



**pennsylvania**

DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Environmental Cleanup & Brownfields

# **Easton Road PFC HSCA Site**

Public Hearing

November 18, 2019

Doylestown Township

Bucks County, PA

# Agenda

- Site background and investigation results
- Response alternatives for providing potable water supply in the Site area
- Q&A
- Public Hearing on DEP's proposed response

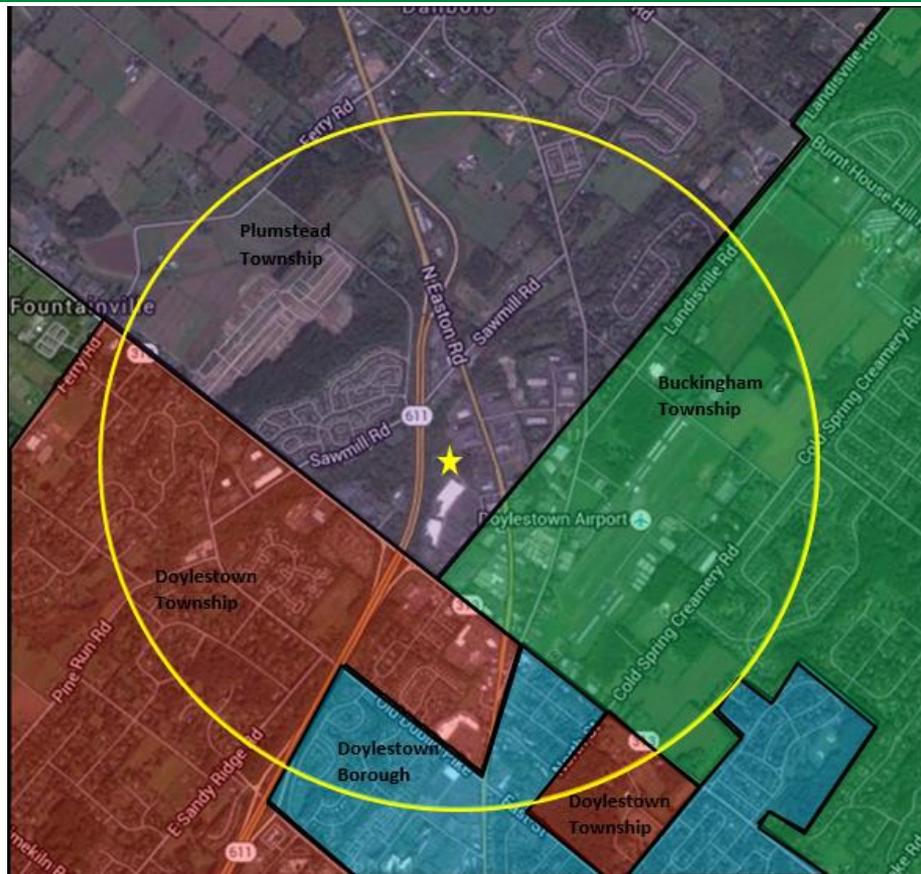
# Background

- Per- and polyfluorinated alkyl substances (PFAS) are present in commercial, industrial, and residential products
  - Cookware, carpets, clothing, food packaging, firefighting foams, water repellent materials
- In 2012, USEPA Unregulated Contaminated Monitoring Rule (UCMR) 3
  - Included Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA), and other PFAS
- May 2016, USEPA set a Health Advisory Limit (HAL) of 70 parts per trillion (ppt) for combined PFOA & PFOS in drinking water

# Site Background

- May 2016: Doylestown Township Municipal Authority (DTMA) found combined concentrations of PFOA/PFOS above the HAL in a supply well & a local private residential well
- June 2016:
  - DEP met with local Townships
  - Created the Easton Road website
  - Began extensive well survey of the Site area
- July 2016: DEP identified approx. 375 private drinking water wells in the area and began sampling efforts

# Easton Road PFC Site



-  Doylestown Township
-  Doylestown Borough
-  Buckingham Township
-  Plumstead Township

 Cross Keys Municipal well

**Easton Road PFC HSCA Site**  
1-mile Radius Map: Initial Study Area  
Bucks County  
June 28, 2016

# Site Investigation

## Private Residential Well Sampling

- Over 300 private residential wells sampled
- 8 homes exceed the HAL 70 ppt
- Approx. 20 homes above 40 ppt
- Localized area of concern

*One part per trillion = One drop of detergent in enough dishwater to fill a string of railroad tank cars 10 miles long.*

*One square inch in 250 square miles.*

*One second in 32,000 years.*

# Easton Road PFC HSCA Site Sampling



## Legend

- Surface Water/Sediment Sample Location
- Well Location

## Concentrations Range

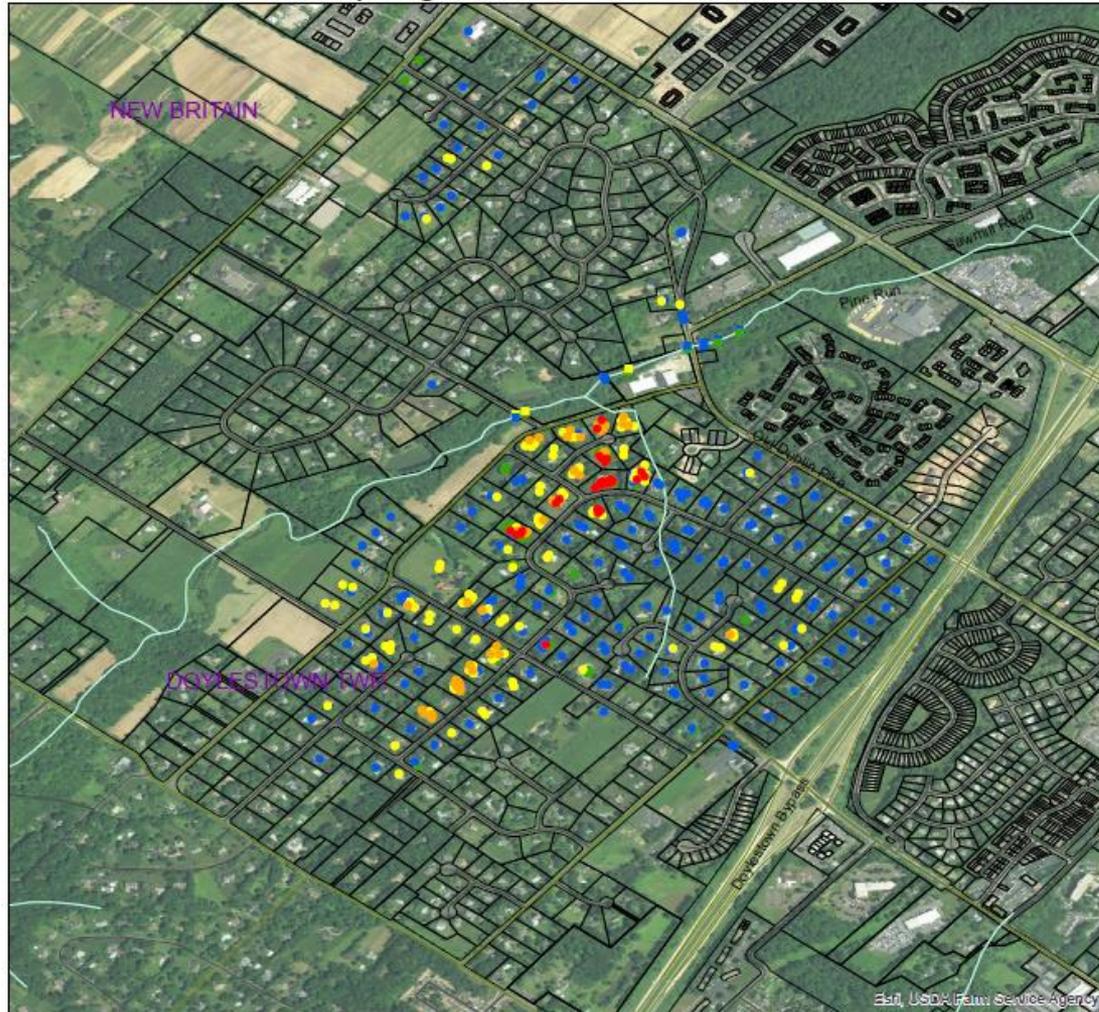
(Combined Results of PFOA & PFOS)

- ≥ 70 ppt
- 41 - 69 ppt
- 21 - 40 ppt
- 1 - 20 ppt
- Non-Detect

Easton Road PFC HSCA Site

Note: The combined PFOA and PFOS concentrations on this figure represent all analytical results from sampling events between January 2017 and August 2019.

# Easton Road PFC HSCA Site Sampling Results as of 043019



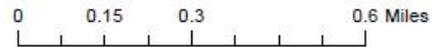
## Legend

□ Surface/Sediment Sample Location

## Well Sample Results

(Combined Concentrations of PFOA & PFOS)

- $\geq 70$  ppt
- 41 - 69 ppt
- 21 - 40 ppt
- Above Detection Limit - 20 ppt
- ND



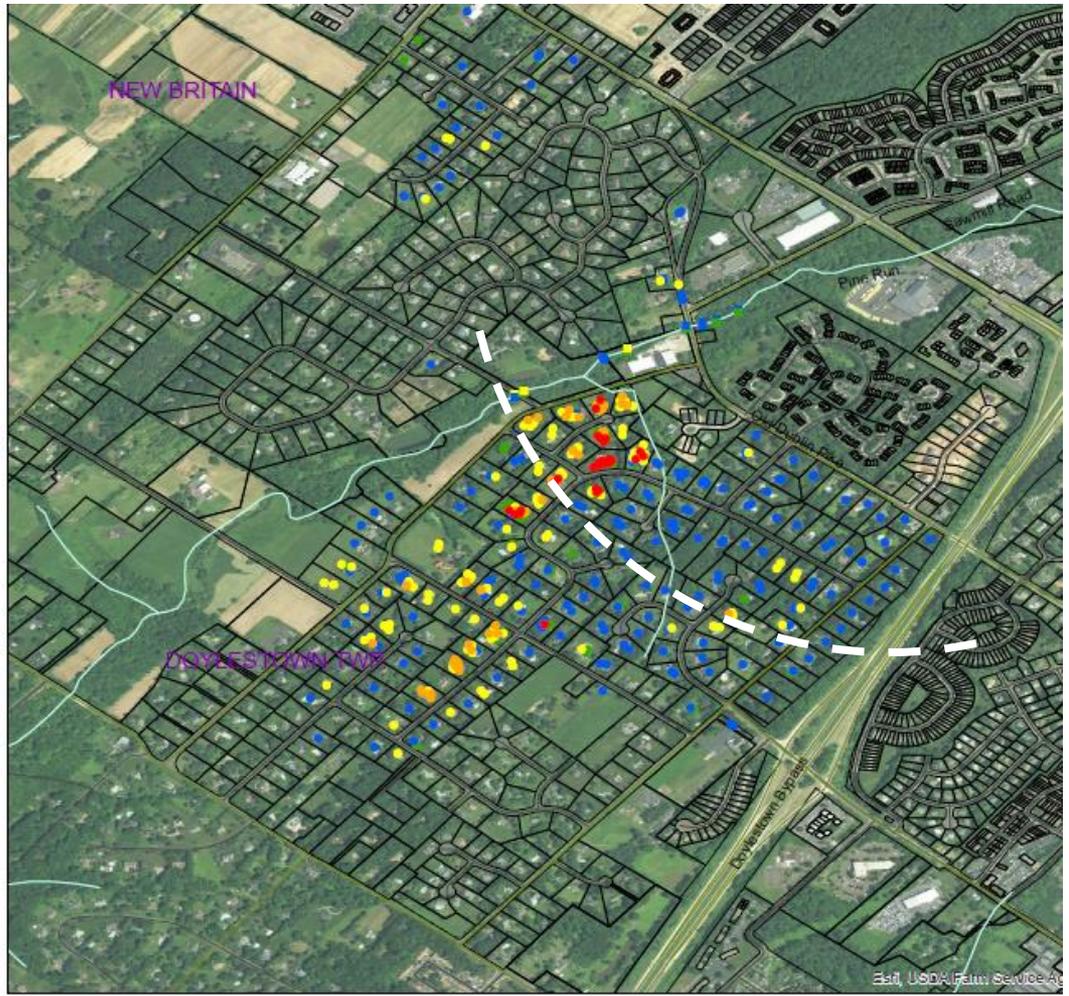
Doylestown Township Area

# Site Investigation

## Private Residential Well

### Continued Sampling Efforts

- Expanded original sampling area within Doylestown Township
- October 2017: Resampled 20-69 ppt
- November 2018: Resampled 10-20 ppt
- Quarterly Sampling Above 40 ppt



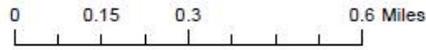
**Legend**

□ Surface/Sediment Sample Location

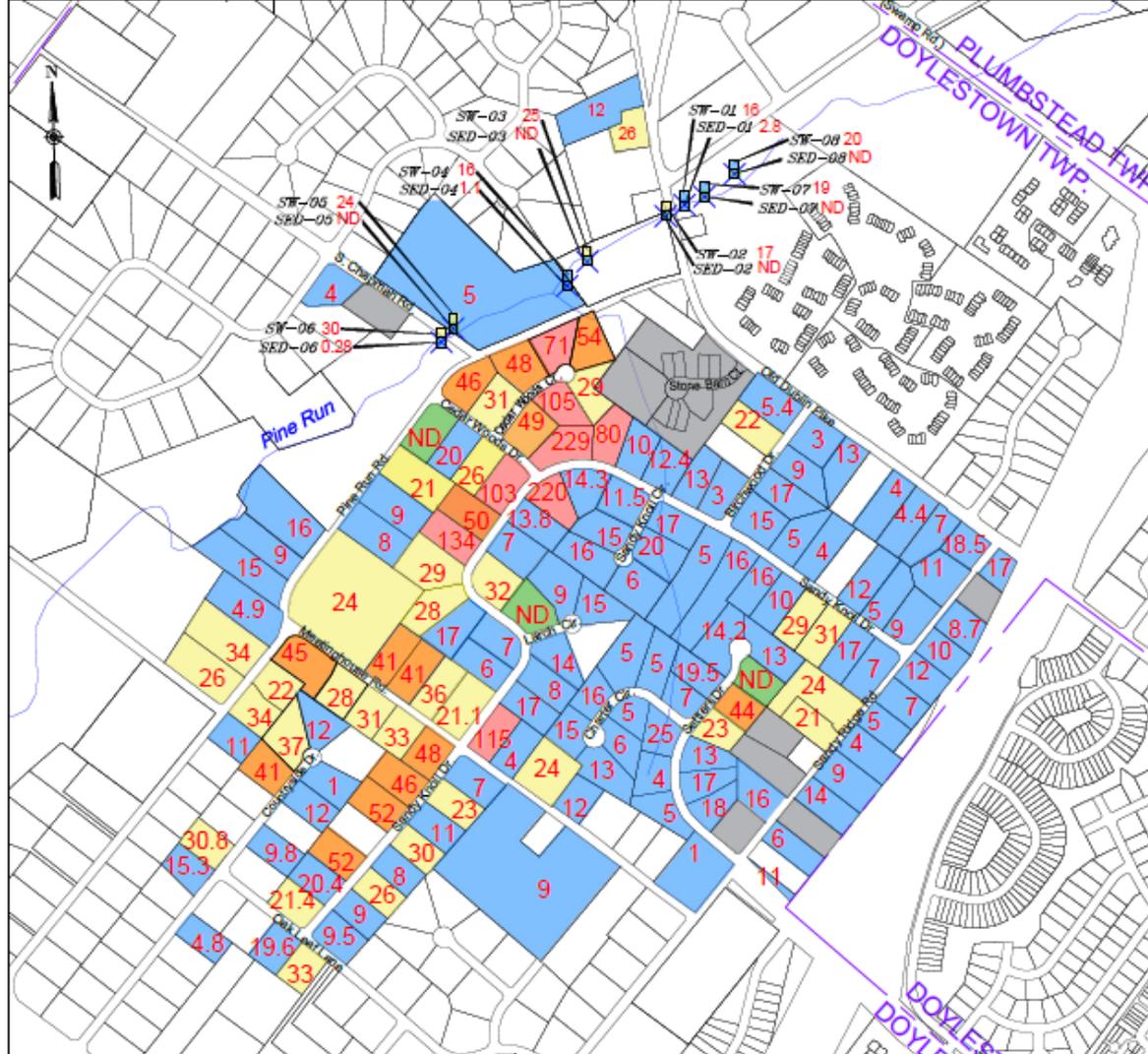
**Well Sample Results**

(Combined Concentrations of PFOA & PFOS)

- ≥ 70 ppt
- 41 - 69 ppt
- 21 - 40 ppt
- Above Detection Limit - 20 ppt
- ND



**Doylestown Township Area**

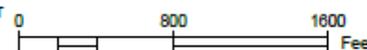


■ ABOVE 70 ppt  
■ 41-69 ppt  
■ 21-40 ppt  
■ Above Detection Limit - 20 ppt  
■ NON-DETECT  
■ PUBLIC WATER  
17 PFOA/PFOS RESULTS

NOTE:  
 THE COMBINED PFOA AND PFOS CONCENTRATIONS IN WATER WELLS ON THIS FIGURE REPRESENT THE MAXIMUM CONCENTRATIONS OF COMBINED PFOA AND PFOS CONCENTRATIONS DETECTED IN MULTIPLE SAMPLING EVENTS BETWEEN JUNE 2016 AND APRIL 2019.

SW □ SURFACE WATER SAMPLE POINT  
 SED ⊠ SEDIMENT SAMPLE POINT

MAP SOURCES:  
 BUCKS COUNTY PLANNING COMMISSION, GIS AND THE DELAWARE VALLEY PLANNING COMMISSION, GIS.



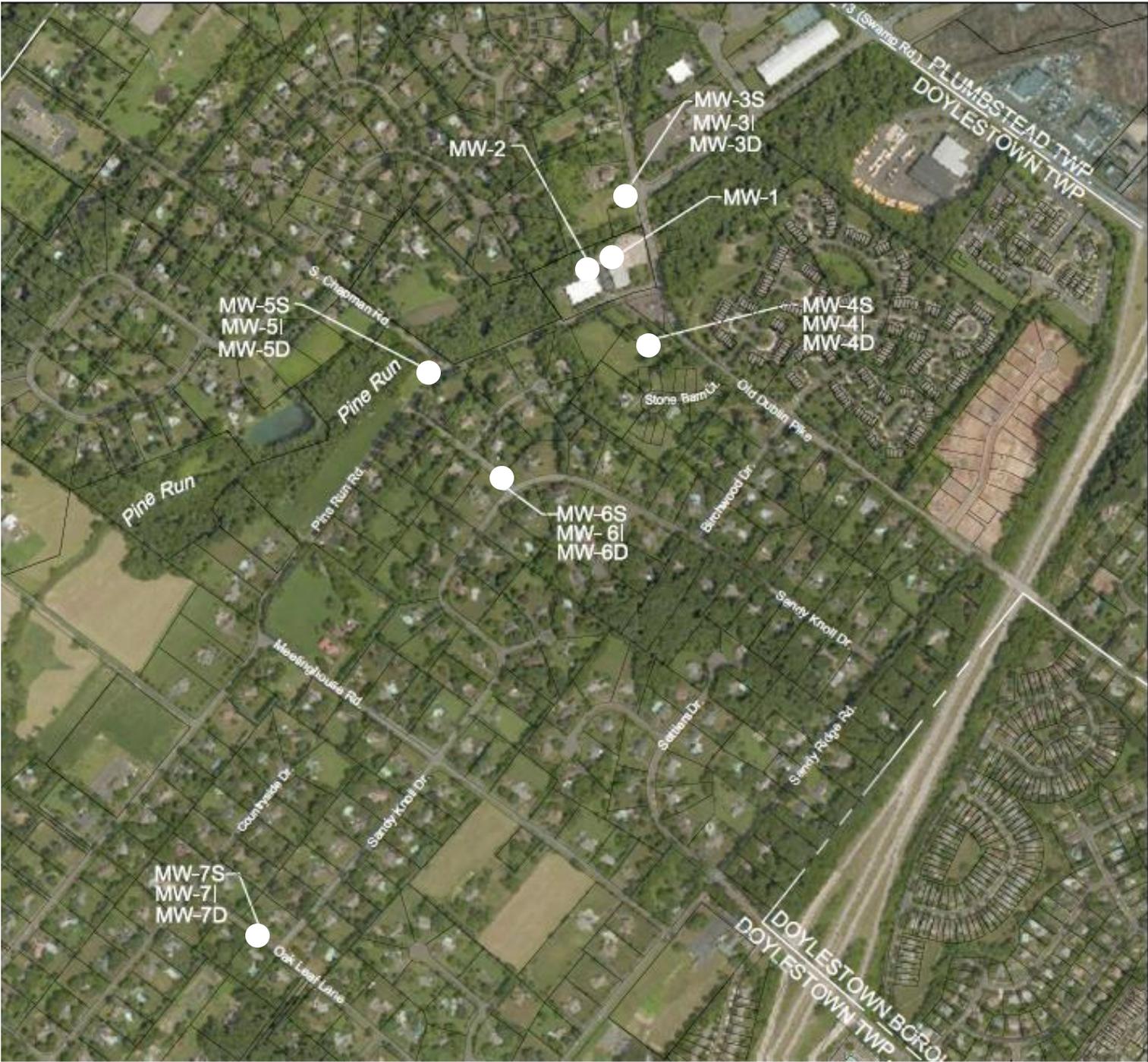
**TETRA TECH**  
 IRRSC7  
 Easton Road PFC HSCA Site  
 Site Location Map  
 Doylestown Borough, Doylestown Twp., PA

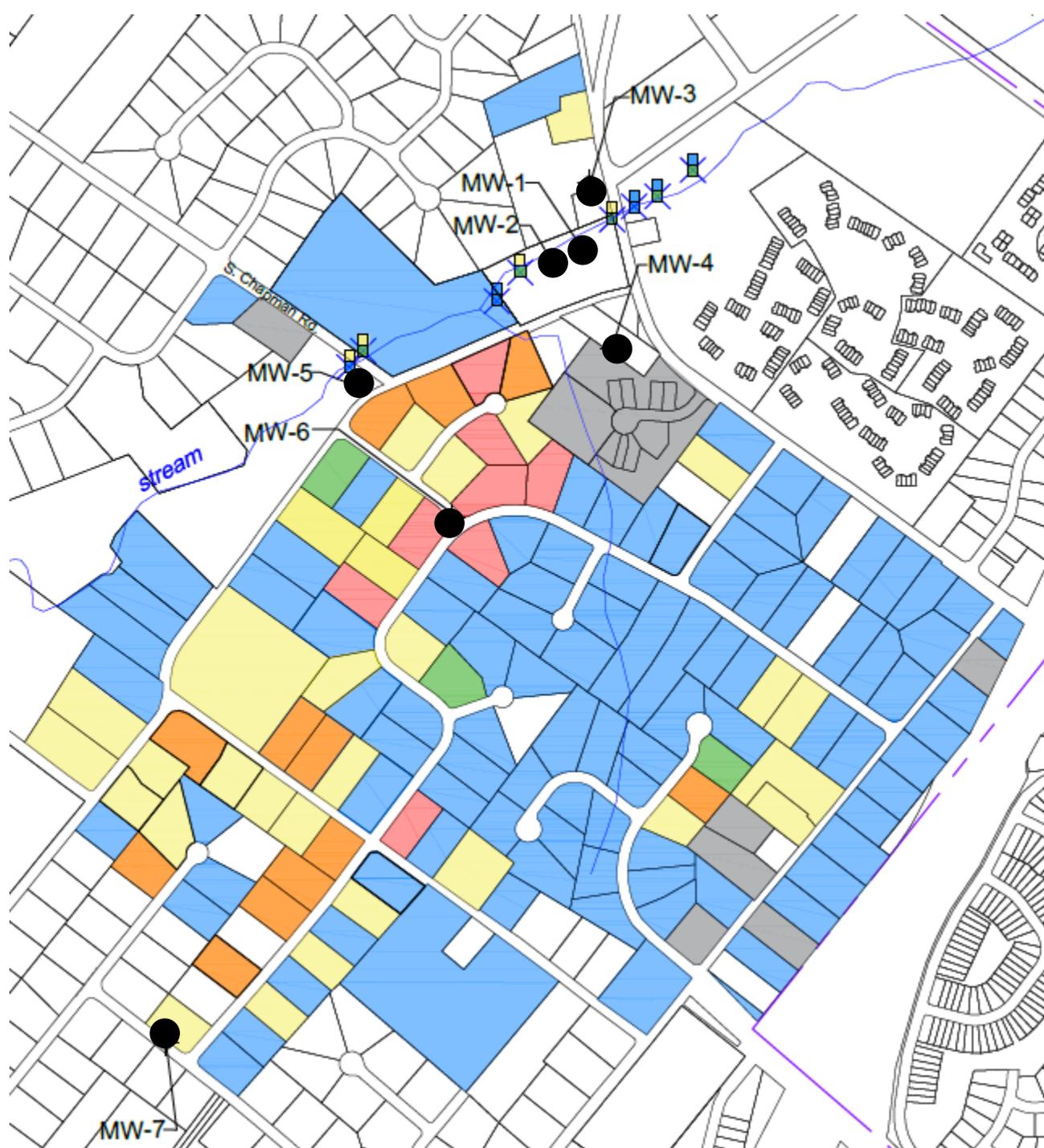
Easton Road Site-hatch parcels-Rev J April 20 2019.dwg	SCALE AS NOTED
FIGURE NUMBER 1	REV J DATE 5/24/19

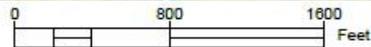
# Site Investigation

## Groundwater Monitoring Well Installation & Sampling

- February 2017
  - Seven (7) monitoring wells installed within localized area of concern
- Five (5) rounds of sampling have been completed
  - Results have ranged from ND-69 ppt







**LEGEND:**

- MW/7D - MONITORING WELL ID
- ◆ - MONITORING WELL LOCATION
- 322.28 - GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- - GROUNDWATER CONTOUR
- ← - INFERRED GROUNDWATER FLOW DIRECTION

**NOTE:**  
ELEVATION READINGS TAKEN APRIL 2018

**SURVEY:**  
DEWBERRY, PA SOUTH SPCS, NAD 83(2011), NAVD 88

**IMAGE SOURCE:**  
USGS EARTHSTAR GEOGRAPHICS SID, 2016 MICROSOFT CORPORATION



**IRRSC7**  
**Easton Road PFC HSCA Site**  
**Groundwater Contours -**  
**Deep Screen**  
**Doylestown Township, PA**

FILE	103S5436004—Figure10c.dwg	SCALE	AS NOTED
FIGURE NUMBER	10c	REV	DATE
		B	7/27/18

# Site Investigation

## Surface Water & Sediment Sampling

### Pine Run Creek

- April 2017-August 2019
  - 24 surface water samples and 16 sediment samples from various locations along Pine Run Creek and its tributaries
- Results have ranged from ND-41 ppt



# Summary

- Since 2016 DEP has been providing bottled water to homes with private wells with drinking water above the HAL
  - 4 homes currently receiving bottled water
  - 4 homes have privately installed filtration systems
- Multiple sampling events
- Source Investigation
- Analysis of response alternatives (AOA) to evaluate possible interim response actions

# Response Alternative Evaluation Criteria

- Effectiveness  
*does it mitigate threats posed by the contamination?*
- Time frame of the response  
*is it temporary or permanent; how long will it take to enact?*
- Reliability  
*can it consistently comply with health based standards?*
- Implementability  
*is it feasible to initiate, install, operate, and/or maintain?*
- Public, municipal, and organizational support  
*discovered through public comments*
- Cost  
*is it cost prohibitive, or appropriate use of Commonwealth funds?*

# Response Alternatives

1. No action (*baseline for comparison only*)
2. Bottled water
3. Whole-house Filtration Systems
4. Public water line

# Alternative 1

## No Action (Baseline Alternative)

### PROS

Implementable

No cost

### CONS

Not effective

Not a permanent solution

Not reliable

# Alternative 2

## Bottled water

### PROS

Implementable

Effective

Reliable

Cost Effective

### CONS

Not a permanent solution

Inconvenient to use & store

# Alternative 3

## Whole-house Filtration Systems

### PROS

Quickly Implementable

Keep well

Effective

Permanent

Reliable

### CONS

Requires monitoring  
& some limited  
maintenance

# Alternative 4

## Public water line

### PROS

Effective

Permanent

Reliable

### CONS

Not easily implementable

Inconvenience during  
construction

Unintended  
consequences / Impact  
groundwater flow

# Response Alternative Comparisons

Criteria	#1 (No action)	#2 (Bottled water)	#3 (Whole-house Filters)	#4 (Water line)
Effective?	<b>NO</b>	<b>YES</b>	<b>YES*</b>	<b>YES</b>
Permanent?	<b>NO</b>	<b>NO</b>	<b>YES*</b>	<b>YES</b>
Reliable?	<b>NO</b>	<b>YES</b>	<b>YES*</b>	<b>YES</b>
Timeframe	<b>N/A</b>	<b>N/A</b>	<b>3 Months</b>	<b>12 Months</b>
Cost effective?	<b>YES</b>	<b>\$16,000</b>	<b>\$75,000</b>	<b>&gt;\$2,000,000</b>
Public/municipal support?	<b>To be determined based on public comments</b>			

*\*-with proper maintenance*

# DEP's Proposed Alternative

## Alternative 3 Whole-house Filtration Systems

- Protective of human health
- Complies with HAL
- Implemented quickly
- Cost-effective
- Permanent solution
  - Simple maintenance may be needed on occasion

# DEP's Proposed Alternative

## Whole-house Filtration Systems



- Will Remove PFOA/PFOS
- Additional treatment may be required
- Three sampling ports
- Non-freezing location required

# Easton Road PFC HSCA Site

Questions?  
Off the Record

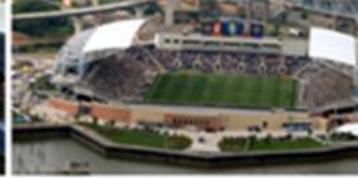
# Easton Road PFC HSCA Site

## Public Hearing Comment Period

- Please state your first and last name.
- Please spell your name for the court recorder.
- State your address.
- Provide your comment for the record.

\*\*\*\*DEP Appreciates your comment.\*\*\*\*





Bureau of Environmental Cleanup & Brownfields

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**484-250-5784**

**[www.dep.pa.gov/eastonroad](http://www.dep.pa.gov/eastonroad)**

**DEADLINE FOR WRITTEN COMMENTS:**

**January 17, 2020**

**\*Please indicate in the letter or email that you are providing a comment to be included in the  
Administrative Record**