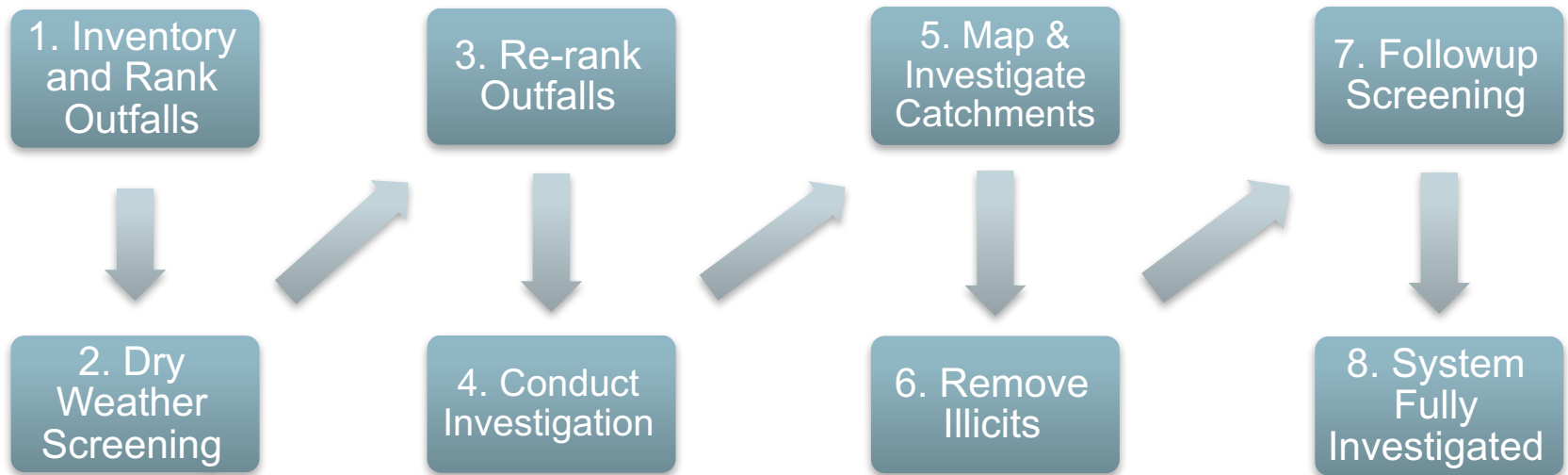


CT MS4 General Permit: Catchment Assessment and Ranking

IDDE Workshop

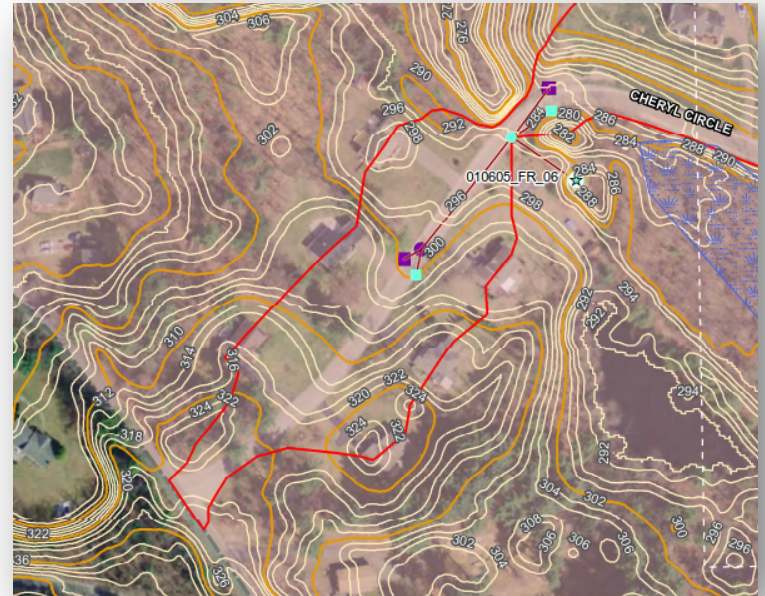
September 27, 2017

IDDE Program Protocol



Outfall/Catchment Assessments

- **Inventory**
- **Mapping**
- **Catchment Delineations**
 - CTDEEP Local Basins
 - Outfall driven delineations
- **Priority Ranking**
 - Screening Factors
- **Outfall Screening**
- **Catchment Investigations**
- **Source Isolation**

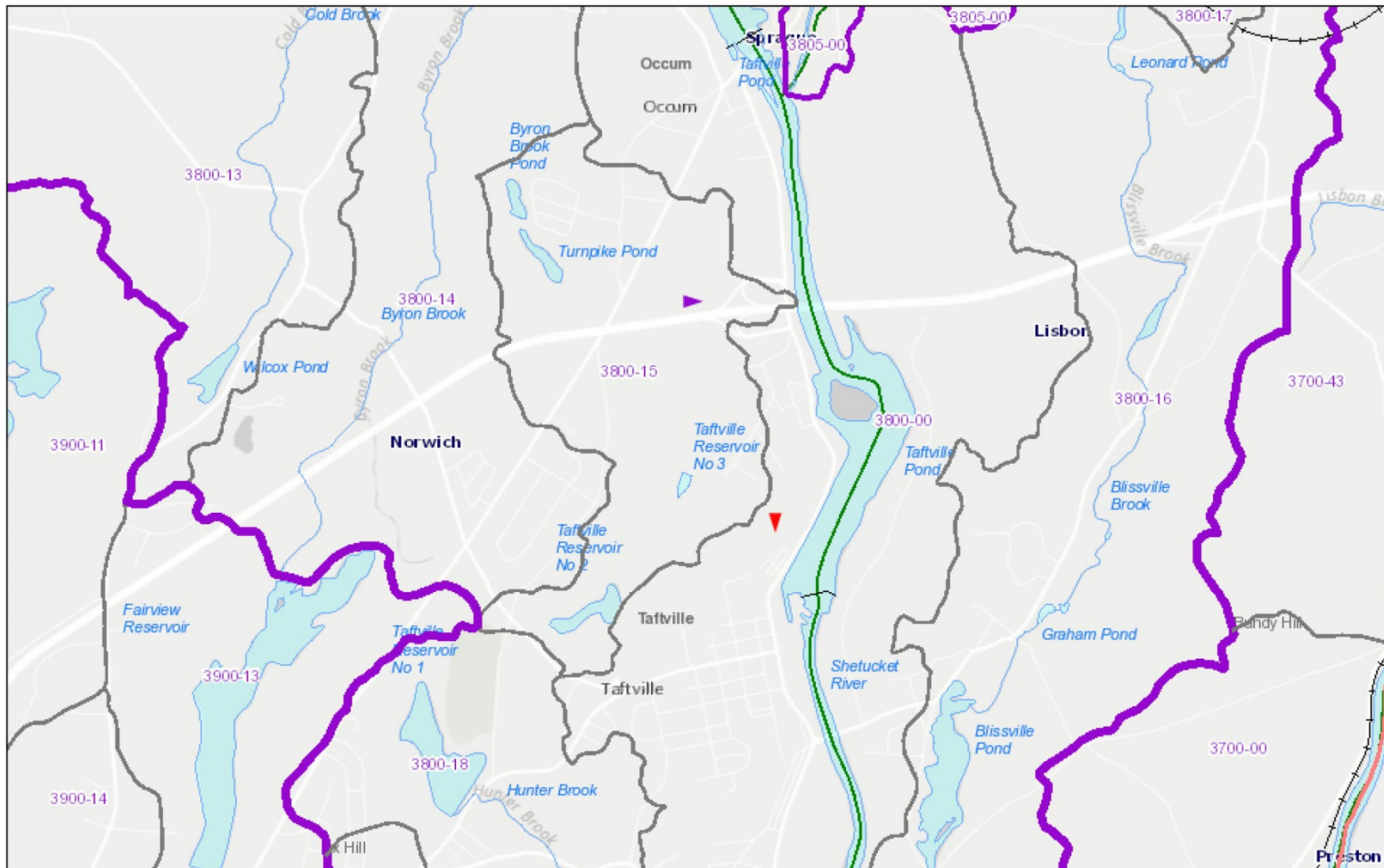


Who, What, Where, When...



- **Who: Regulated MS4**
- **What: Catchment Assessment and Priority Ranking**
- **Where: Urbanized Area and Priority Areas**
- **When: 2 years from effective date (July 1, 2019)**
- **This is mostly a desktop exercise**

Local Basins



September 26, 2017

2016 CT Stormwater Impaired Rivers

CT MS4 Municipalities

Existing MS4 Town

New MS4 Town

Not Included

Local Basin Line

Major Basin

Regional Basin

Subregional Basin

Local Basin

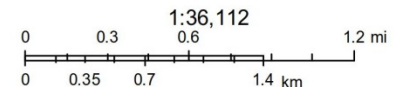
Local Basin Poly

Local Drainage Basin Direction

Outlet Direction

Main Stem Direction

Coastal Direction



USGS, CT DEEP
CT DEEP

Web AppBuilder for ArcGIS

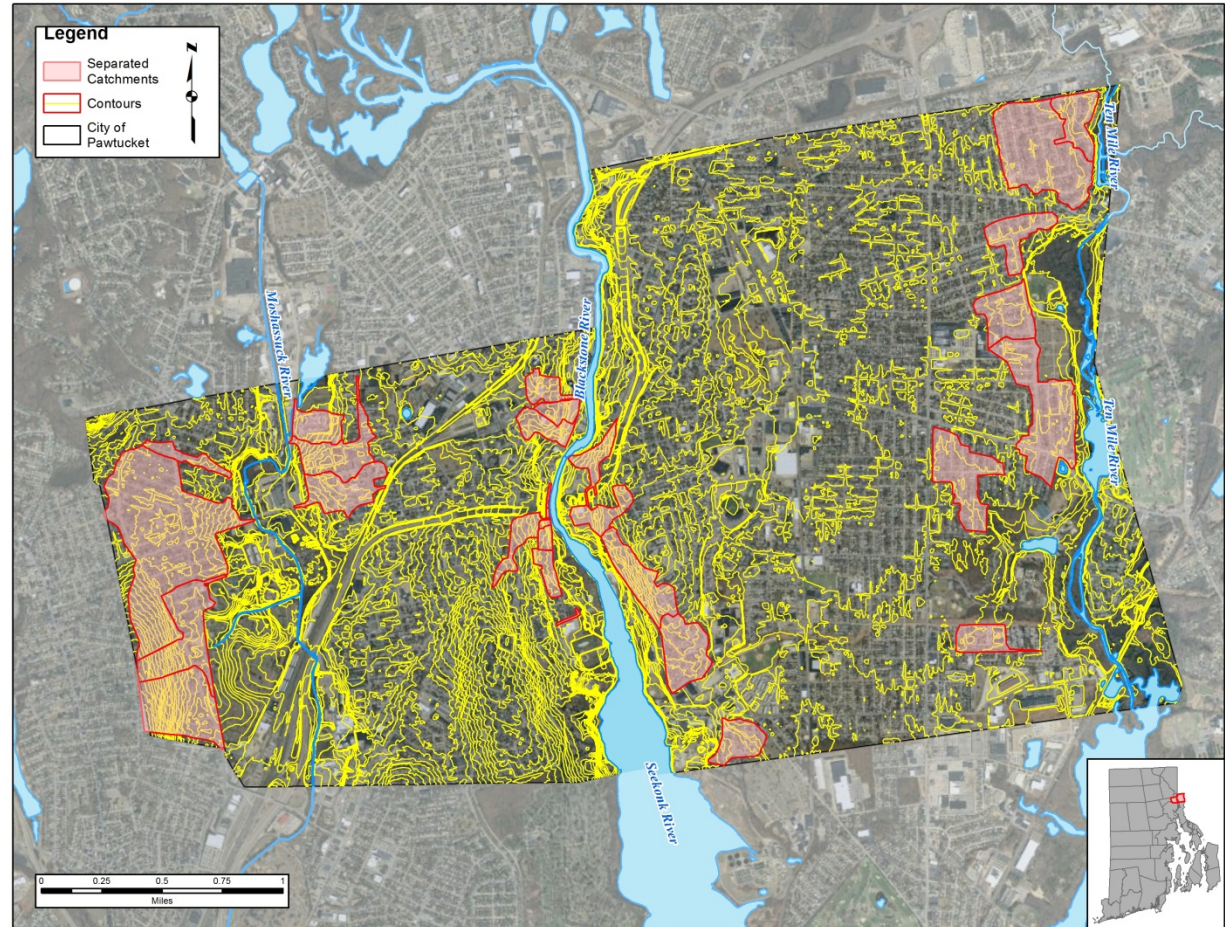
Catchment Delineations

“Catchment area” means the land area from which stormwater runoff is collected by a permittee’s MS4 and discharges through a single outfall to surface water.

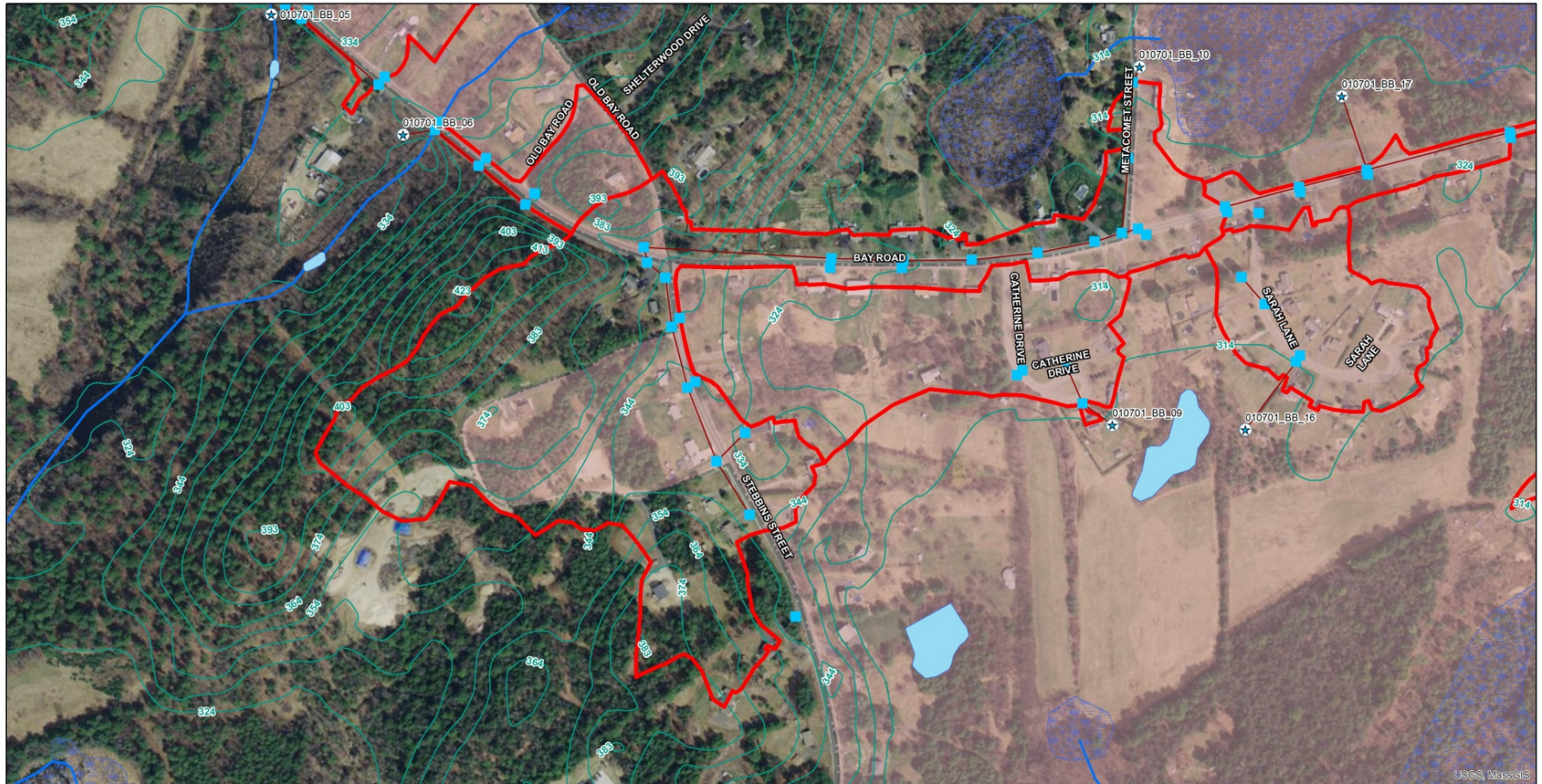
- **Mapping**
 - **Outfalls**
 - **Pipes**
 - **Open channel conveyances**
 - **Catch basins**
 - **Manholes**
 - **Interconnections**
 - **DUE: YEAR 3 (July 1, 2020)**
- **Other info you will need**
 - **Contours**
 - **Aerial imagery**
 - **As-builts**
 - **Paper maps**
 - **Sewer or CSO infrastructure**

Things to consider when delineating

- Catch basin placement
- Road grading
- Building footprints and roof lines
- Topographic vs. piped boundaries



Delineation Example



Legend

INLET_GPS	Culvert	Sanitary Sewer Manhole	StreamRiver	Catchments	NRCSHUC_POLY
Catchbasin	Ret_Pond	Hold_Tank	LakePond	10 ft Elevation Contour	UrbanizedAreaLimits
Manhole	Spillway	Outfall	Reservoir	2 ft Elevation Contour	
WQ Manhole	Wier	Storm Drain Lines	SwampMarsh	Massachusetts Municipalities	

Outfall/Catchment Screening Factors

- Past discharge complaints
- Poor dry weather receiving water quality
- Density of generating sites
- Age of surrounding development and infrastructure
 - >40 years old = high potential for illicit discharges
- Sewer conversion
- Historic combined sewer systems
- Density of aging septic systems
- Culverted streams
 - Greater than one road crossing

Ranking Categories

- Problem
- High Priority
- Low Priority
- Excluded



Outfall/Catchment Ranking

- **Problem**
 - Known or suspected contributions of illicit discharges based on existing information
 - Visual/Olfactory Evidence
 - Do not need to be screened
 - Identified during initial ranking, cannot add to Problem category after initial ranking



Outfall/Catchment Ranking

- **High Priority**
 - Not initially categorized as “Problem”
 - Discharging to an area of concern to public health
 - *beaches, recreation areas, shellfish beds, and/or drinking water supplies*
 - Any outfall /catchment where screening results indicate sewer input based on olfactory/visual evidence or sampling results



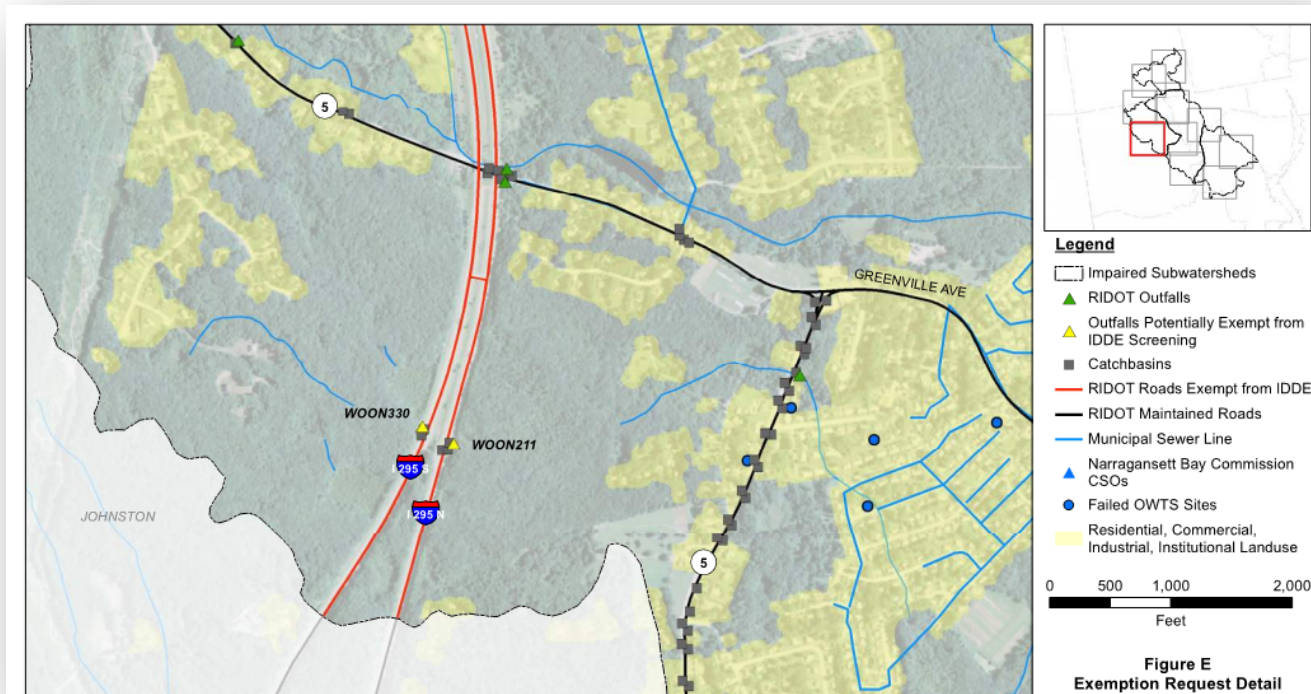
Outfall/Catchment Ranking

- **Low Priority**
 - Not identified as Problem or High Priority outfall/catchment
 - Lack of screening or system vulnerability factors



Outfall/Catchment Ranking

- **Excluded**
 - No potential for illicit discharges
 - Limited to roadway drainage in undeveloped areas with no dwellings and no sanitary sewers,
 - Drainage from athletic fields
 - Parks or undeveloped green space and associated parking without services



Schedule

IDDE Program Element	Years from Effective Date of Permit					
	1	2	3	4	5	10
Outfall Inventory and Mapping		X				
Initial Priority Ranking of Outfalls		X				
Detailed Storm System Mapping (including catchment delineations)			X			

Questions

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