Maddy Russell

1 The course of action for Rehoboth Beach, Delaware.

2 The Problem Statement

The Rehoboth Bay was declared to be an impaired waterway in 1996 according to standards established under section 303(d) of the Clean Water Act of 1972. No action was taken to improve water quality until the American Littoral Society and the Sierra Club sued the Environmental Protection Agency (EPA) for failure to enforce federal regulations and won the case. In response, in 1998 the State of Delaware created a Total Maximum Daily Load (TMDL) for the Inland Bays and began working on a pollution control strategy. In 2005 the city of Rehoboth and the State of Delaware agreed to cap the effluent pipe from the Rehoboth wastewater treatment facility, dumping into the Lewes and Rehoboth Canal, by December 31, 2014. The wastewater facility is one of three remaining point source polluters in the Inland Bays, its allowable nutrient load was set at zero. The effluent will either be rerouted through an ocean outfall built by the city or to a land application facility run by the county. The Rehoboth Commissioner's vote to determine this decision will take place December 14, 2009.

3 Policy questions and/or policy research objectives

What is the role of scientific expertise versus legal authority in evaluating alternative decisions about environmental and other aspects of municipal infrastructure?

How does a local authority make technical and science decisions?

If we suppose that the state has better resources for evaluating the technical merit of alternatives that require environmental and thus science evaluation, how might a joint decision be reached that would include both the state's science expertise, and the local authority's representation of their local constituencies?

4 Prior findings, literature and/or theory

Delaware Department of Natural Resources and Environmental Control (DNREC). Total Maximum Daily Load (TMDL) Analysis for Indian River, Indian River Bay and Rehoboth Bay, Delaware. 1998.
http://www.dnrec.state.de.us/dnrec2000/Library/Misc/Unorg/ibxecsum.pdf

Weingart, Peter. Paradoxes. Scientific expertise and political accountability: paradoxes of science in politics. Science and Public Policy. 26.3:151-161. June 1999.

5 Tools and methods

I have been attending Rehoboth city council meetings, Sussex county council meetings, and meetings of the Clean Water Advisory Council. I will interview the county engineers, members of the Center for the Inland Bays, the Clean Water Advisory Council and Delaware Natural Resources and Environmental Control. I have been invited to sit in on the negotiations about the mitigation measures for the Lewes Wastewater Facility, which has chosen to trade its nutrient load two for one rather than eliminate its discharge.

6 Proposed research and results (and current results, if any)
I will examine the literature for public policy theory that applies to the interaction between science and policy, especially as it is applicable to local politics and management of infrastructure. I will compare this to my observations and interviews of key players.

7 Graphics and Photos

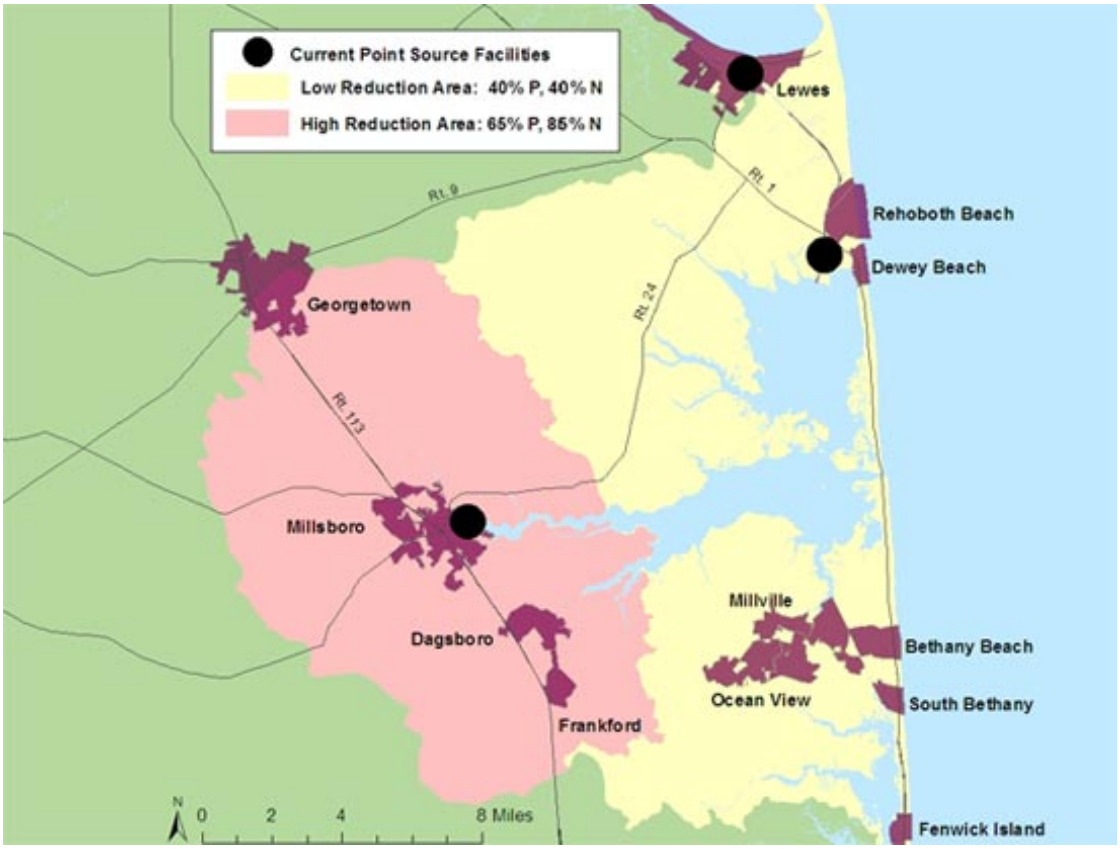

Figure 1 TMDL for Inland Bays Watershed (DNREC 2008).

TMDL	1998 lbs/day	Reduction	Target lbs/day	1998 lbs/day	Reduction	Target lbs/day
Nitrogen	1614	40%	968	2833	85%	425
Phosphorous	79	40%	49	84	65%	29

Figure 2. The TMDL load reduction levels for the Inland Bays, Delaware (DNREC 2008).