



# Drinking Water Source Protection Program



Department of  
Environmental  
Conservation

Department  
of Health

Department  
of State

Department of  
Agriculture  
and Markets



**Together, we can protect your drinking water.**

*Locally Led, State-Supported Source Water Protection*

**Grant Jiang & Michael Forgeng**

**April 2023 monthly meeting**

**April 20th 2023**

# WHAT IS SOURCE WATER?

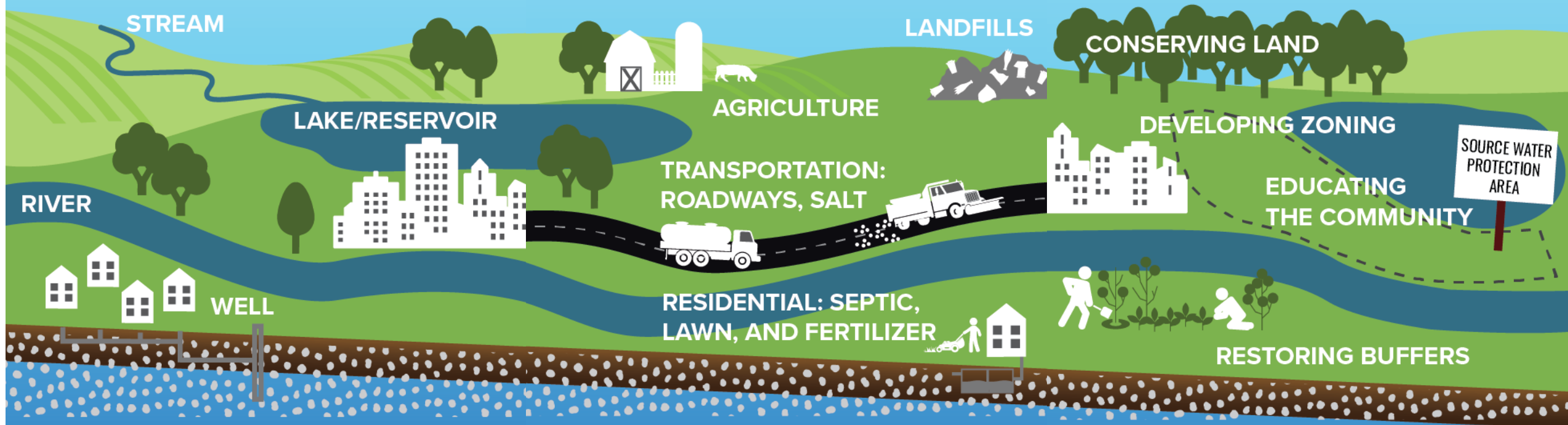
Your drinking water can come from:

# WHY PROTECT SOURCE WATER?

Potential contaminants can come from:

# SOURCE WATER PROTECTION ACTIONS

Communities can take action by:



Department of Health



Department of Environmental Conservation

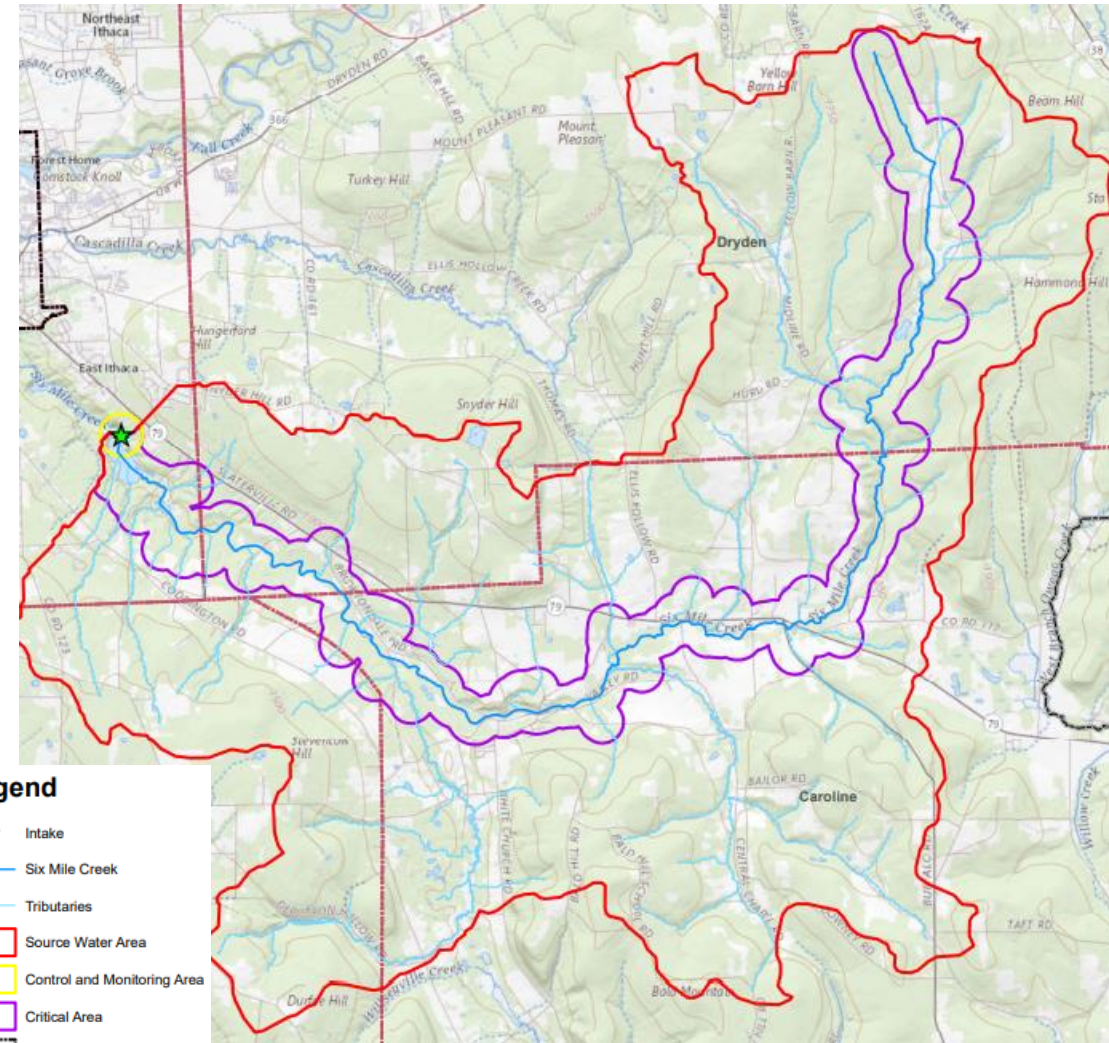
# The DWSP2 Process

- A. Plan Preparation
- B. Plan Development
- C. Implementation
- D. Progression



# Plan Development

- A. Prepare maps
- B. Form stakeholder group
- C. Inventory potential contaminant sources
- D. Complete maps
- E. Identify protection and management methods
- F. Develop implementation timeline
- G. Finalize plan



## Legend

- ★ Intake
- Six Mile Creek
- Tributaries
- Source Water Area
- Control and Monitoring Area
- Critical Area
- City of Ithaca
- Counties
- Towns



Department of Health



Department of Environmental Conservation

# H7 DWSP2 Subcommittee

- Grant Jiang (NYSDOH)
- Mike Forgeng (NYSDOH)
- Gary Bassett (V. Rhinebeck)
- Randy Alstadt (C/T Poughkeepsie)
- Paul Malmrose (Technical Advisor)
- Dan Shapley (Technical Advisor)
- Devin Rigolino (Dutchess County)
- Ben Ganon (Ulster County)



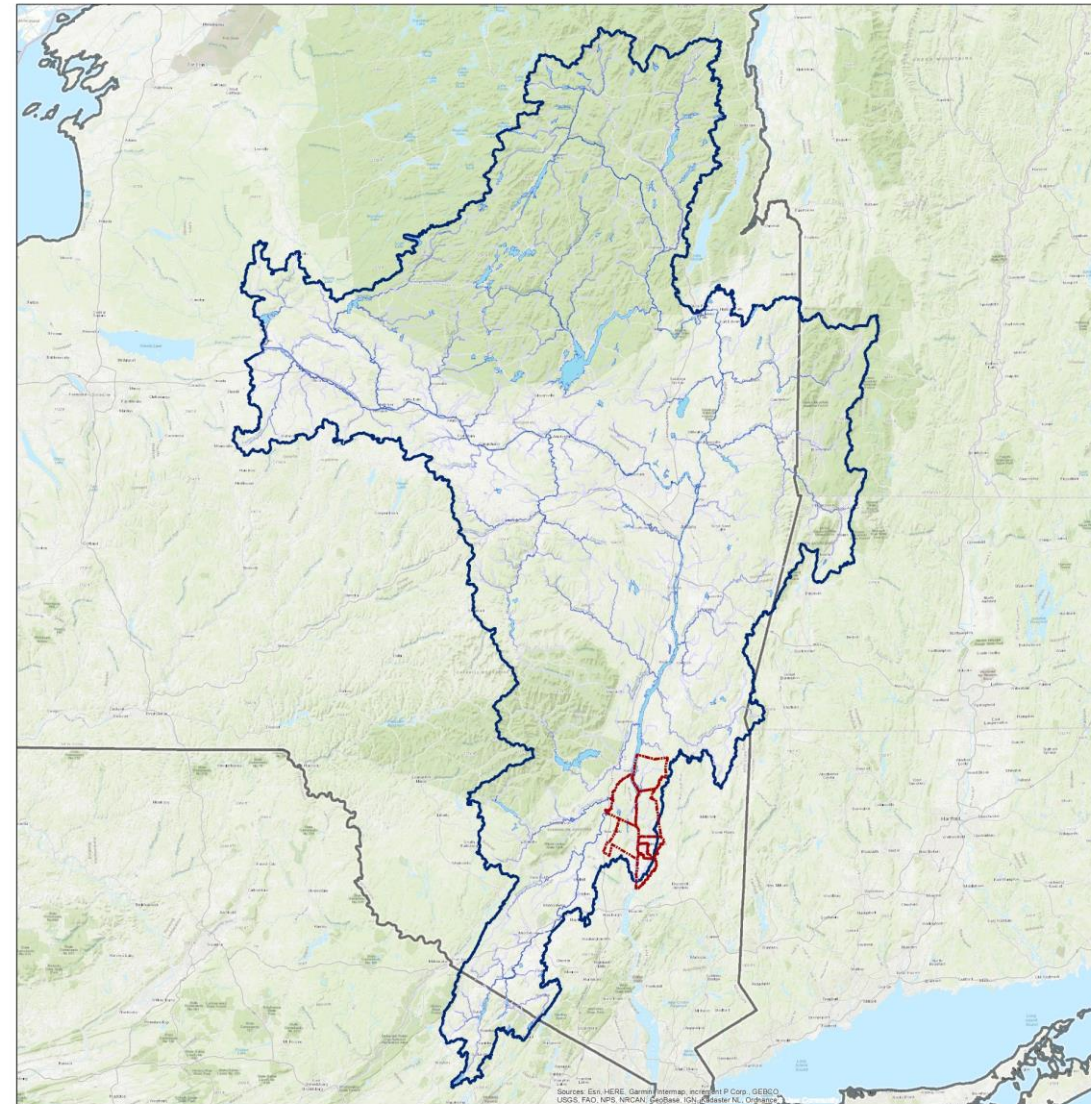
# H7 Different from Other DWSP2 Communities

- Multiple municipalities and jurisdictions involved
- Hudson is very large (understatement)
  - Around Poughkeepsie, average discharge is ~190,00 gallons/second (gallons/year)<sup>1</sup>
  - About ~1 million tons of sediment is transported through the Hudson per year<sup>2</sup>
  - Potential threats and actionable measures are thus different for the H7 than other DWSP2 communities

<sup>1</sup> USGS gauge at Poughkeepsie, 2002-2019 data

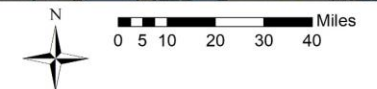
<sup>2</sup> Ralston et al., 2013

Hudson 7 DWSP2 - Hudson River Watershed \*Draft\*



## Legend

-  Hudson 7 Municipal Boundaries
-  Hudson River
-  Contributing Area to Hudson 7



Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,  
Bureau of Water Supply Protection GIS  
Date: 4/19/2023

# Two-Pronged Approach to Source Protection

## “Prong” 1:

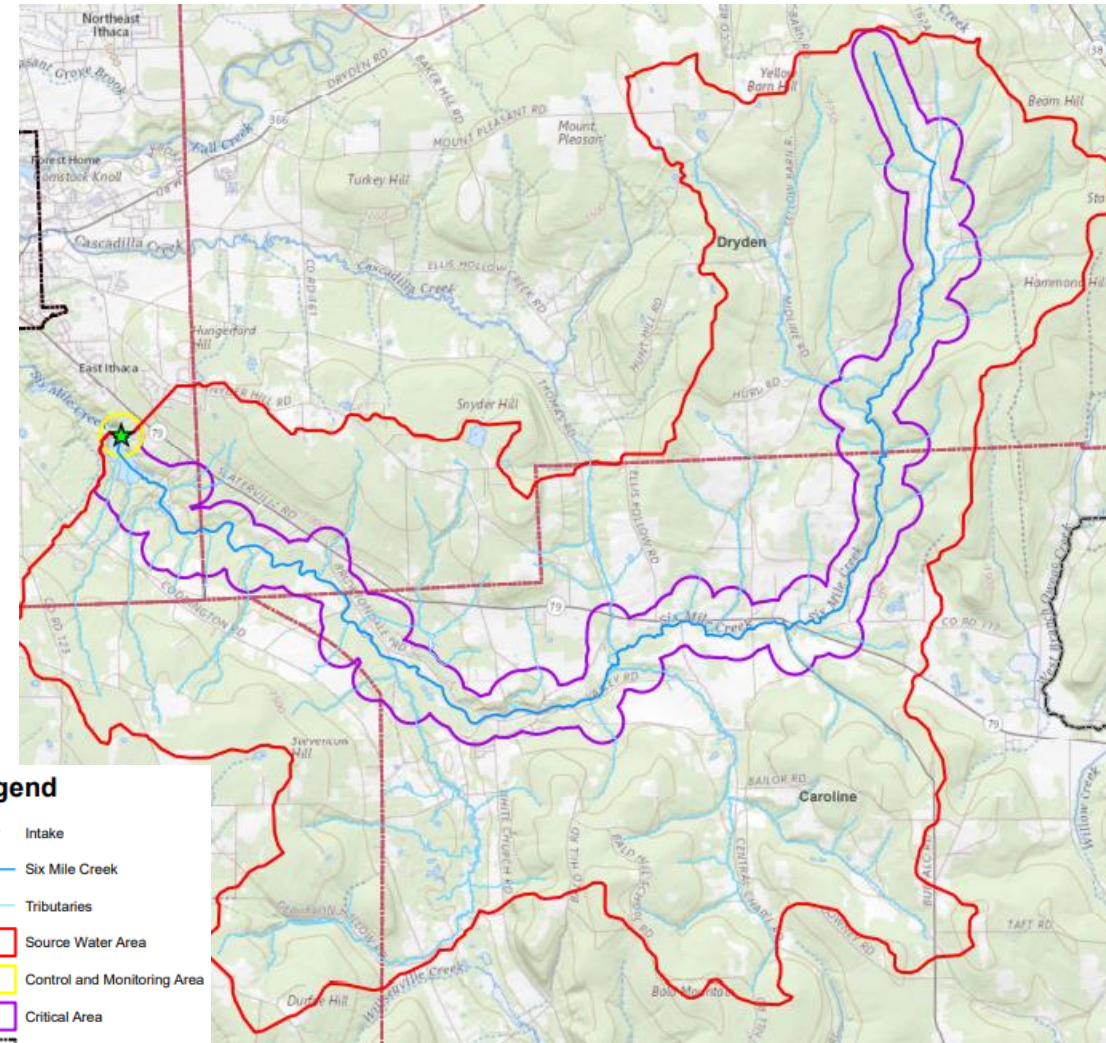
- Focusing on large and/or very close sources of potential contamination within areas that the H7 and its partners have jurisdiction/influence over
- Ensuring that policymakers and water system operators are aware of these potential sources of contamination

## “Prong” 2

- Issues and concerns that Hudson 7 have less immediate jurisdiction over
- Where can the Hudson 7 lead by example?
- Hudson 7 have more influence as a group than separately – what issues can the H7 bring attention to?

# Plan Development: Current progress

- A. Prepare maps
- B. Form stakeholder group
- C. Inventory potential contaminant sources
- D. Complete maps
- E. Identify protection and management methods
- F. Develop implementation timeline
- G. Finalize plan

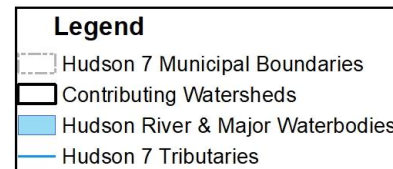
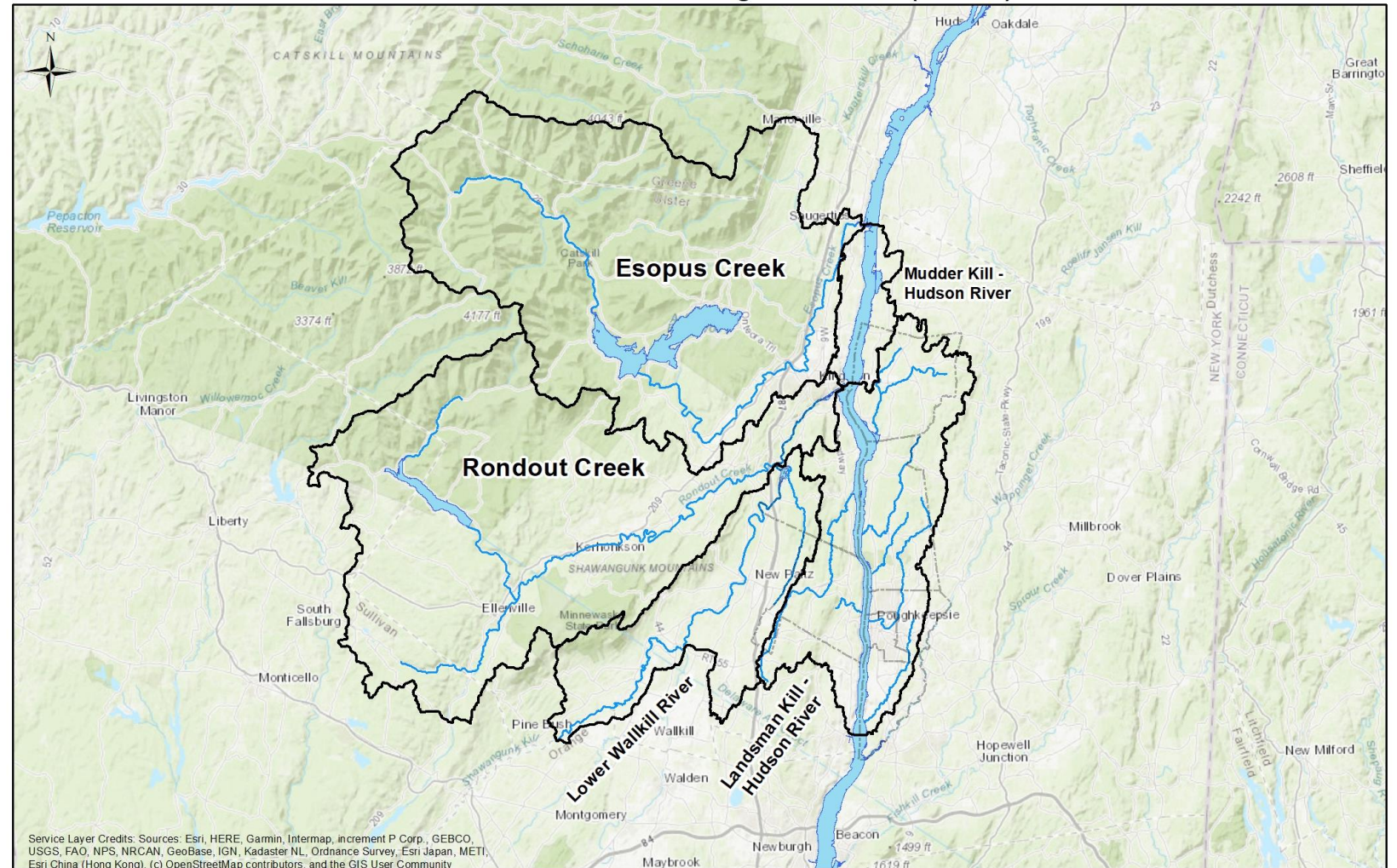




# Prong 1 Focus Area

- Wappinger and Fishkill Creeks are downstream of H7 intakes + municipal areas
- Both Town of Wappinger and Town of Fishkill are working on their own DWSP2 plans that cover their respective creeks

Hudson 7 DWSP2 Contributing Watersheds (DRAFT)



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0 1.75 3.5 7 10.5 14 Miles  
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Bureau of Water Supply Protection GIS  
Date: 4/19/2023



# Potential Contaminant Sources

## **Bulk Storage**

- [Chemical Bulk Storage Facilities](#) (e.g. chemical manufacturing)
- [Major Oil Storage Facilities](#) (e.g. petroleum storage and distribution centers)
- [Petroleum Bulk Storage Facilities](#) (e.g. gas stations)

## **Waste Management and Disposal**

- [Active Landfills](#)
- [Inactive Landfills \(Title 12\)](#)
- [Hazardous Waste Management Facilities](#)
- [Land Application Sites](#)
- [Vehicle Dismantling Facilities](#) (e.g. junkyards)

## **Contamination Sites or Incidents**

- [Remediation Sites](#) (e.g. State Superfund Sites, Brownfield Cleanup Sites, Environmental Restoration Program Sites, Federal Superfund Sites)
- [Spill Incidents](#)

## **Mineral Extraction Sites**

- [Oil and Gas Wells](#)
- [Orphan Oil and Gas Wells](#)
- [Mines](#)
- [Historical Abandoned Mines](#)

## **Discharges to Water**

- [State Pollutant Discharge Elimination System Permitted \(SPDES\) Facilities](#) (e.g. municipal wastewater treatment works, municipal separate storm sewer systems (MS4s), combined sewer overflows (CSO), concentrated animal feeding operations (CAFO), solid waste management facilities, manufacturing operations)
- [Combined Sewer Overflows \(CSOs\) and Sanitary Sewer Overflows \(SSOs\)](#)

## **Transportation**

- [Airports](#) (e.g. de-icing operations)
- [Transportation Corridors](#) (e.g. highways, railroads, hazardous material routes)
- [Road Maintenance Facilities](#)
- [Salt and Deicers Storage](#)

## **Agriculture**

- [Agricultural Activities](#)

## **Other**

- [Golf Courses](#)
- [Marinas and Boat Launches](#)
- [Stormwater](#)
- [Toxic Release Inventory \(TRI\) Facilities](#)
- [Fire Training and Dedicated Fire Training Facilities](#)
- [Nutrient Loading \(Lakes Only\)](#)
- [Saltwater Intrusion](#)
- [Road Salt Application](#)

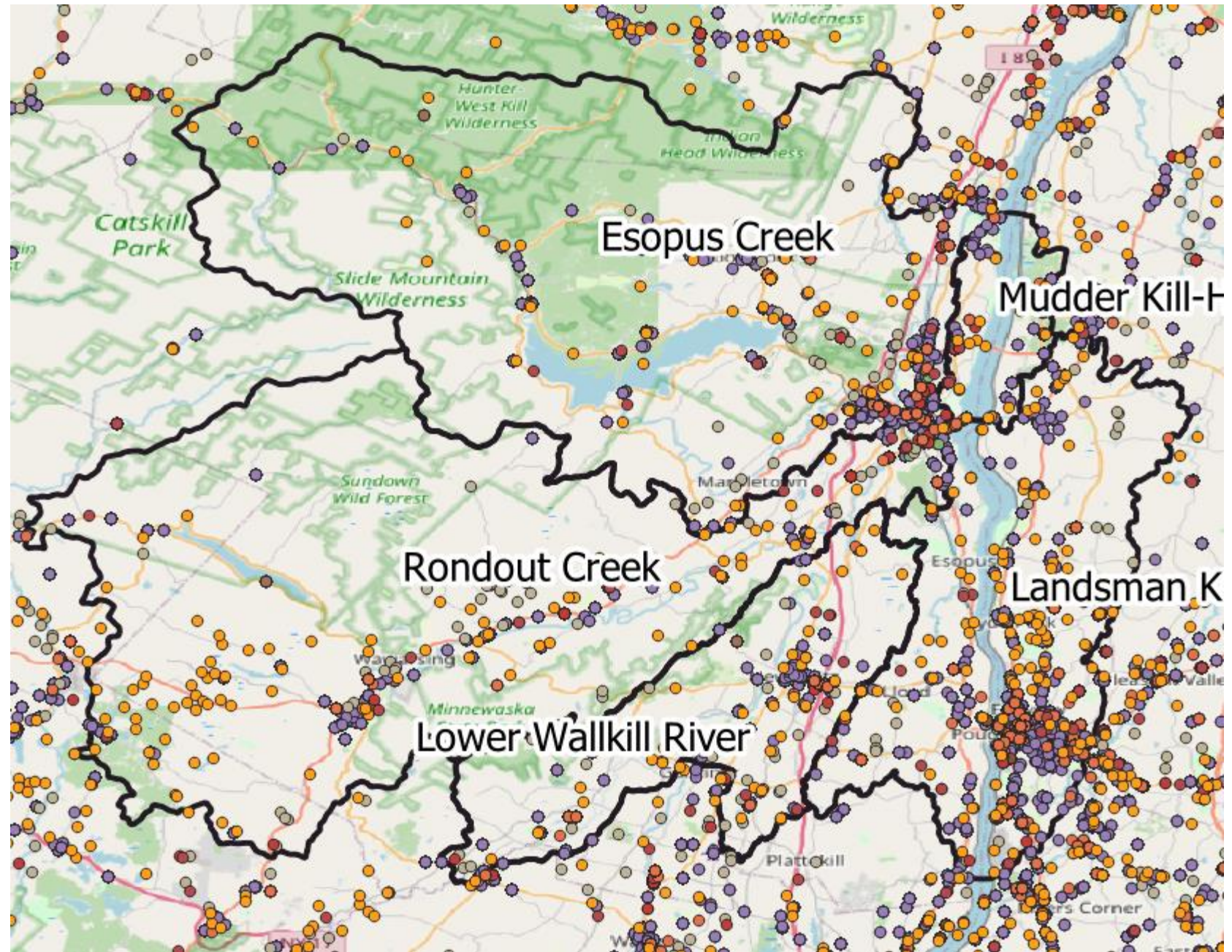
## **Residential Sources**

- [On-site Septic Systems](#) (e.g. septic tanks, cesspools)
- [Lawn and Garden chemicals](#)
- [Waterfront Property Management](#)

## **Conveyances and Pipelines**

- [Oil and Gas Pipelines](#)

Unfiltered  
data not  
very useful  
– what to  
focus on?



# Bulk Storage (Petroleum, Major Oil, Chemical)

- Only looking at major oil storage & chemical storage facilities
- NYS has one of (if not the most) stringent underground storage regulation programs in the nation; tanks inspected every 3 years

# Solid Waste Management

- Filtering out transfer stations & composting facilities
- Due to low risk associated with them – NYSDOH will look further to see if proximity to water body can be used to further filter out these facilities

# Mineral Extraction Sites

- The only oil and gas wells in Eastern New York are exploratory wells drilled ~50 years ago that are capped and abandoned – oil/gas wells removed
- Mines: stringent remediation process. All mines in the H7 focus area are sand/gravel, clay, limestone, and one bluestone quarry. For now, only considering Tilcon facility due to size + river proximity

# Discharges to Water

- Filtering out non-state significant/non-EPA major (mobile home parks, etc) individual SPDES permits
  - State-significant/non-EPA major comprise vast majority of discharge across the state
- For General SPDES Permits – filtering out facilities marked as having “No Discharge”

# Transportation

- Railroads + rail crossings of high concern. CSX railroad under jurisdiction of Federal Railroad Administration (USDOT)
- Salt storage: generally low priority (salt front of higher concern, but H7 can serve as example for watershed stewardship across state)
- Airports and fire training centers are being compiled across Ulster & Dutchess Counties



# Agriculture

- Much of the H7 is forested in nature, most of the agriculture is concentrated across the Lower Wallkill
- Only one CAFO in the H7 focus area, Ulster County reached out and determined this facility was of low risk
- Likely a lower tier focus, or a focus for Prong 2 (much of the farmland in the Hudson River Watershed is outside H7 jurisdiction)

# Oil & Gas Conveyance

- Some oil & gas pipelines in the H7 focus area; finding best way to display + convey this information
- (Also looking into size of pipelines & protection measures already in place)

# Toxics Release Inventories (TRI)

- Four facilities in the H7 focus area
  - Three (3) in Ulster Co, one (1) in Dutchess Co
- Very heavily monitored, big facility of concern is the IBM facility in Poughkeepsie (T)
  - IBM facility is the largest (does anyone know if it's active?)

# DEC Remediation Sites

- Tentatively filtering out remediation sites that are marked as “Remediation Complete” or “No Threat”
  - Tentative for now as we’re checking with DEC to verify if Completed/No Threat sites have checked for emerging contaminants

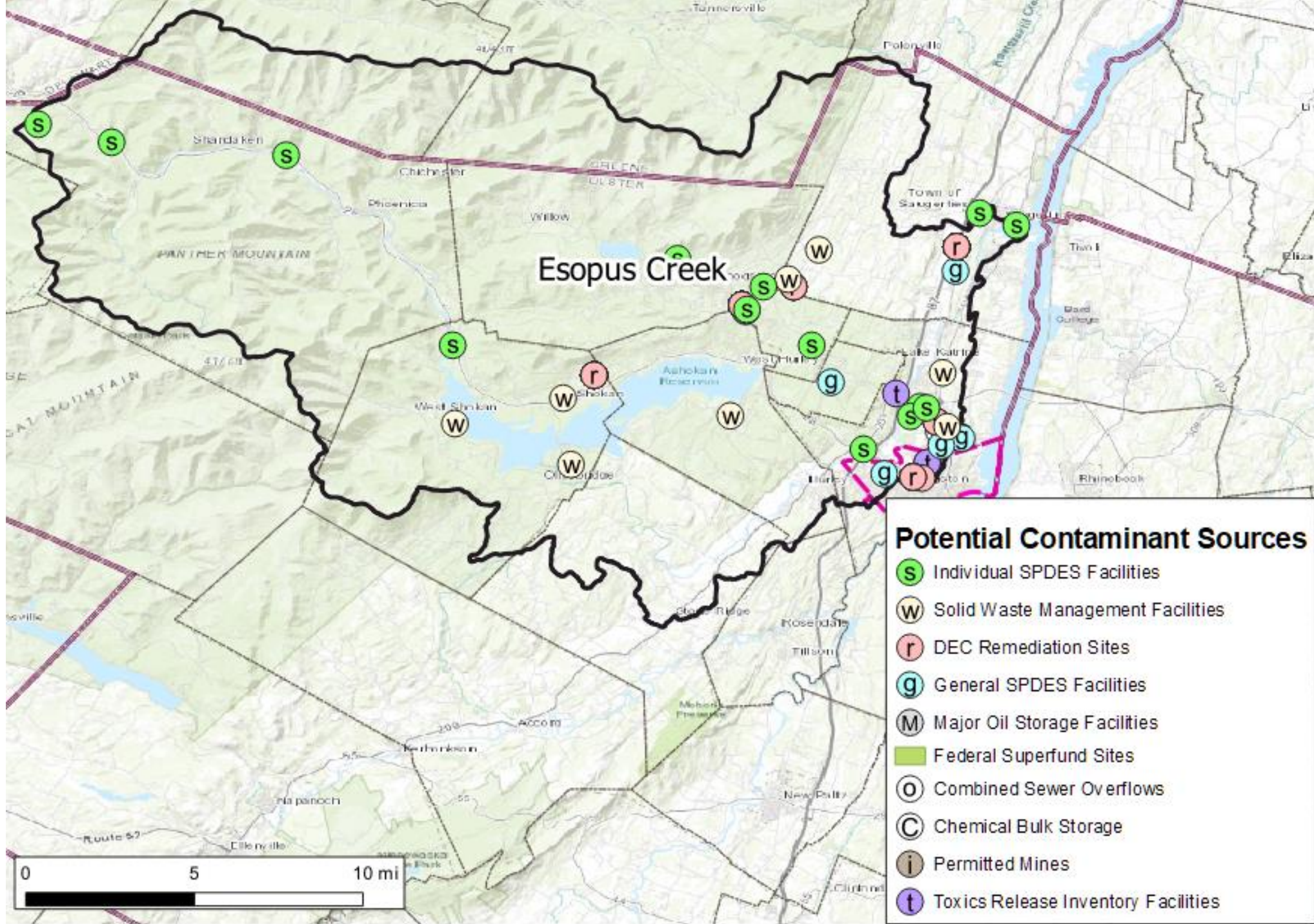
# Stormwater & Waterfront Property Runoff

- Subcommittee decided less of an immediate/existential concern, but an issue where the H7 can lead by example
  - There is a construction site database – concern is from sediment & construction/industrial releases
- Double checking which communities are MS4

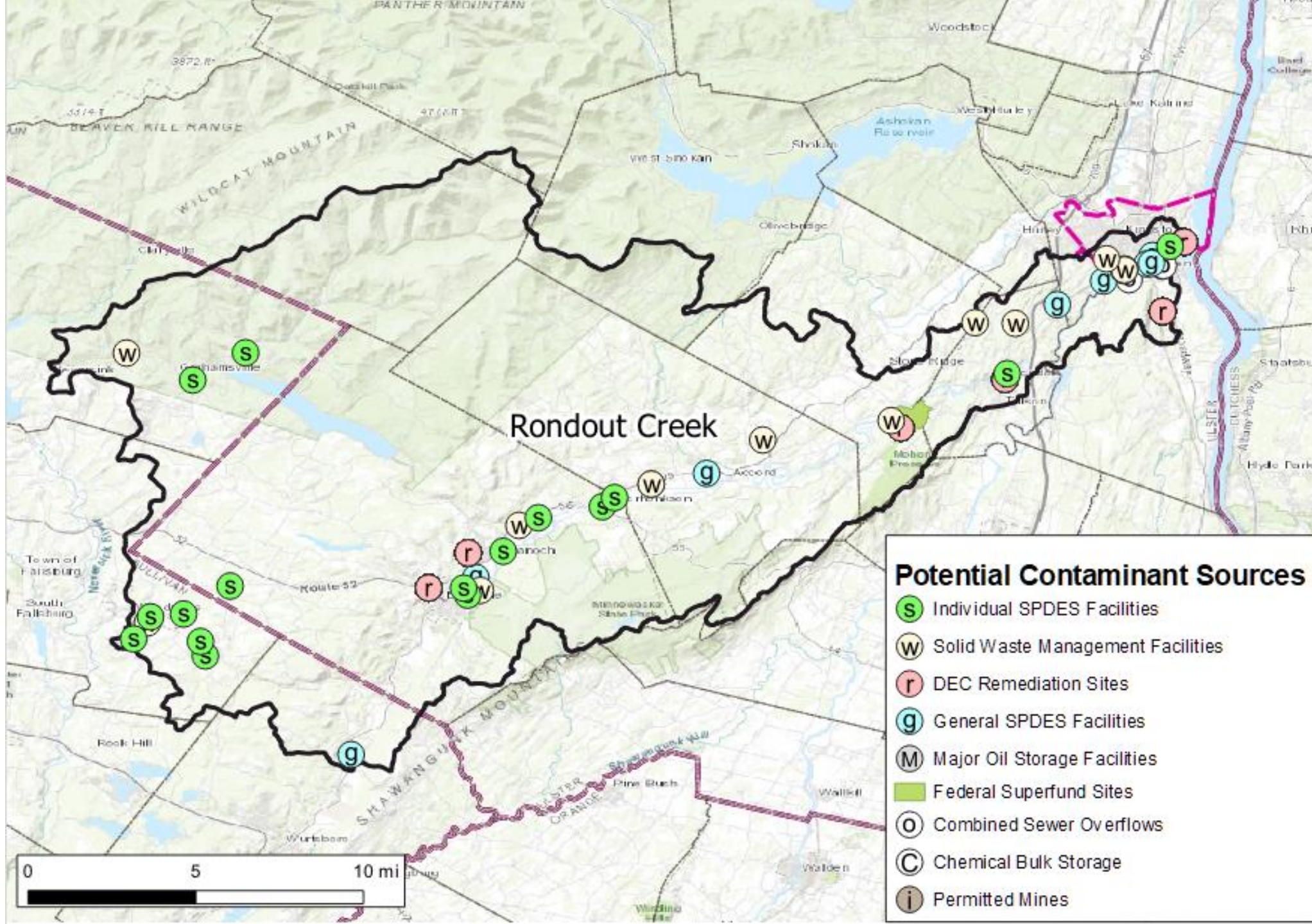
# Residential & Other Sources

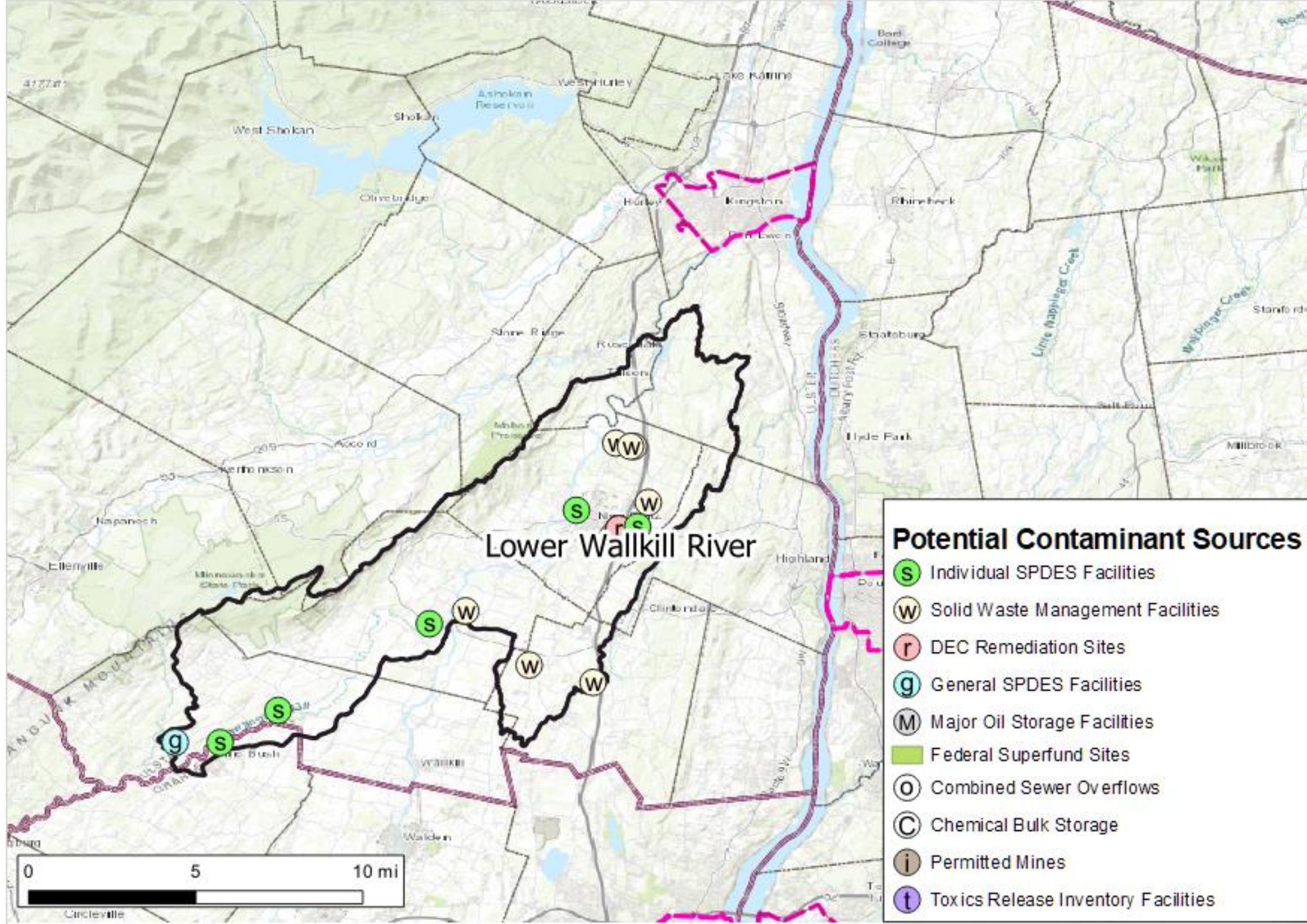
- Generally a lower concern for the Hudson River due to the sheer size of the Hudson
- However – opportunity for the Hudson 7 to serve as an exemplary standard across the State

# Filtered maps



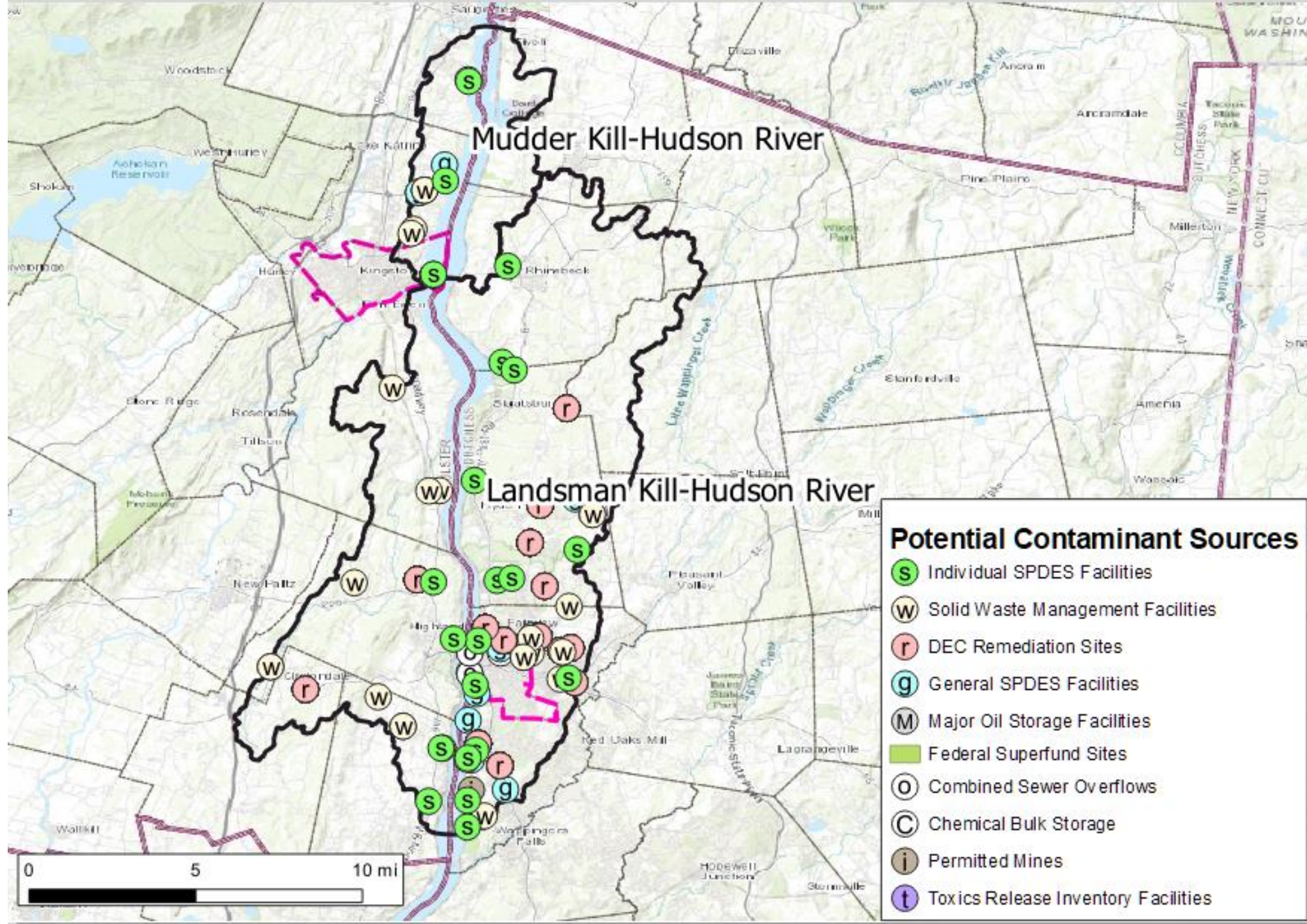






### Lower Walkkill River

Map labels include: West Shokan, Shokan, Ashokan Reservoir, Olivebridge, Hurley, Kingston, Rhinebeck, Statensburg, Hyde Park, Highland, Clintonville, Walden, and Cricleville. Major roads shown include NY 28, NY 29, NY 286, NY 287, NY 288, NY 289, NY 290, NY 291, NY 292, NY 293, NY 294, NY 295, NY 296, NY 297, NY 298, NY 299, NY 300, NY 301, NY 302, NY 303, NY 304, NY 305, NY 306, NY 307, NY 308, NY 309, NY 310, NY 311, NY 312, NY 313, NY 314, NY 315, NY 316, NY 317, NY 318, NY 319, NY 320, NY 321, NY 322, NY 323, NY 324, NY 325, NY 326, NY 327, NY 328, NY 329, NY 330, NY 331, NY 332, NY 333, NY 334, NY 335, NY 336, NY 337, NY 338, NY 339, NY 340, NY 341, NY 342, NY 343, NY 344, NY 345, NY 346, NY 347, NY 348, NY 349, NY 350, NY 351, NY 352, NY 353, NY 354, NY 355, NY 356, NY 357, NY 358, NY 359, NY 360, NY 361, NY 362, NY 363, NY 364, NY 365, NY 366, NY 367, NY 368, NY 369, NY 370, NY 371, NY 372, NY 373, NY 374, NY 375, NY 376, NY 377, NY 378, NY 379, NY 380, NY 381, NY 382, NY 383, NY 384, NY 385, NY 386, NY 387, NY 388, NY 389, NY 390, NY 391, NY 392, NY 393, NY 394, NY 395, NY 396, NY 397, NY 398, NY 399, NY 400.



# Next steps:

- Get input from the H7 at large!