

NRS 600 Seminar

**Development of Rapid Assessment Methods for Isolated Wetlands in
Rhode Island**

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Abstract

Isolated wetlands in New England represent a significant natural resource. Recent Supreme Court decisions, SWANCC and Rapanos, have left federal protection of non-navigable waters, and wetlands not adjacent to navigable waters, unclear. Given this regulatory climate, the primary goal of this project is to develop a rapid assessment protocol to assess the ecological condition of isolated wetlands in the State of Rhode Island. This study focuses on using amphibians as indicators of condition, because they are sensitive to environmental changes and adverse conditions. Some of the parameters I plan to evaluate include water quality, hydroperiod, macroinvertebrate predators, landscape metrics, and vegetation structure. Given the increasing urbanization in the State, a second objective of this study will be to evaluate the effects of urbanization on isolated wetland condition. One of my concerns is assessing site occupancy rates of species with imperfect detection probabilities; therefore, a third objective will be to use intensive dip net surveys during multiple visits to each site to quantify detection probabilities for a suite of amphibian species. During a pilot study conducted during 2007, I gathered data on a wide array of environmental parameters at six isolated wetlands. Based on the findings from the pilot study, I have developed plans for the next season of data collection at 36 isolated wetlands located along an urbanization gradient and a tentative approach for data analysis.

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