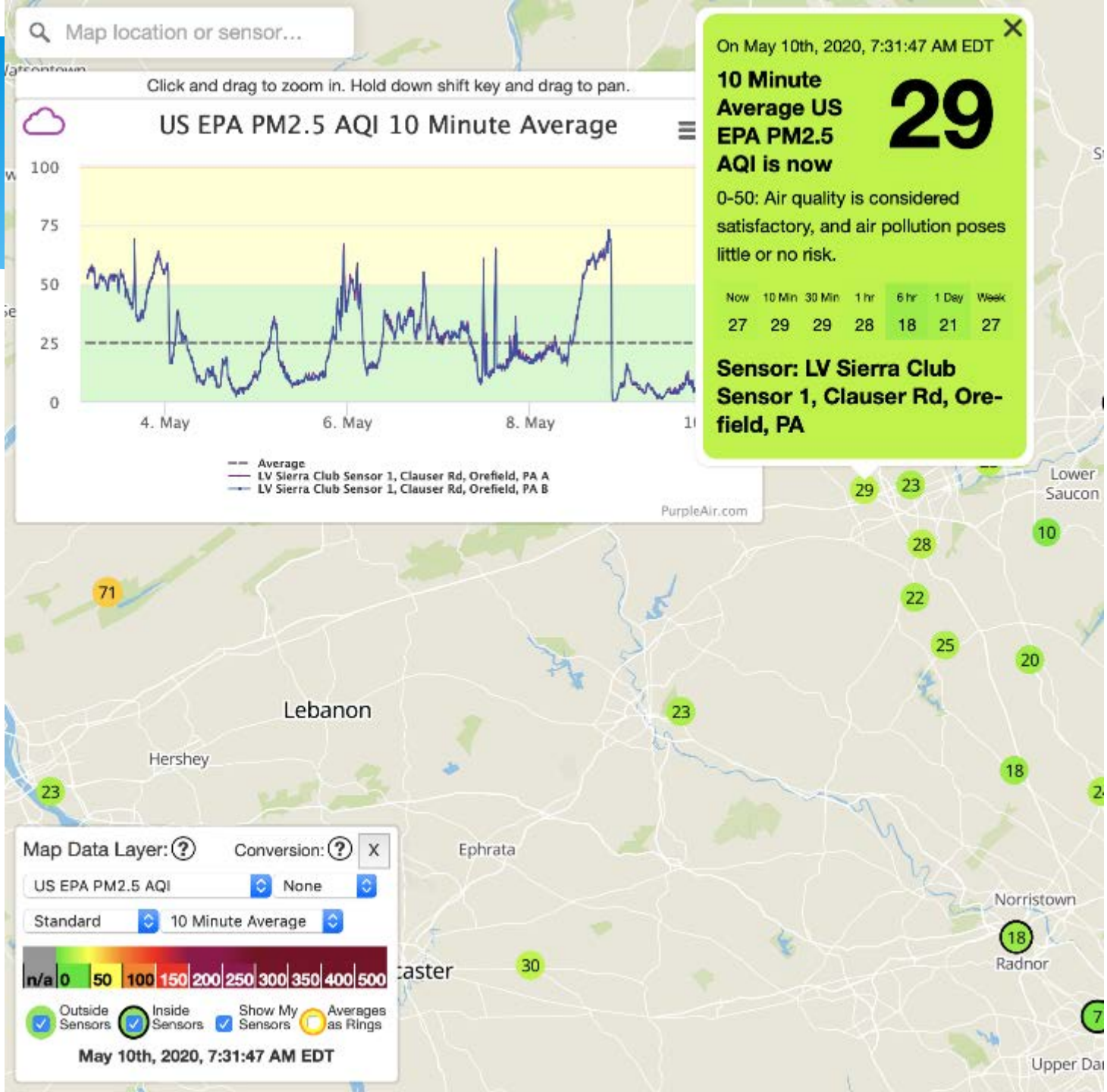
- North – Lehighton
- West – Orefield
- South – Powder Valley
- East - Bethlehem

We are now at a low point in the economy. This will provide a baseline for when the economy picks backup.



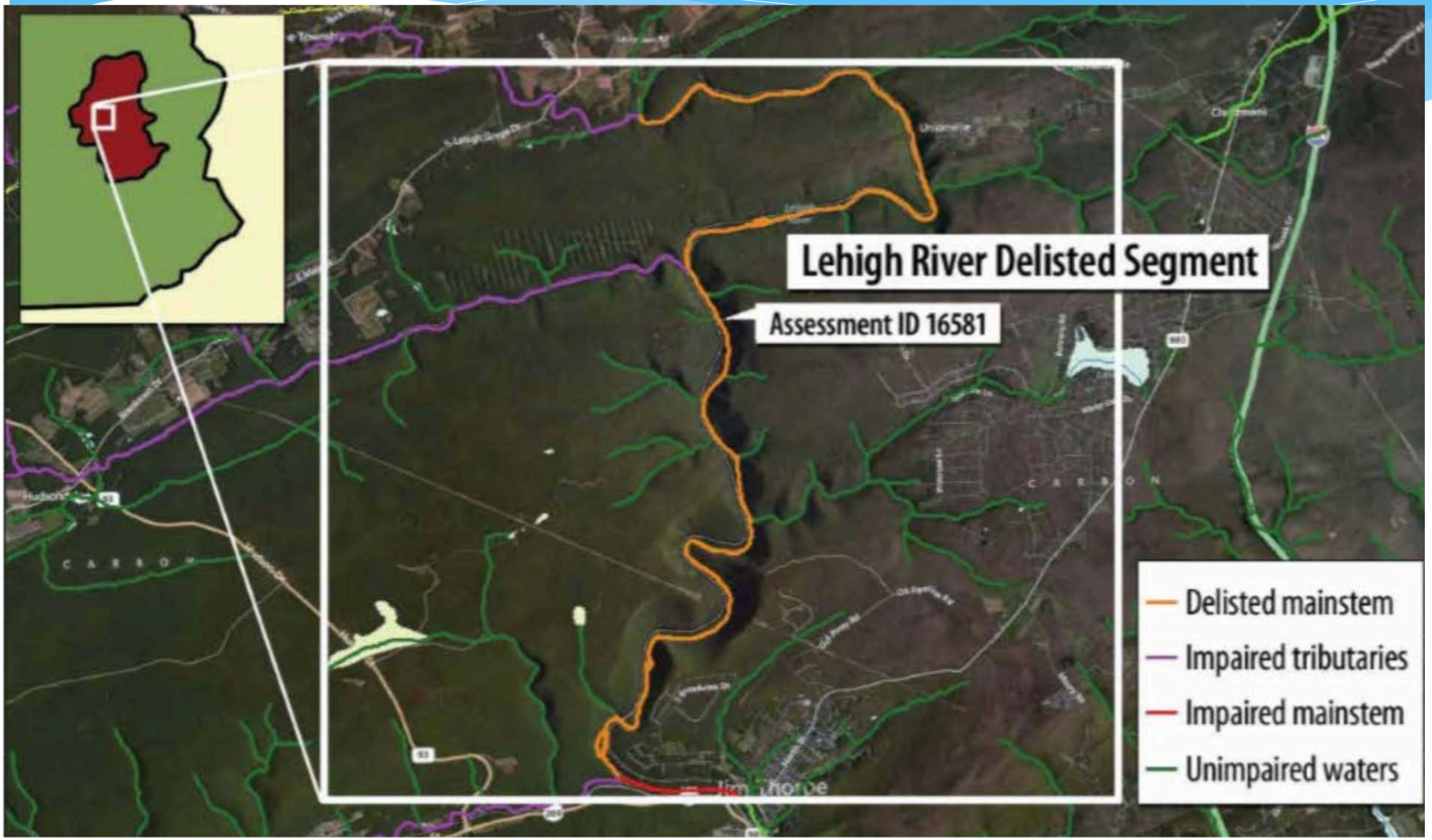


Clicking on the reading of interest opens a 5 day chart and table of statistical data



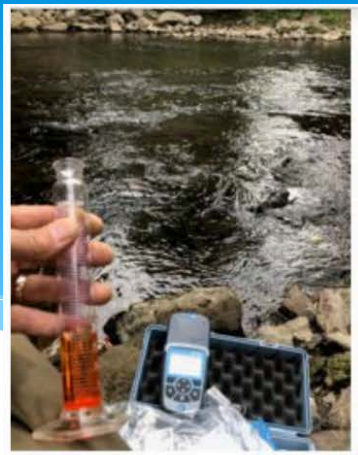
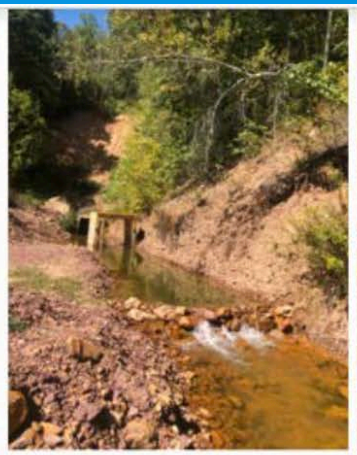
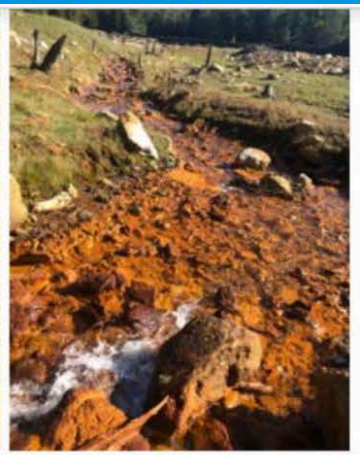
Two Aluminum Impaired Streams

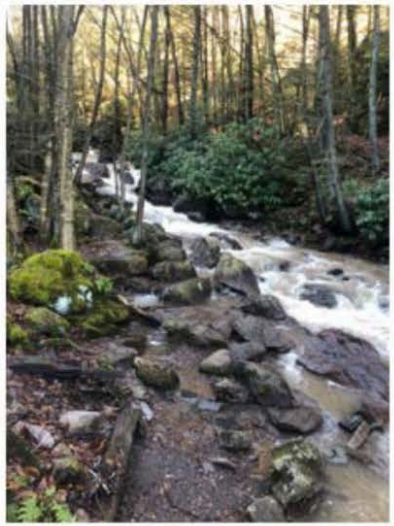
- Two Tributaries to the Lehigh, Buck Mountain Creek and Black Creek

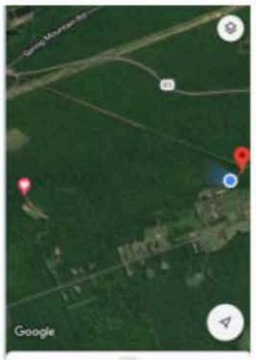


Photos from the Field

* Abandoned Mine Drainage Sites
  * Quakake Tunnel
  * Buck Mountain Tunnel
  * Sandy Run
  * Lausanne Tunnel
  * Palmerton Gap



EPA Criteria for Acute and Chronic Toxicity of Aluminum

nparison of the EPA's 1988 criteria and the updated 2018 criteria for aluminum. It is unclear why Trump's EPA re
ity, but it is not surprising given their anti-environment agenda and track record (VOTE!). Note the ug/l units equ
000 ppb = 1 ppm (parts per million or mg/l).

quatic life criteria for aluminum	Freshwater acute [a] (1-hour, total recoverable aluminum)	Freshwater Chronic [a] (4- recoverable alumi
Criteria (Vary as a function of a site's pH, and DOC)	1-4,800 µg/L [b] 0.001 -4.8 ppm	0.63-3,200 µg/L [b]. 0.006 -3.2ppm
H 6.5-9.0, across all total hardness and	750 µg/L 0.75 ppm	87 µg/L. 0.087 ppm

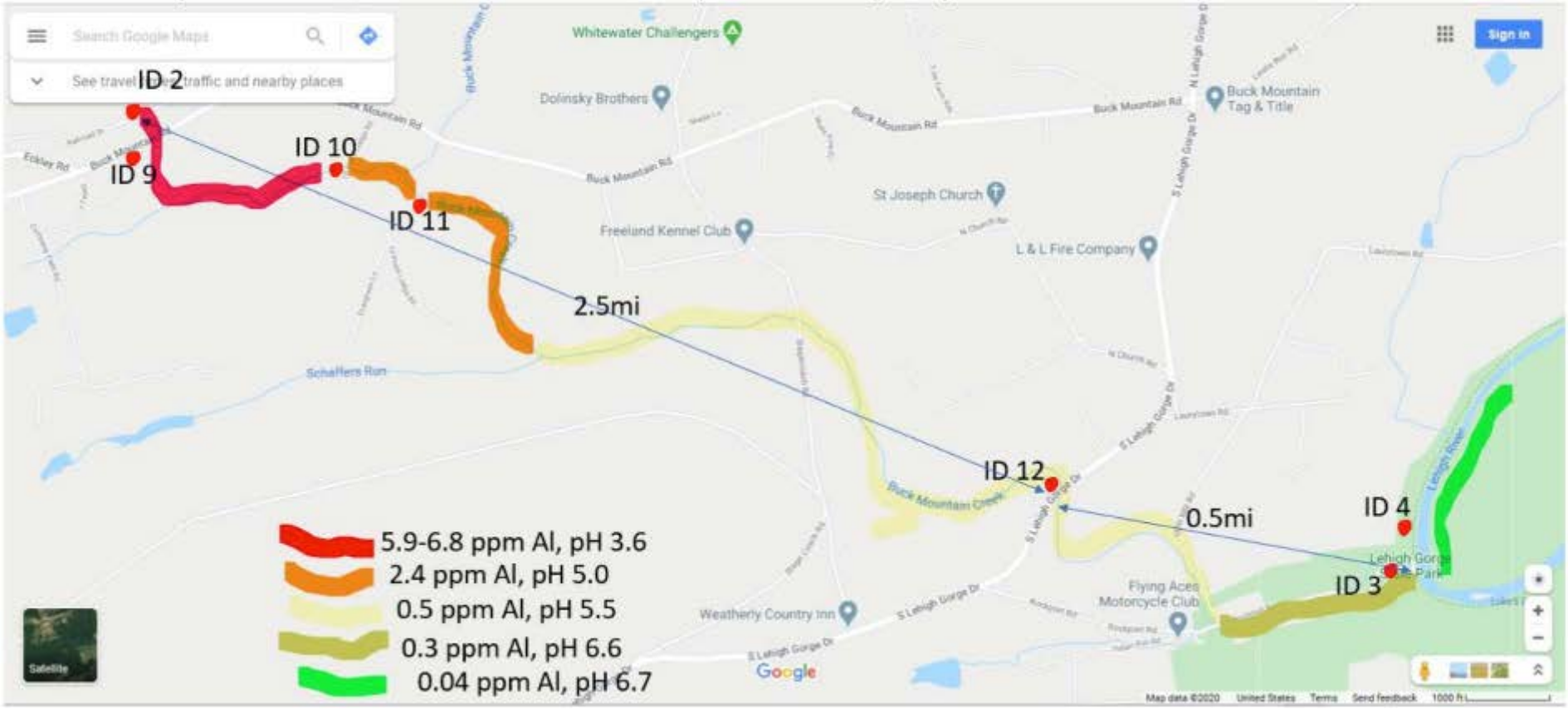
ended acute criteria (known as the criteria maximum concentration or CMC) duration is a
the recommended chronic criteria (criteria chronic concentration or CCC) duration is a fou
EPA recommends that the CMC and CCC not be exceeded more than once every three years

Lehigh Trib Values: 6.8 ppm to 0.3 ppm

Acute Toxicity to Aquatic Life

- We took local samples along the tributary from the AMD tunnel discharge (pollution source) to the Lehigh River

Figure 1 Satellite View showing Buck Mountain #2 Tunnel Discharge as it heads to Lehigh River. Toxicity level is color coded to show extent of Acute toxic level in the first 0.8 mile and Chronic Toxic level in 1.5 miles prior to the Lehigh Confluence.



Toxic Tributaries

Table 1 - Results of Data Collected by Sierra Club (ground zero tunnel outflow samples highlighted in yellow, toxic Al level is highlighted in red and dangerously low pH values in magenta)

ID No.	Date	Sample Location	Sp Cond, uS/cm	pH	DO, %Sat	Temp, F	Al ppm	Fe, ppm	Mn, ppm	Zn, ppm	NO3, ppm
1	4Aug19	Lausanne Tunnel Outflow to wetland treatment area	823	5.06	55.2	54.2	0.277	3.8	3.1		
13	4Aug19	Lehigh River Upstream of Nesquehoning Ck					0.121	0.25	0.5		
14	8Sep19	Aquashicola Creek, near Lehigh River	222	7.66	99.1	60.4				0.35	0.45
15	8Sep19	Lehigh River upstream of Aquashicola	111	7.43	101	63.4				0.0	0.45
2	21Sep19	Buck Mountain #2 Tunnel Outflow	276	3.55	72.8	48.5	6.87	0.41	2.5		0.02
16	21Sep19	Quakake Tunnel Outflow	310	3.72	92.2	51.1	5.24	0.55	2.6		0.07
17	21Sep19	Sandy Run at strip mine	248	3.6	87.9	50.4	3.27	2.06	2.0		0.05
3	12Jan20	Buck Mountain Creek at Rockport	64	6.56	96.1	46.3	0.289	0.92	0.0		0.68
4	12Jan20	Lehigh River above BM Creek	119.7	6.74	98.2	44.3	0.042	0.13	0.2		0.57
5	12Jan20	Black Creek after confl. w/ Quakake	63.9	6.6	96.0	46.3	0.135	0.46			0.69
6	11Mar20	Aquashicola Creek near Lehigh								0.22	
7	21Mar20	Wetzel Run at nearest bridge	263.9	4.0	111.9	48.5	3.195	0.05	1.9		0.37
8	21Mar20	Quakake Creek after Wetzel Confl	116.9	5.16	114.2	47.8	0.915	0.12	0.7		0.81
9	5Apr20	BM2 Tunnel Outflow (Sulfur Creek) at BM Road	258	3.74	112.1	49.3	5.92	NA	NA	NA	0.33
10	5Apr20	Sulfur Creek at 10 points Rd	162.7	4.32	108.7	49.4	2.39	NA	NA	NA	0.44
11	5Apr20	BM Creek after confl w Sulfur Creek	120.2	5.02	120.2	49.5	1.82	NA	NA	NA	0.56
12	5Apr20	BM Crk at Lehigh Gorge Road	87	5.51	110.2	48.9	0.5	NA	NA	NA	0.82