

Cesspool Phase-out: Implementing the R. I. Cesspool Act of 2007

Land and Water Conservation
Summit

March 26, 2011

Rhode Island Department of Environmental Management

Office of Water Resources



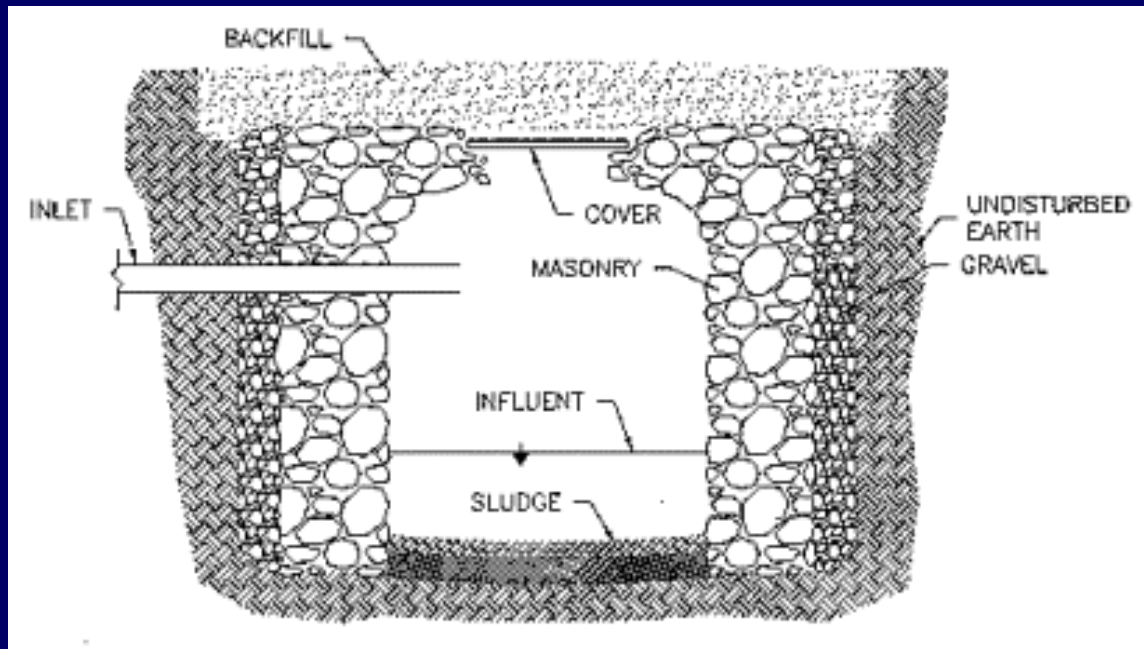
Overview of Session

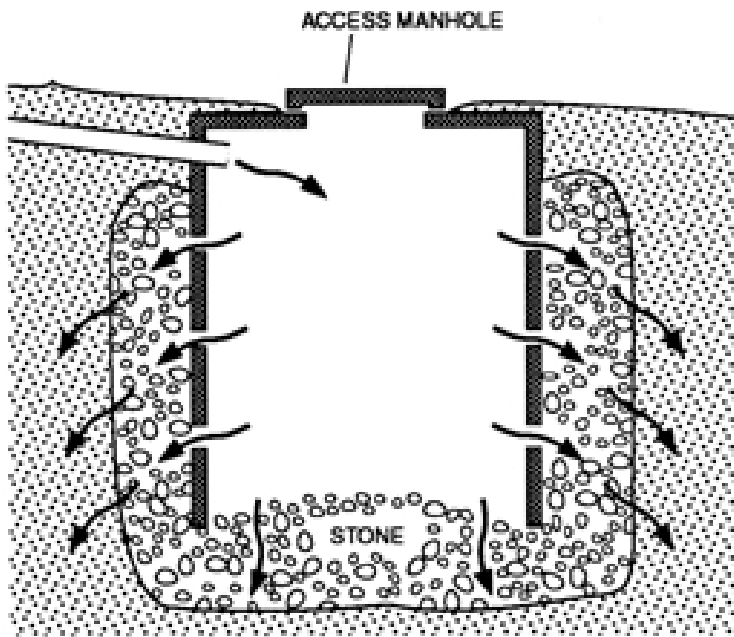
- Cesspools
- Summary of Cesspool Act
- Phase-out Implementation Steps
 - ◆ Site Selection
 - ◆ Homeowner Requirements
- Local Onsite Programs



What is a Cesspool?

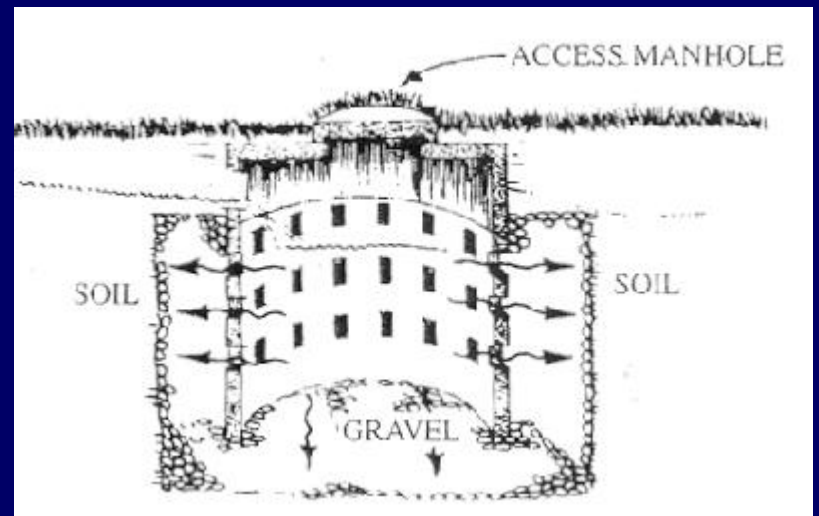
- A cesspool is any buried chamber that receives sewage from a building for disposal directly into the ground.
- Could be a metal tank, a perforated concrete vault, a “beehive,” or even just a covered excavation.





Steel Barrel

Concrete Galley



Cesspools in RI

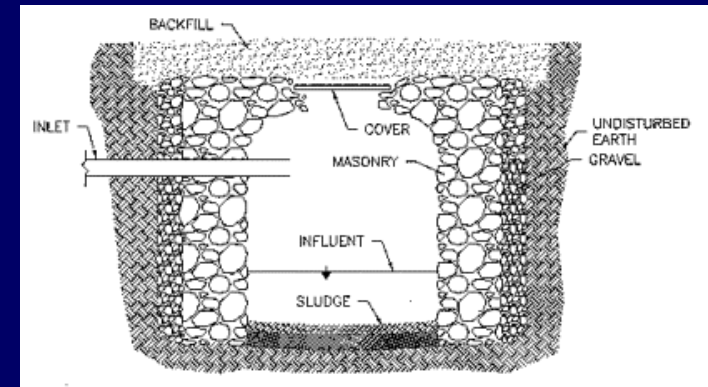
- Not an approved method of waste disposal – Substandard.
- Approximately 50,000 cesspools in RI.
- DEM approves about 1000 repairs/ replacements per year: 50% of these are cesspools. Approx. 50% of these cesspool replacements are result of property transactions.
- Cesspools **MUST** be removed and replaced IF;
 - ◆ Failed
 - ◆ Subject to 2007 Act
 - ◆ Large Capacity Cesspool



Why are Cesspools Bad?

- Poor Treatment Performance:
 - ◆ Concentrated disposal site
 - ◆ Disposal deep under ground
- Unreliable: Construction standards prior to 1968 were either non-existent or insufficient to meet today's needs.

- Undersized for wastewater flows from modern homes
- Physical degradation and collapse



Why are Cesspools Bad?

- Heightened Risk of Groundwater Contamination
 - ◆ Threat to drinking water for areas served by onsite wells
 - ◆ Threat to coastal environment (beaches and shellfishing) due to pathogens.

Legislative/Regulatory Background

- 2001 Regulatory strategies for phase-out first discussed
- 2002 First legislative proposal – all cesspools statewide by 2017
- 2003 Point of sale discussed
- 2004-06: 200' from all waters, private/public wells
- 2007 Act passed
- 2008 New comprehensive OWTS Rules (Onsite Wastewater Treatment Systems)
- 2009 Mapping and property identification
- 2010 Cesspool Phase-out in OWTS Rules (Rule 53)



Rhode Island Cesspool Act of 2007

- Affected areas are those:
 - ◆ Within 200 ft. of the inland edge of the coastal feature of a tidal waterbody (CRMC jurisdictional area).
 - ◆ Within 200 ft. of a public drinking water well.
 - ◆ Within 200 ft. of a water body with an intake for a drinking water supply.
- Towns with municipal cesspool phase-outs comparable to State law are exempt: Charlestown, South Kingstown, Block Island.



Rhode Island Cesspool Act of 2007

Cesspools in these 200 foot zones must be:

- Inspected by a System Inspector by January 1, 2012.
- Failed cesspools must be replaced within 1 year of discovery.
- In areas already sewerred: Must connect to the sewer system within one year of property sale.
- All other cesspools in the 200' zones removed by January 1, 2013.



What is a failed cesspool?

- Cesspool fails to accept sewage, as evidenced by sewage backing up onto the ground surface or into the building it serves;





Image: DEM Office of Compliance & Inspection





Image: DEM Office of Compliance & Inspection

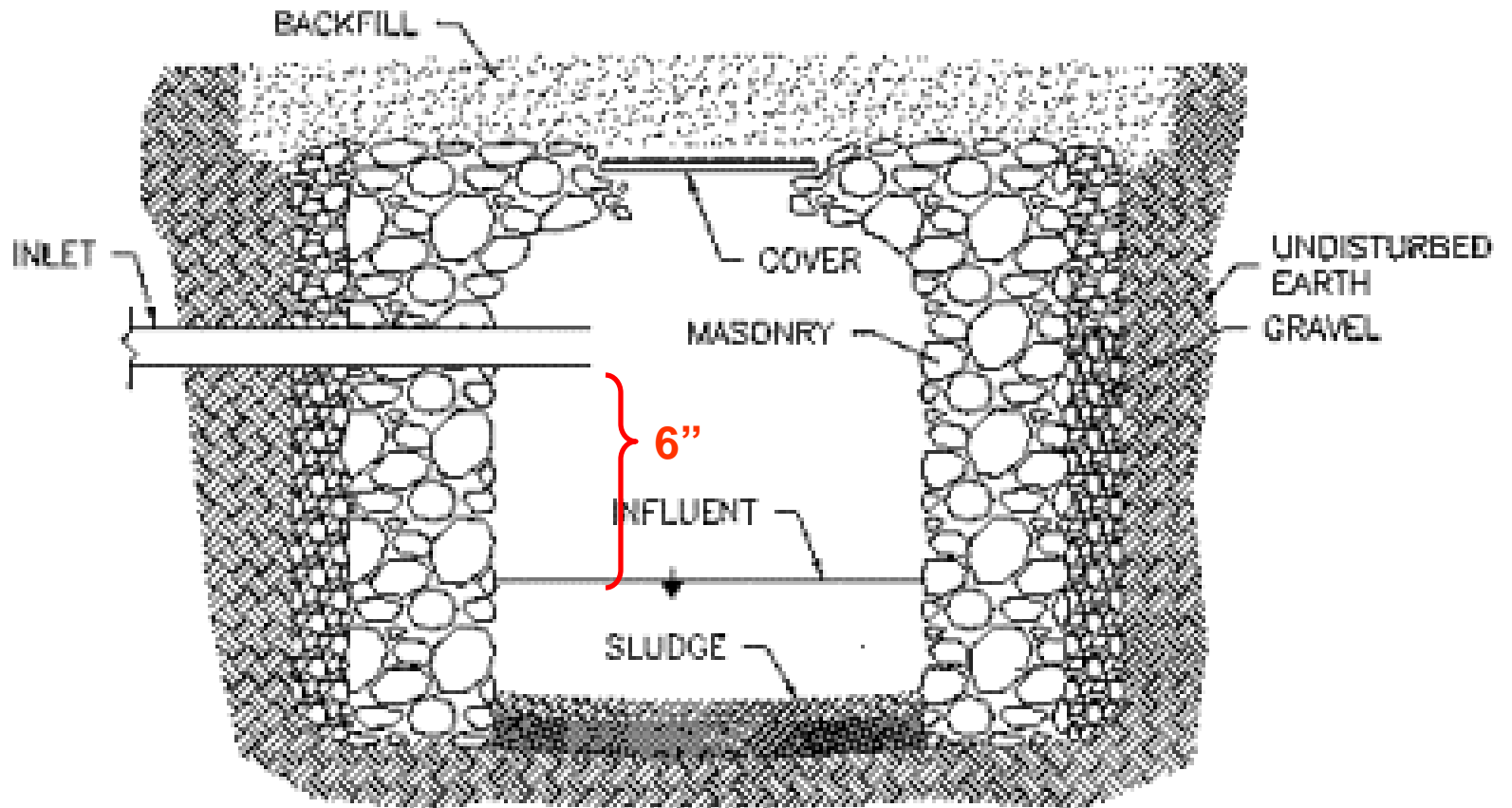


Image: DEM Office of Compliance & Inspection

What is a failed cesspool?

- The liquid level in the cesspool is less than 6 inches from the bottom of the pipe that drains into it;







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What is a failed cesspool?

- The cesspool has to be pumped more than 2 times per year;
- The cesspool has been shown to have contaminated a drinking water well, stream or wetland; or
- The bottom of the cesspool is below the groundwater table at any time of year, resulting in direct connection between the waste in the cesspool and the groundwater.



Cesspool

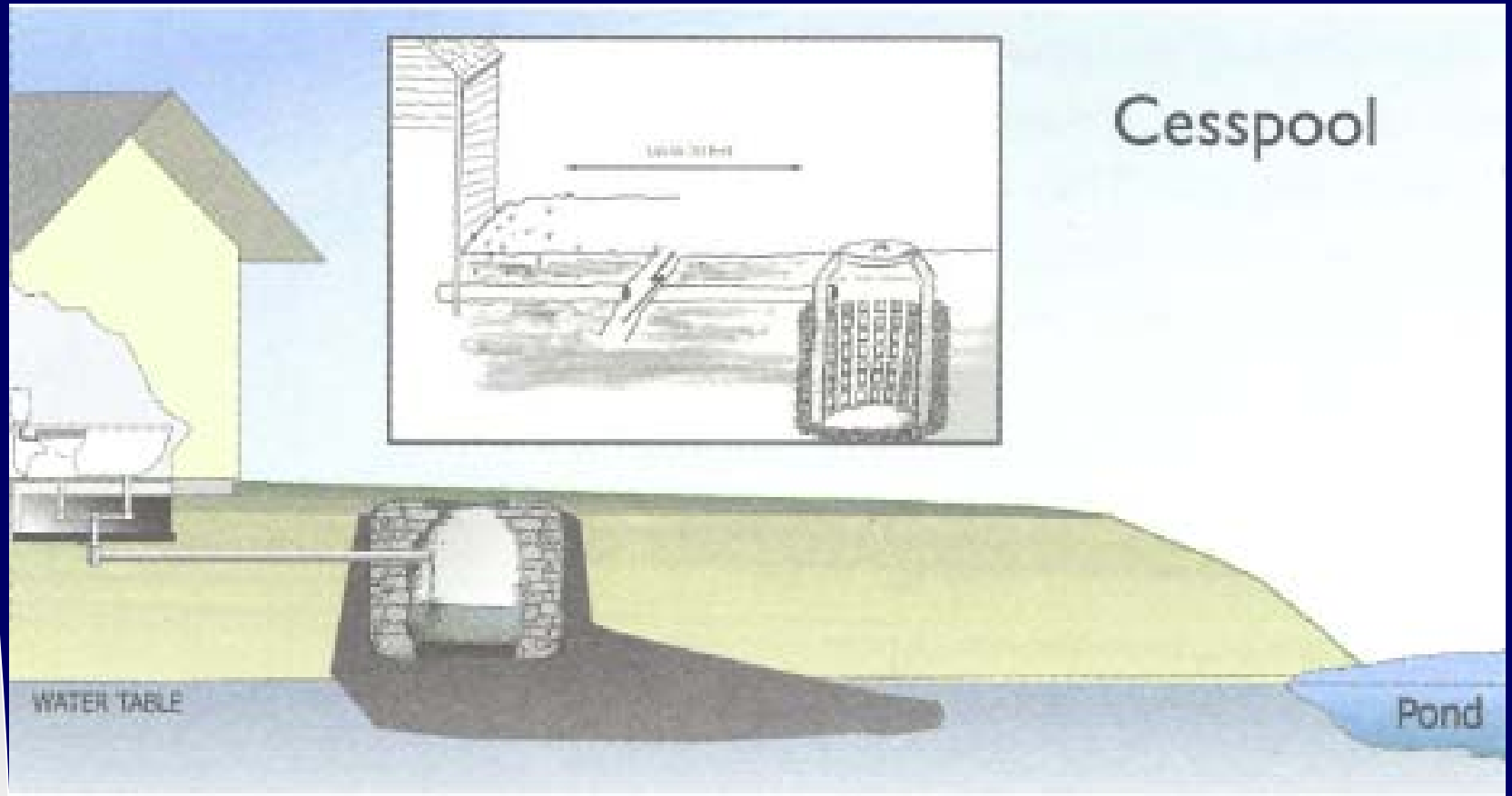


Image: URI Cooperative Extension Fact Sheet *Septic System Information for Rhode Islanders: What's in Your Backyard?*

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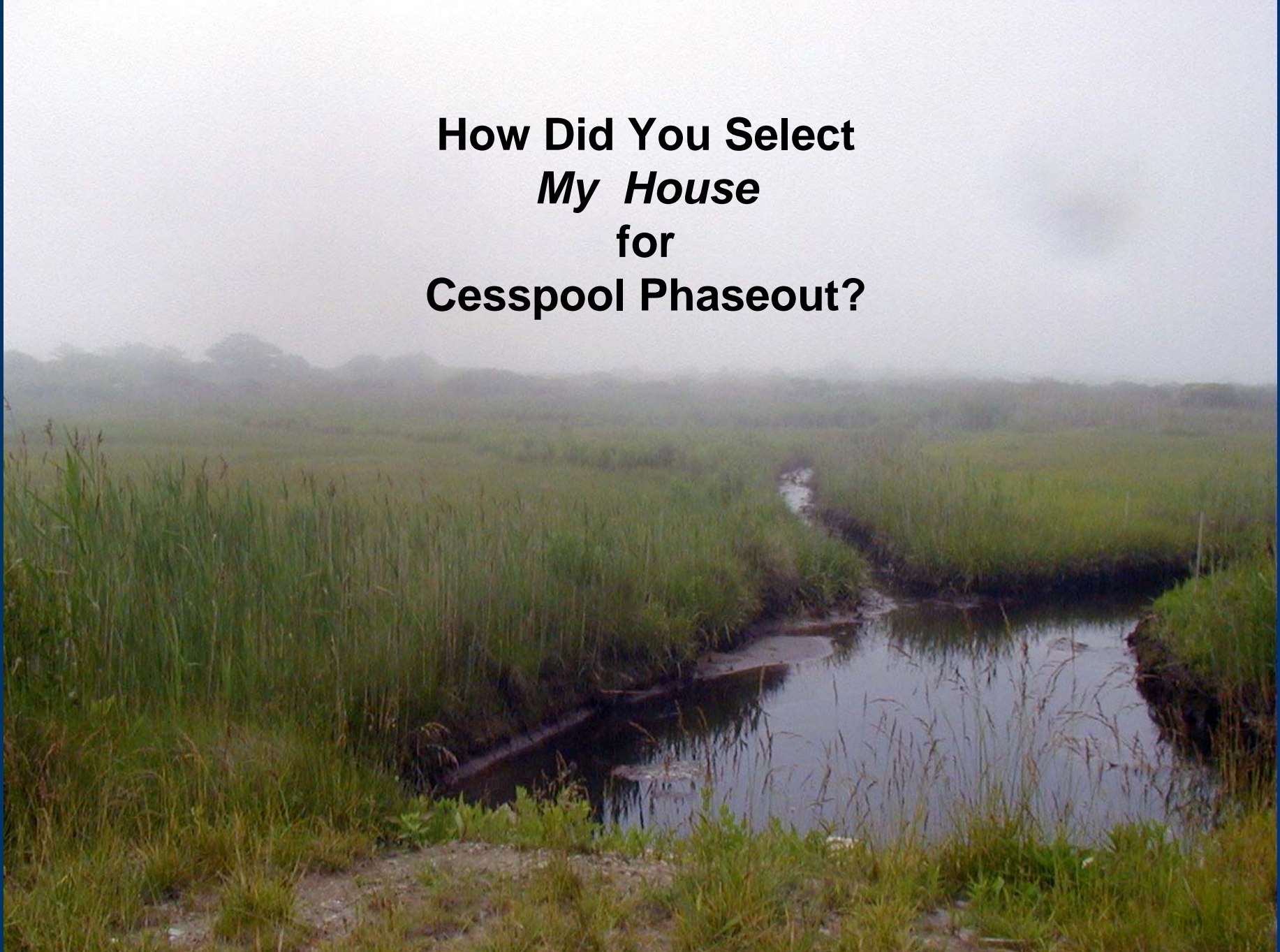


Property Selection

- As of March – approximately 3730 properties have been identified.
- Approximately:
 - ◆ Coastal – 3400
 - ◆ Public wells – 300
 - ◆ Reservoirs – 30



**How Did You Select
My House
for
Cesspool Phaseout?**



What is a Coastal Shoreline Feature?



Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879
Telephone: 401-783-3370
<http://www.crmc.ri.gov/>

Coastal Shoreline Features Section 210 of the Coastal Resources Management Program

Pursuant to R.I. General Laws § 46-23-6, the Coastal Resources Management Council (CRMC) has jurisdiction over activities in tidal waters of the state (out to 3 miles) and on all coastal shoreline features and their 200-foot contiguous area (i.e., the 200-foot area landward of the shoreline feature). A CRMC permit is required for any construction or alteration activity on a shoreline feature or within 200 feet of a shoreline feature, and within tidal waters of the state.

Please consult with CRMC staff for shoreline feature verification and applicable setback requirements. Remember, setbacks and buffers are always measured from the most inland edge of the shoreline feature. In some cases there may be more than one shoreline feature on a site, and the setback will be determined by the most inland coastal shoreline feature. See Coastal Resources Management Program Section 140.

When there is uncertainty as to whether CRMC jurisdiction applies to a property, landowners may file a preliminary determination application (\$100 fee). An application is available from the CRMC website at:
<http://www.crmc.ri.gov/applicationforms/pdfs/Prelimdet.pdf>

Coastal Beaches (Section 210.1)
Coastal beaches include expanses of unconsolidated, usually unvegetated sediment commonly subject to wave action, but may also include a vegetated beach berm. Beaches extend from mean low water landward to an upland rise, usually the base of a dune, headland bluff, or coastal protection structure, pilings or foundation. Accordingly, there may be other shoreline coastal features inland of the coastal beach, and the setback would be determined on the most inland edge of these other coastal shoreline features.



Coastal Beach

Barrier Islands and Spits (Section 210.2)
Barriers are islands or spits comprised of sand, gravel or cobble extending parallel to the coast and separated from the mainland by a coastal pond, tidal water body, or coastal wetland. In addition to a beach, barriers have, in most cases, a frontal foredune zone and often, back barrier dune fields. The lateral limits of barriers are defined by the area where unconsolidated sand or gravel of the barrier abuts bedrock or glacial sediment. The entire barrier is considered a coastal shoreline feature, so a project located anywhere on the barrier would be within CRMC jurisdiction.



Coastal Barrier

Coastal Wetlands (Section 210.3)
Coastal wetlands include salt marshes and freshwater or brackish wetlands contiguous to salt marshes or other shoreline features. Areas of open water within coastal wetlands are considered a part of the wetland. In addition, coastal wetlands also include freshwater and/or brackish wetlands that are directly associated with non-tidal coastal ponds and freshwater or brackish wetlands that occur on

a barrier beach or are separated from tidal waters by a barrier beach. The setback would be determined by the location of the most inland edge of the wetland or the inland edge of an adjacent and more inland shoreline feature, for example a low coastal bluff or a man-made bulkhead or seawall.



Coastal Wetland



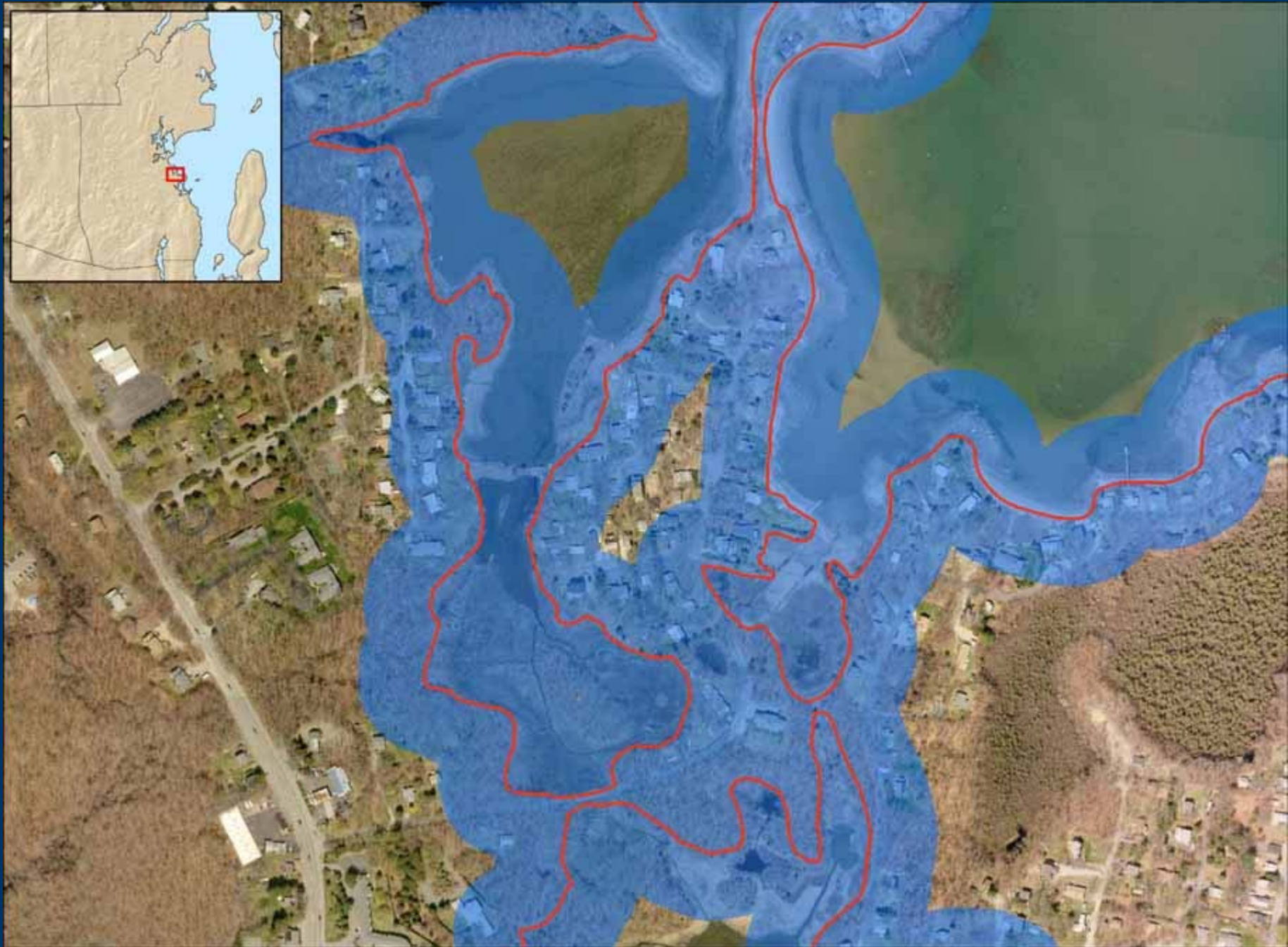
Coastal Wetland

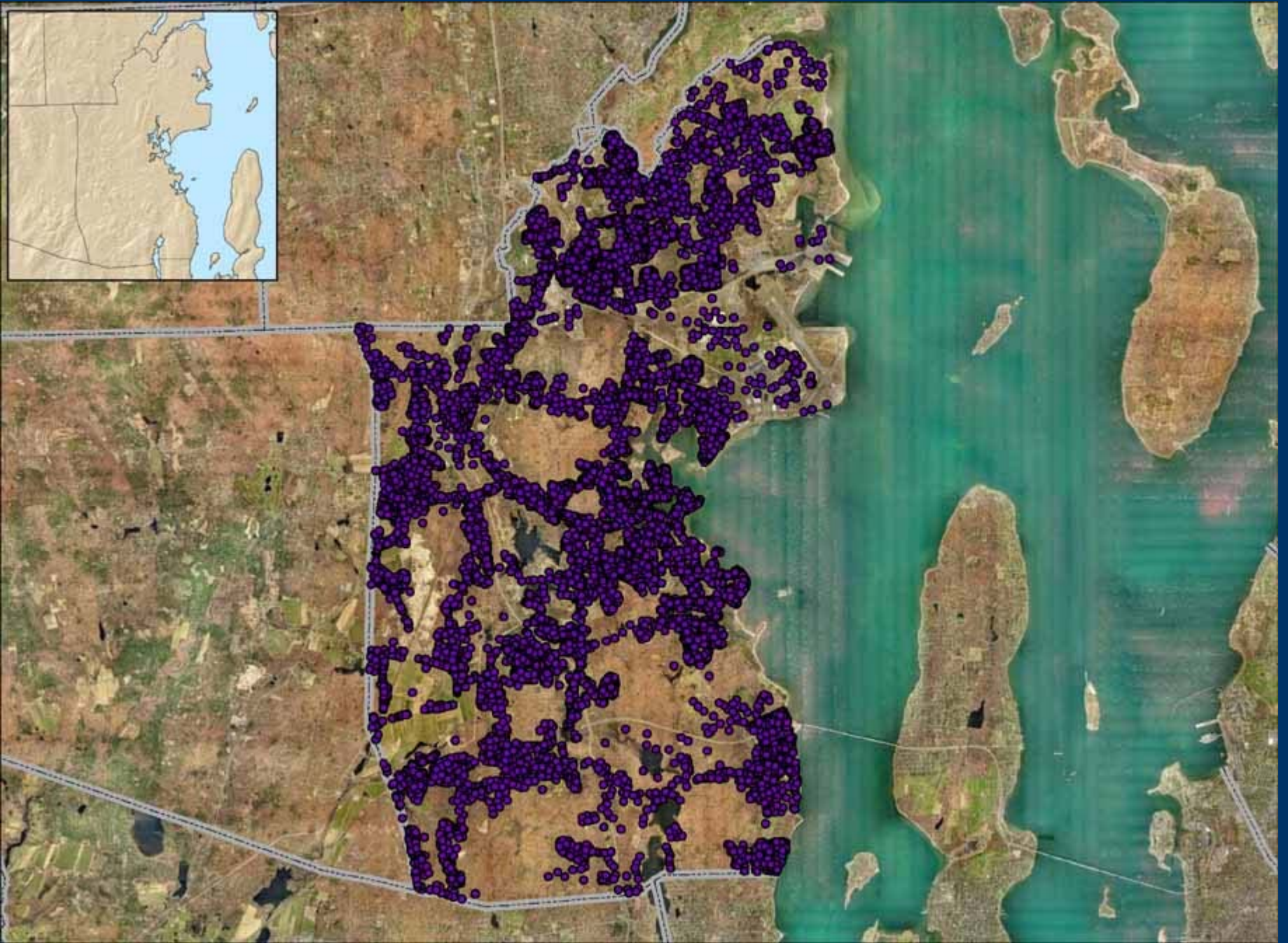


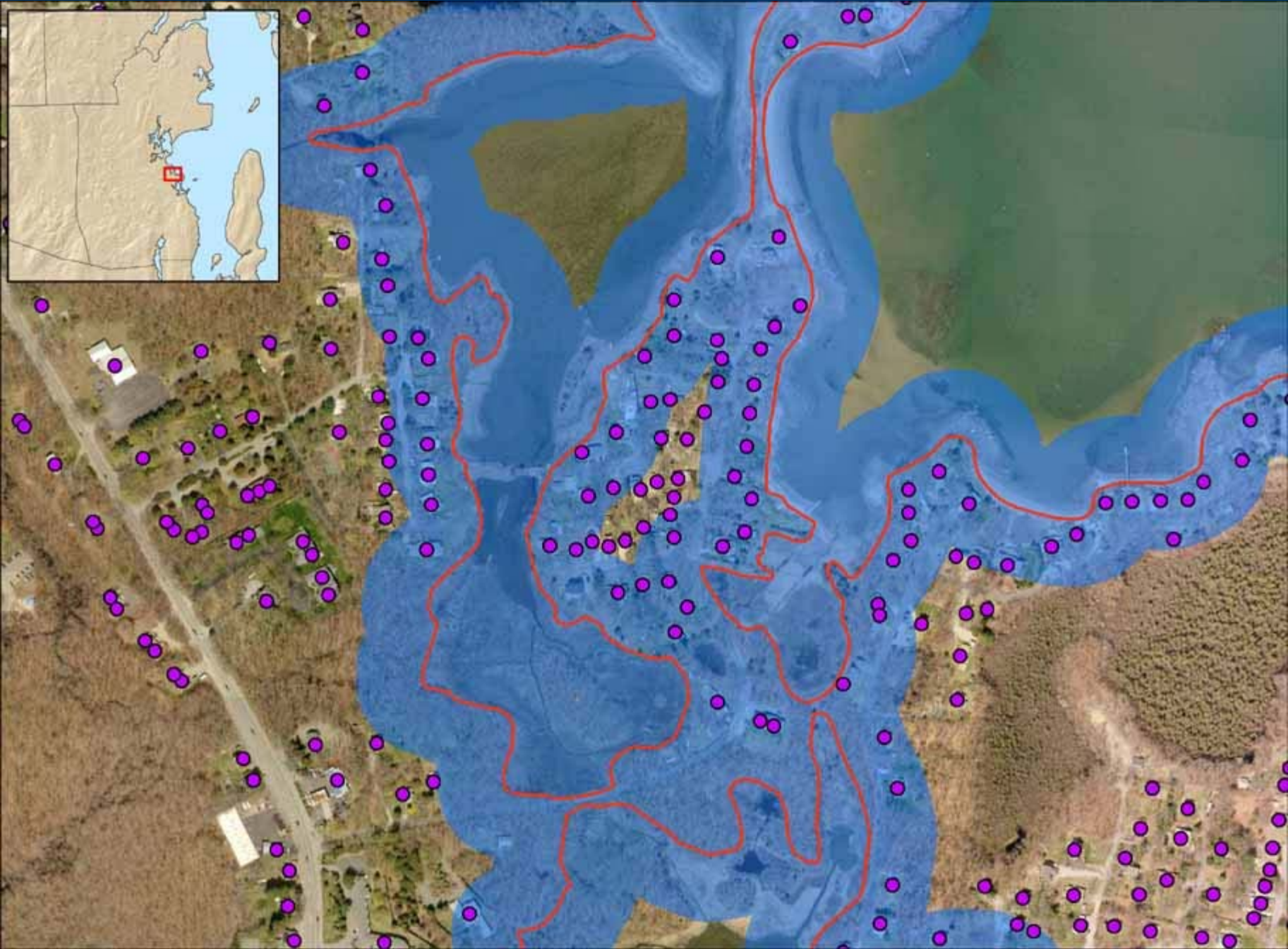


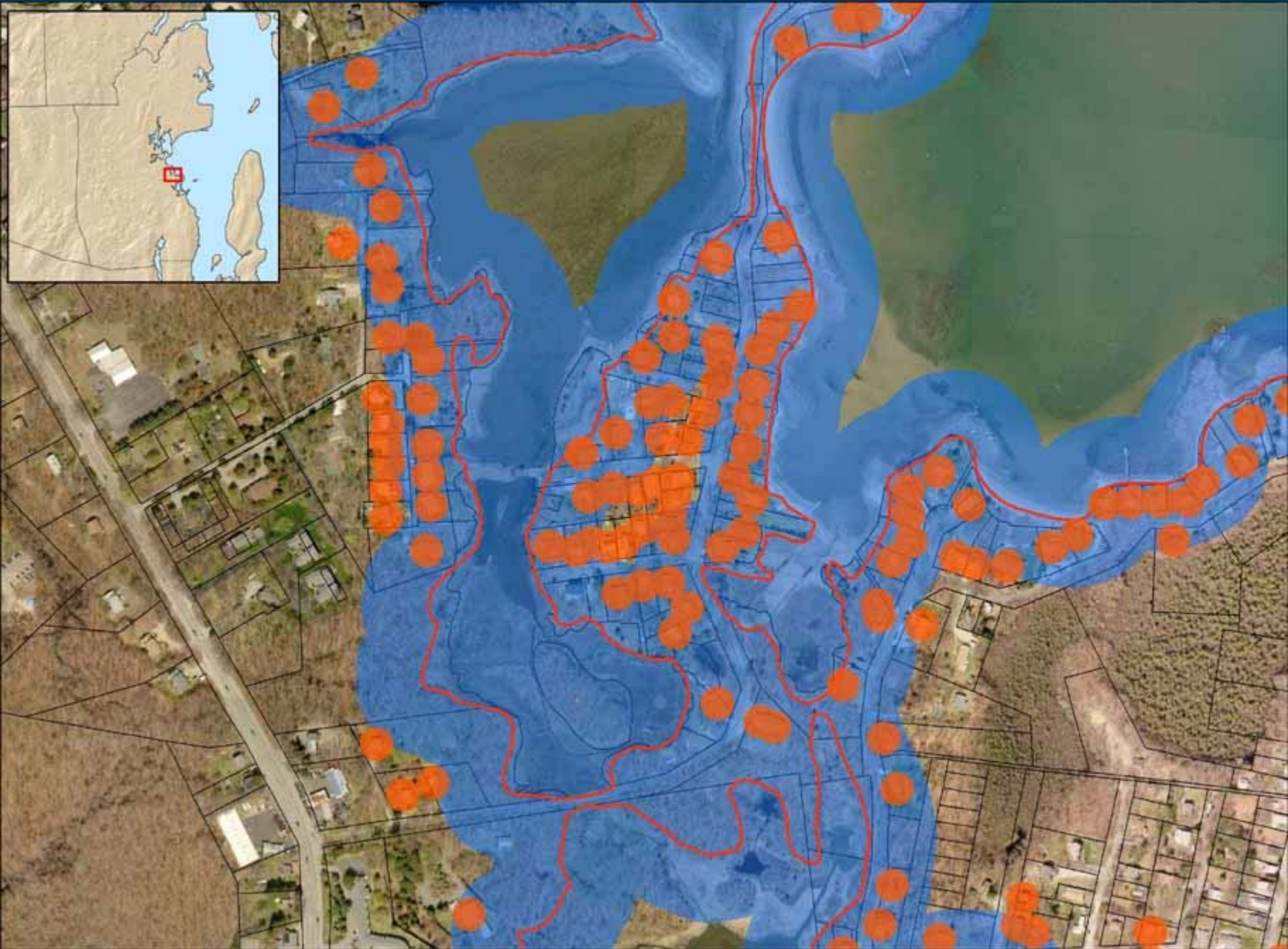


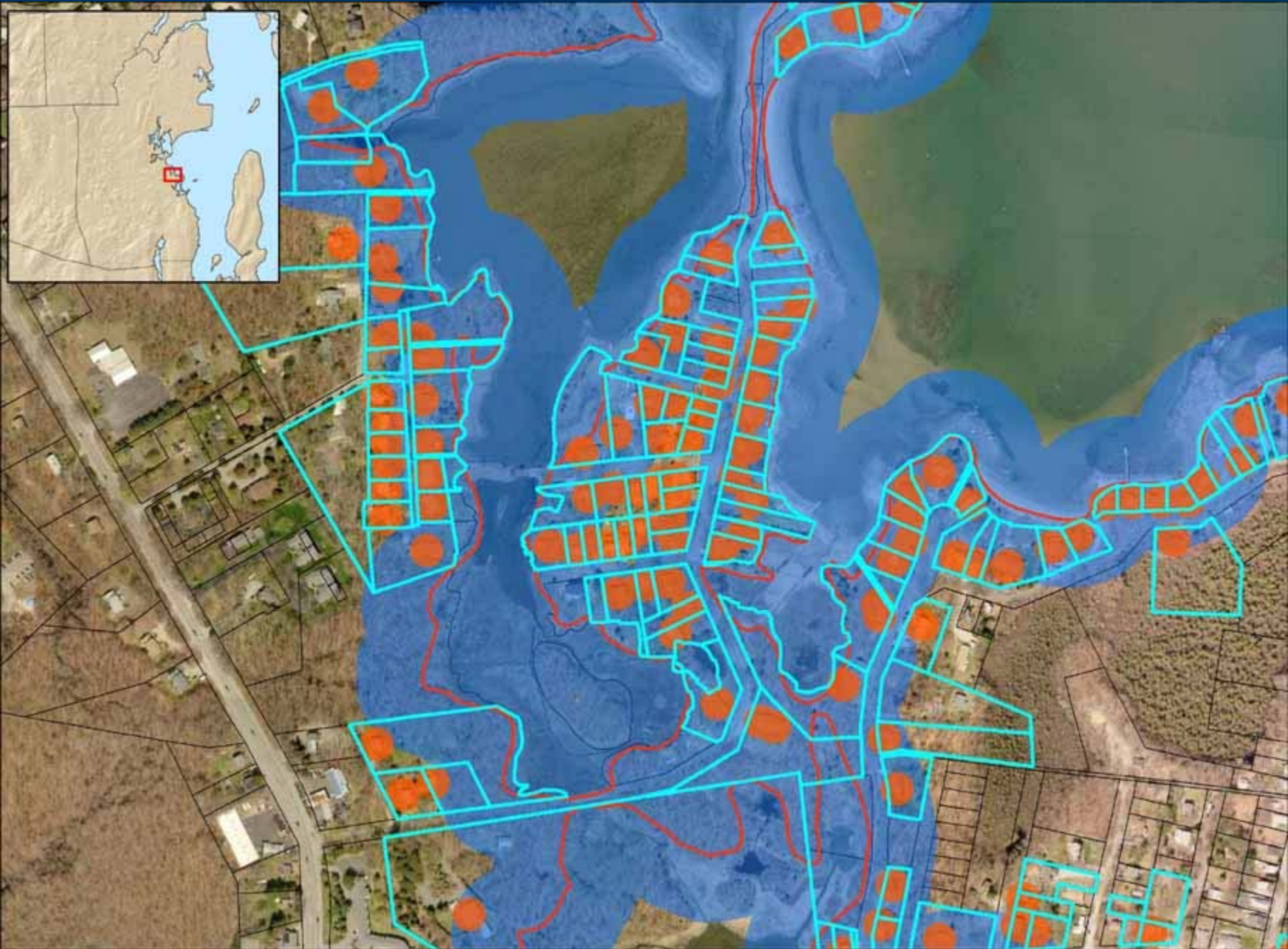












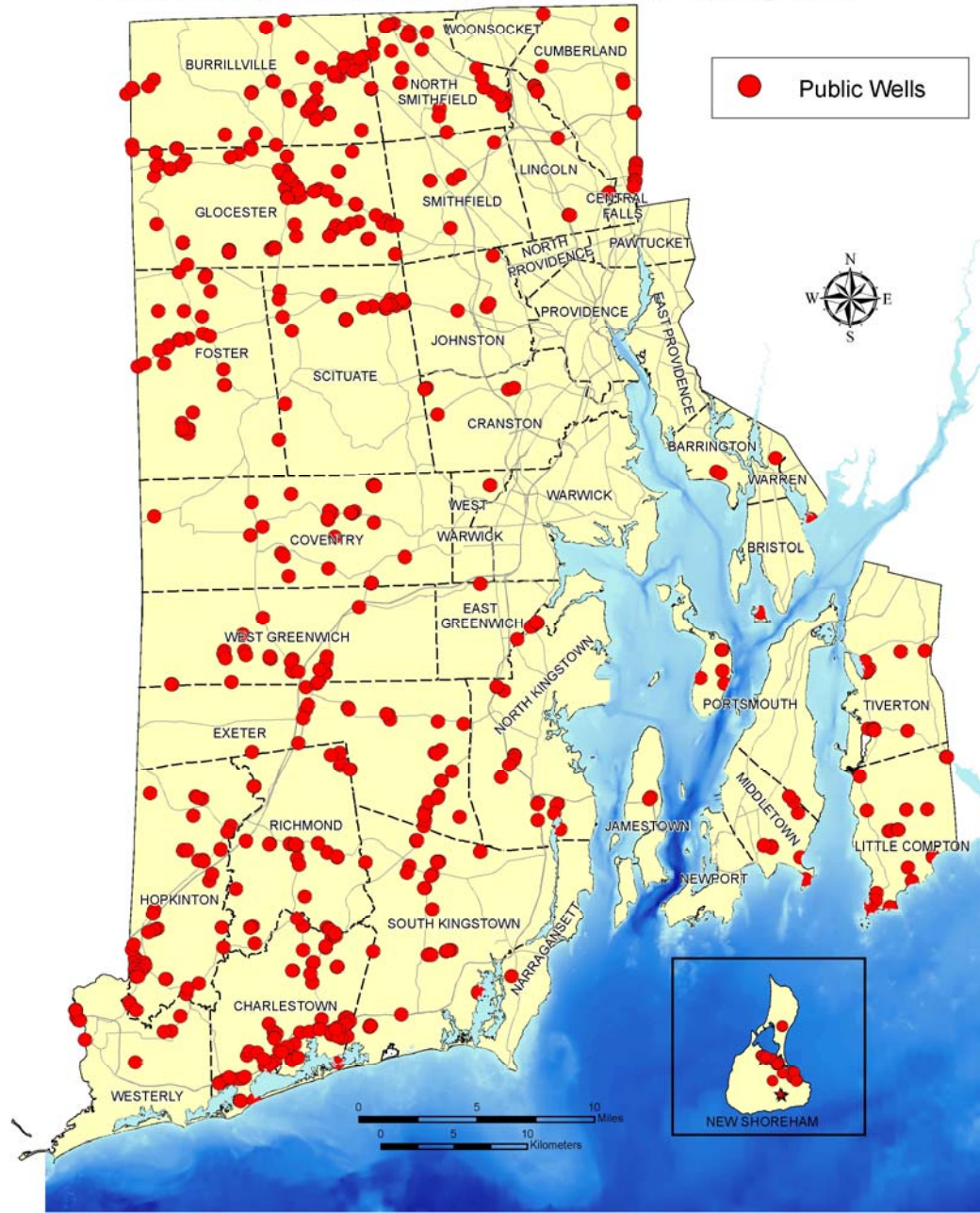
Wells and Reservoirs

- Within 200 feet of a public well. 657 Public Wells in RI – from major municipal wells to wells serving schools, nursing homes, restaurants and hotels.
- Within 200 feet of the drinking water supply impoundment that has an intake for a water supply.



Rhode Island Public Wells

Rhode Island Department of Environmental Management

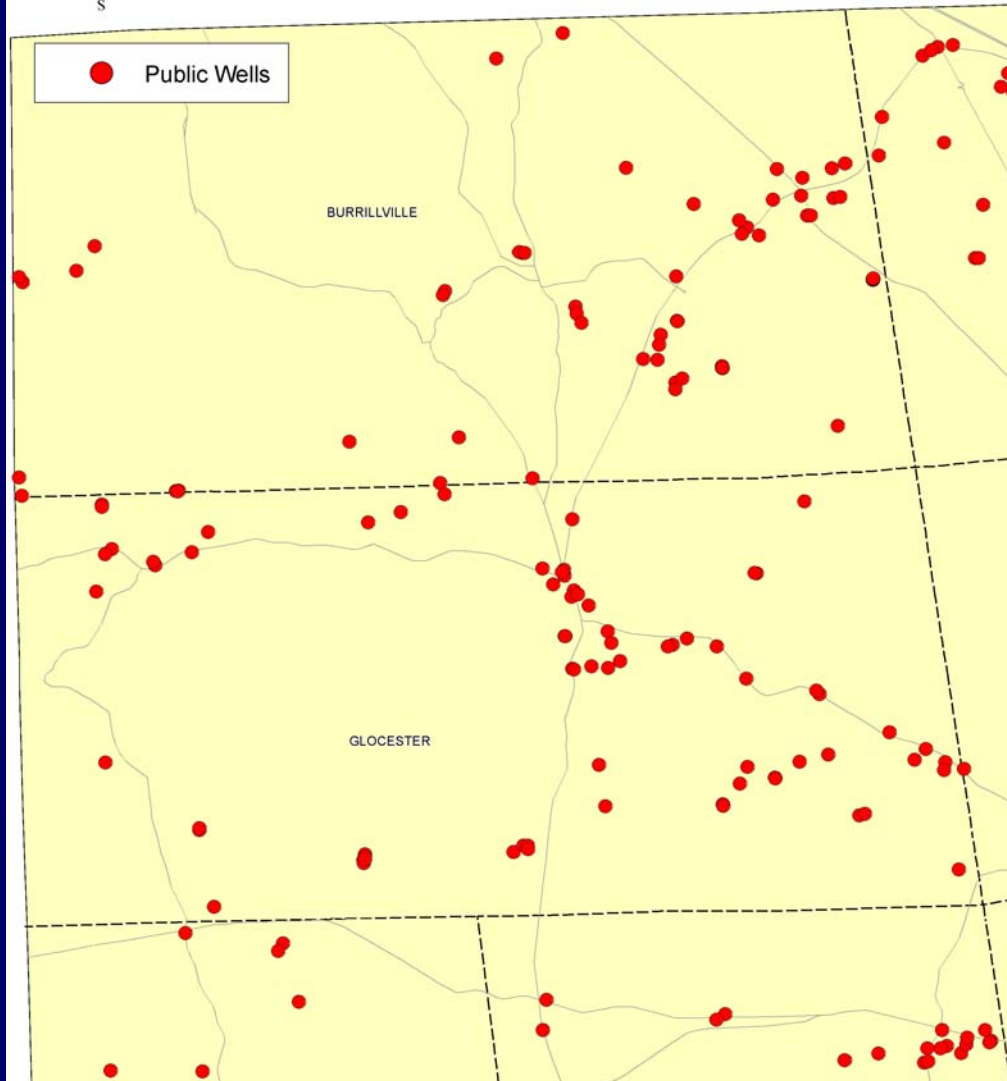


Rhode Island Public Wells

Rhode Island Department of Environmental Management



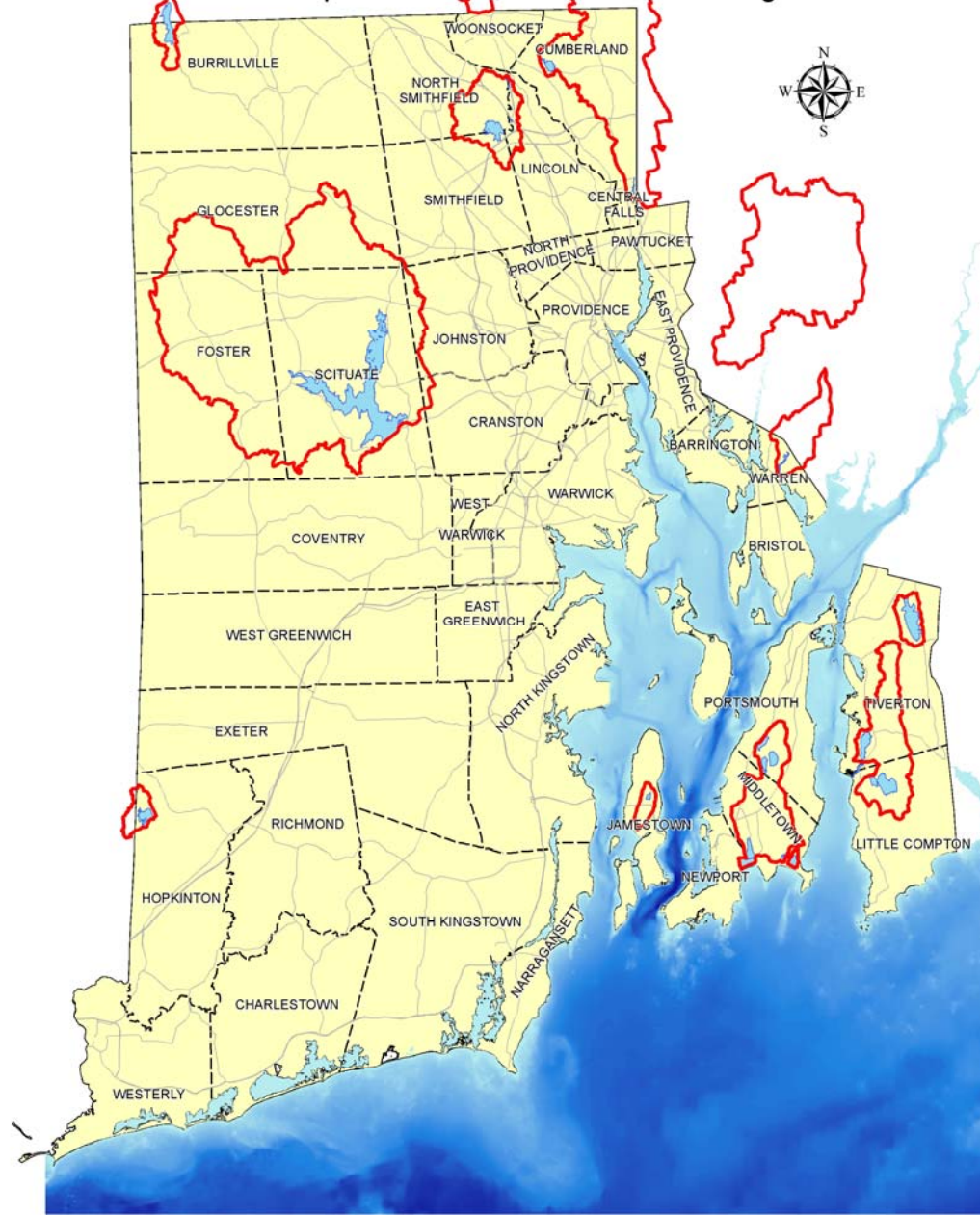
● Public Wells





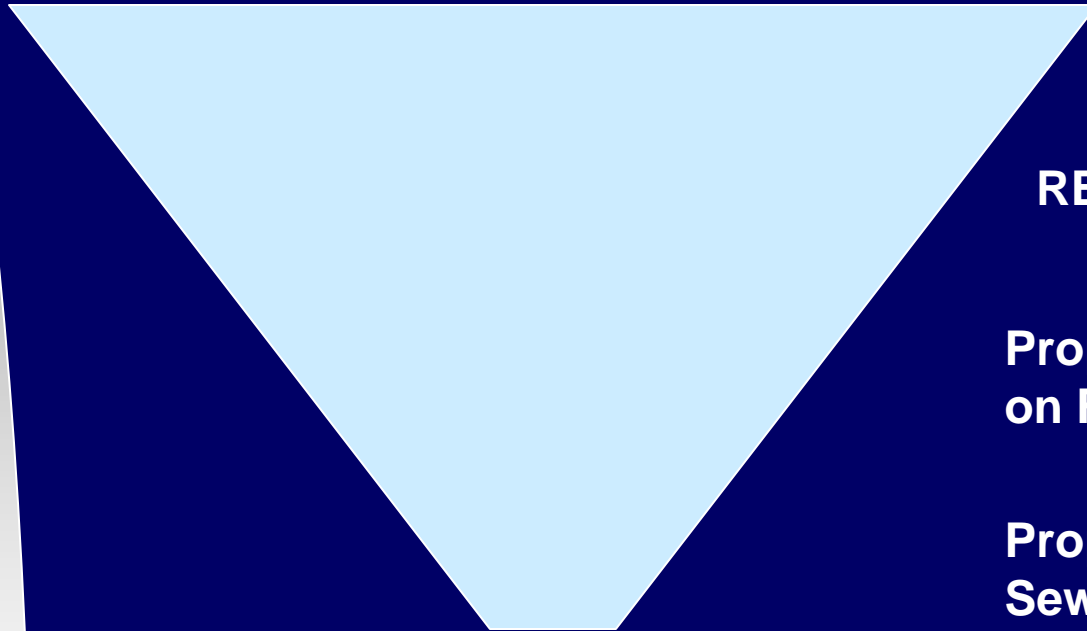
Drinking Water Reservoir Watersheds

Rhode Island Department of Environmental Management



Site Selection

All Properties That Could
Contain a Cesspool Within 200'
Zones Based on Location Alone



REMOVE FROM LIST:

**Properties with OWTS Permit
on File with DEM**

**Properties with Documented
Sewer Connection**

**SMALLER List of Properties Likely to be
Subject to Cesspool Act (These Property
Owners Will Receive a Letter)**



Mailings

- Following towns all have >350 properties identified: Warwick, Portsmouth, Tiverton, North Kingstown, Narragansett.
- Letters have been sent to North Kingstown, Jamestown and Narragansett.
- Even if you don't get a letter from DEM and you do have a cesspool within the 200 foot zones, Rules still apply.





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Property Not Subject to the Act?

- Homeowners may demonstrate to DEM that the Cesspool Act does not apply:
 - ◆ Show property not served by cesspool.
 - ◆ Show cesspool not within 200' zones.
- Self-certification allowed, but substantive evidence required.



Exemptions to Replacement Requirement

If the Cesspool is Not Failed

- Area is to be sewerred within 5 years: No upgrade required unless cesspool fails, BUT must connect to sewer within 6 months of completion.
- In areas already served by sewers: Must connect within one year of property sale.





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Temporary Hardship Extension

- Delays upgrade deadline as late as January 1, 2018 for eligible property owners. Extension expires with property sale.
- Income \leq 80% Area Median
- Cesspool must not be failed.



What is 80% AMI?

- Most of RI
 - ◆ 2 person: \$46,200
 - ◆ 4 person: \$57,700
- Newport, Middletown, Portsmouth
 - ◆ 2 person: \$51,550
 - ◆ 4 person: \$64,400
- Hopkinton, Westerly, New Shoreham
 - ◆ 2 person: \$50,200
 - ◆ 4 person: \$62,700



How Much Will This Cost?

- Keep in mind everything is site-specific!
- Inspection: \$75-\$250, plus an additional \$175-\$200 if pumping needed.
- Replacement with OWTS:
 - ◆ Conventional: \$10,000-\$15,000
 - ◆ A/E (more constrained lots): \$20,000-\$25,000
- Connect to sewer line: \$1,000-\$2,000



Financial Assistance

- RI Community Septic System Loan Program (CSSLP)
 - ◆ Low interest loans (2%) 10 year loans available for repair or replacement.
 - ◆ Towns must have approved Onsite Wastewater Management Plan to participate
- 11 Towns participate in CSSLP
- Since 1999, \$7.9 million has been loaned out.
- Towns may also apply for CDBG Funds.





Onsite Wastewater Management Plan Review Criteria

- Description of the management area
- Community assistance program for OWTS repair/replacement
- Method to ensure OWTS maintenance (inspection and tracking)
- Financial analysis
- 15 towns have an approved plan



Ideal Local Onsite Wastewater Management Program

- Onsite Plan/CSSLP
- Local ordinance
- Mandatory inspections
- Web based tracking system
- Website for outreach information
- Local staff dedicated to program management
- Cesspool phase-out



Municipal Cesspool Phase-out

- Block Island: townwide, done
- South Kingstown: townwide, done
- Charlestown: townwide (zones) by 2014
- Tiverton: Stafford Pond watershed, done; point of sale remainder of town
- Portsmouth: 6 months from property sale or 5 years from first inspection; whichever first





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Large Capacity Cesspools

- Serves any non-residential facility that has the capacity to serve more than 20 people per day or serves any multi-family residence or apartment building.
- Use is Prohibited
 - ◆ US EPA rules from 2005
 - ◆ 2008 OWTS Rules



What is Next? Options:

- No further removal requirements
- Statutory changes, e.g.:
 - ◆ Geographic scope (e.g., 200' inland water resources)
 - ◆ Point of Sale
- Regulatory changes (e.g., failure criteria)
- Local requirements for phase-out



Take Home Messages

- Advocate for Cesspool phase-out:
 - ◆ Support current efforts
 - ◆ Support expansion of phase-out efforts
- Support the development and implementation of an active local onsite program, especially mandatory inspections.
- Large capacity cesspools – encourage local compliance.



Questions?

- Photos courtesy of DEM Office of Compliance and Inspection
- Today's presentation will be posted along with other Cesspool Phase-out info at:

<http://www.dem.ri.gov/programs/benviron/water/permits/isds/cessfaze.htm>

