

May 2, 2021

Joe / Alan –

Historicaerials.com is an extremely useful website for free. When free of course they have a watermark across the page. Since we are very familiar with the orientation of the streets relative to the landfill, I went with the 1979 aerial photo of the development since it's still fairly new with minimal tree growth. I activated the compare option and picked diffuse, so this brings up another set of maps on the right-hand side. I looked at the historical topographic maps compared to the aerial and noticed a change in orientation of a stream adjacent to the landfill and development over time. See my comparisons below.

1979 Aerial overlain with 1913 Topographic Map

- aerials 2017
- 1979 2015
- topos 2013
- atlases 2012
- compare 2010
- diffuse 2008
- overlays 2007
- measure 2006
- 2002
- 1995
- 1987
- 1984
- 1979**
- 1972
- 1970
- 1969
- 1963
- 1957
- 1953
- 1947
- 1940
- 1931

100 m
500 ft
40.38641 : -74.3875

Tweet

- T2019 aerials
- T2016 topos
- T2014 T1913
- T1988 atlases
- T1982
- T1972
- T1965
- T1955
- T1942
- T1920
- T1913**
- T1909
- T1901
- T1898
- T1893
- T1888

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A 1979 aerial photo of the Inwood Estates development with no landscaping compared to a 1913 topographic map of the area shows a stream channel (blue) from the landfill location heading northeast towards Spotswood-Englishtown Road where symbols on the topo map indicate a low lying / wetland area.

1979 Aerial overlay with 1920 Topographic Map

+

Lori Street Monroe Township NJ

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+

-

aerials 2017

1979 2015

topos 2013

atlases 2012

compare 2010

diffuse 2008

overlays 2007

measure 2006

2002

1995

1987

1984

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T1898

T1893

T1888

Tweet

aerials

topos

atlases

100 m

500 ft

40.36808 : -74.38786

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same as 1913 topographic map

1979 Aerial overlay with 1942 Topographic Map

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aerials	2017	T2019	aerials
1979	2015	T2016	topos
topos	2013	T2014	T1942
atlases	2012	T1988	atlases
compare	2010	T1982	
diffuse	2008	T1972	
overlays	2007	T1965	
measure	2006	T1955	
	2002	T1942	
	1995	T1920	
	1987	T1913	
	1984	T1909	
	1979	T1901	
	1972	T1898	
	1970	T1893	
	1969	T1888	
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	1947		
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	1931		

100 m
500 ft
40.36683 : -74.38736

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The stream extending from the landfill is mapped as extending between the backyards of the Elizabeth and Michelle Street residents. The stream also extends into the low lying wetland area that eventually extends behind Woodland School.

Robert Half

The 1942, 1955, 1965, 1972, 1982, and 1988 topographic maps all show the stream extending between Elizabeth and Michelle Streets. The 2019 topographic map shows the stream only present in the wetland area north of Lori Street. It's my understanding that the stream between the two streets has been channeled into a pipe.

The link I sent to you via email is to a google drive I created with all the documents I could find about the landfill. I even scanned large D size plans of the landfill leachate collection system. These documents are an interesting read.

In the document dated April 17, 1979, there is mention of a grading cut of the landfill that exhibited a red-purple color. This stratum is described as behind the housing sites on Lani Street that were eventually never built. The stratum is described as exposed for 200 yards. How large this layer is in the landfill is probably unknown, but if that layer continues on the northeast or east side of the landfill, drainage from the layer could intersect the area where the original stream orientation is shown on the 1913 and 1920 topographic maps.

The residents are continuing to smell methane and BFI is not pumping to the sanitary sewer system. My concern is that there is a natural preferential path for leachate contaminants as well as methane gas

from the landfill that is connected to the pipe in the backyards of the Michelle and Elizabeth Street residents. What's interesting is that residents are telling me that they know when BFI workers are pumping the leachate to the frac tanks because they smell methane in their yards and houses. Is it possible that by pumping the leachate (at probably a substantial gpm into the frac tanks), methane somehow escapes the landfill and migrates along the preferential pathway, which is both natural and man-made (pipe)?

It just doesn't make any sense that odors would be detected when BFI is not discharging to the sanitary sewer. The natural gas company has been out to the residents and maintain that there is no natural gas leak. I've suggested that the residents get a report from the gas company in writing.

I'll be working from home on Monday 5/3 and Tuesday 5/4, so you can call me anytime.

Karen