RI Cesspool Phaseout
Legislation to Implementation

Paul Jordan
Supervising GIS Specialist
RI Department of Environmental Management
paul.jordan@dem.ri.gov
(401) 222-2776 x4315

Septic tank

Manhole (for cleanout)

Household wastewater

Perforated pipe

Distribution box (optional)

Drain f

Vent

2" PLANK COVER

MORTARED JOINTS ON TOP 4' OF SIDE WALLS

4' TO 6' DIAMETER

MASONRY LAID DRY, OPEN JOINTS

87.407

Salt Ponds Watershed Comparison of Housing Density 1939 to 2003

1939

2003

South Kingstown

Charlestown

Westerley

Pt Judith Pd
Potter Pd
Card Pd
Trustom Pd
Green Hill Pd
Ninigret Pd
Quonochontaug Pd
Winnapaug Pd

Homes / sq-mile

◆ < 25
◆ 26 - 75
◇ 76 - 150
◇ 151 - 300
◇ 301 - 500
◇ > 500

Data Set Credit:
E. Shumchenia, URI-GSO, 2005

0   2.5   5 Kilometers

0   2.5   5 Miles

NARRAGANSETT BAY ESTUARY PROGRAM

Date: 09/26/2007 Time: 17:46:14 UTC: 174614 Lat: 4139.329,N Lon: 07124.708,W Alt: 59.7,M

8/25/2000 11:10am

Bottom DO mg/L

- ◆ < 1
- ◆ 1 - 2
- ◆ 2 - 3
- ◇ 3 - 4
- ◆ 4 - 5
- ◆ 5 - 6
- ◆ 6 - 7
- ◆ > 7

→ Shallow Apparent Redox Potental

Providence

Warwick

Swansea

Bristol

Tiverton

Data Source:
Prell, W., Saarman, E., Murray, D., Deacutis, C., 2004.
Summer-Season, Nighttime Surveys of Dissolved Oxygen
in Upper Narragansett Bay (1999-2003).
Data available at:
http://www.geo.brown.edu/georesearch/insomniacs.

How many cesspools are there?

Assumption:
any home built before 1970 and outside of a sewered area is a potential cesspool location

Analysis:
Define the coastal edge

Using housing unit count and age from US Census - Calculate density of pre – '70 housing for every census geographic unit (block group)

Refine the coarse census geography using more spatially accuracte RIGIS data to get a more realistic estimate of housing density (dasymetry)

Extract residential areas lying within 200ft of the coastal edge

Use refined density estimate and residential area values to estimate total pre-'70 housing/potential cesspools near the coast.

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Residential Land Use is Actually .33 Square Miles

Pre '70 Housing Density = 1054 units / sq-mi

.09 Square Miles of Residential within 200ft of "shore"

Pre-'70 Housing = .09 sq-mi x 1054 HUs / sq-mi ~ 94