

**Mid-Atlantic Joint Assessment Team
Sept. 26, 2007
Wilmington, Delaware**

AGENDA

See abstracts below.

9:30	Welcome and opening remarks; introductions	<i>Dwight Bedsole (DuPont Corporate Remediation Director) and Eli Reinharz (NOAA)</i>
9:45	Update on the recently completed DOI NRDAR Federal Advisory Committee's work	<i>Ralph Stahl (DuPont) and Robin Burr (USDOJ)</i>
10:15	The Delaware Estuary Watershed Database and Mapping Project - A Tool for Facilitating NRDA Settlements and Regional Restoration Planning	<i>Simeon Hahn (NOAA)</i>
10:45	BREAK	
11:00	DuPont's Delaware River Study	<i>Ralph Stahl and/or Amanda DeSantis (DuPont)</i>
11:30	Delaware Bay Benthic Mapping Project	<i>Bart Wilson (DE DNREC Coastal Programs)</i>
12:00	LUNCH	(on site, ordered in)
12:30	Proposed South Wilmington Marsh Restoration Project, status/work to date	<i>David Carter (DE DNREC Coastal Programs)</i>
1:00	Restoration Up Front (restoration banking)	<i>Ralph Stahl and/or Amanda DeSantis (DuPont)</i>
1:30	NRDA Internet Initiative An offshoot of last year's Northeastern Regional NRDA Conference. What opportunities are there to develop it?	<i>Amanda DeSantis (DuPont) and Greg DeCowsky (DE DNREC SIRB)</i>
2:00	BREAK	
2:15	Presentation and discussion: Restoration in a Contaminated Urban Waterway: If We Build It, They Will Come – But Is That Good?	<i>Eli Reinharz (NOAA)</i>
3:45	Closing remarks, set next meeting.	<i>Eli Reinharz (NOAA), Amanda DeSantis (DuPont), and Greg DeCowsky (DE DNREC SIRB)</i>

Abstracts

DELAWARE ESTUARY WATERSHED DATABASE AND MAPPING PROJECT

A Tool for Facilitating NRDA Settlements and Regional Restoration Planning"

Simeon Hahn (NOAA)

The Delaware Estuary Watershed, located along the mid-Atlantic coast, extends across portions of Delaware, New Jersey and Pennsylvania encompassing all of the Delaware Bay and the tidal reaches of the Delaware River. This rich estuarine ecosystem is a critical component of the economic well being of the region, supporting industry, fishing, transportation, natural resources, and recreation and is home to millions of people. The Delaware Estuary, which contains an array of plant and animal species woven together into an intricate and vital ecosystem, has been impacted and degraded by human activities. Several local, regional and governmental organizations are involved in efforts to improve the region's ecological health and support the revitalization and redevelopment of coastal communities along the Delaware River and Estuary. The Delaware Estuary Watershed Database and Mapping project provides a standard database structure for contaminant data and a mapping component (GIS and internet mapping) which provides spatial context for evaluating and communicating the complexity of challenges and opportunities within the Delaware Estuary.

More info at <http://mapping.orr.noaa.gov/website/portal/Delaware/index.html>

DUPONT'S DELAWARE RIVER STUDY

Ralph Stahl / Amanda DeSantis (DuPont)

Watersheds and ecosystems are dynamic with many interconnected chemical, biological, and physical components. Consequently, gaining a sound understanding of their linkages is key to making measurable improvements. DuPont initiated a watershed/ecosystem study in late 2005 to synthesize readily available scientific data concerning ecological impacts from more than two centuries of industrialization and urbanization in a 133-mile stretch of the Delaware Estuary.

The study focused on a regional assessment for ecological conditions in the Delaware River and Estuary based upon the relative risk model (RRM) developed by Dr. Wayne Landis and co-workers at the Western Washington University. Such a model has been applied in several geographic settings in the United States and elsewhere, and the results of its application have been published in peer reviewed journal articles over the past 10 years. The RRM examines where and to what extent stressors occur in a study area, and then addresses whether or not those stressors co-occur with particular habitats or receptors. It is one of several steps toward a better understanding of the relative impacts at a regional (or watershed level), and to some degree, the potential relative role in the watershed at a local level.

DELAWARE BAY BENTHIC MAPPING PROJECT

Bart Wilson (DE DNREC Coastal Programs)

The Delaware Bay represents almost one quarter of the surface area of the State of Delaware. What lies under the Bay is one of the least understood areas of the State. Coastal management decisions are routinely made with little knowledge of how they will affect the Bay, its resources and the related economics of commercial and recreational activities. These decisions can range from designating areas of essential fish habitat to issuing dredging permits.

The Delaware Department of Natural Resources and Environmental Control is undertaking a Delaware Bay benthic and sub-bottom mapping project “To identify and map the benthic habitat and sub-bottom sediments of the Delaware Bay, and supply this information in a form decision makers and stakeholders can easily use that will aid them in their efforts to manage and conserve the Delaware Bay’s resources.”

This project involves the use of three types of acoustical instruments: *RoxAnn* seabed classification system, *Chirp* sub-bottom profiler and a multi-beam bathymetric sampling system, to characterize the benthic habitat and sub-bottom sediments of the bay. The *RoxAnn* system determines the roughness and hardness of the benthic surface to characterize the benthos. The *Chirp* sub-bottom profiler provides data on the sediments up to 30 feet below the bottom of the bay, while the multi-beam sonar provides a complete image of the Bay bottom, showing the topographic relief. The data is verified with numerous shallow and deep sediments samples and video. All this information is statistically analyzed and correlated into numerous GIS maps enabling coastal decision makers to manage this coastal resource effectively.

SOUTH WILMINGTON WETLAND RESTORATION PROJECT: OVERVIEW

David Carter (DE DNREC Coastal Programs)

NOAA awarded the DNREC, Division of Soil & Water Conservation’s Delaware Coastal Programs office a three-year grant to develop a Special Area Management Plan (SAMP) for South Wilmington. This SAMP is a “master” plan that coordinates the efforts, community interests, government entities and stakeholders in addressing social, economic, and environmental issues in a way consistent with the long-term vision for South Wilmington.

The SAMP project area includes lands south of the Christina River within Wilmington, Delaware, and a portion of adjacent New Castle County. Within the project area is the residential neighborhood of Southbridge, commercial and industrial business, vacant land and wetlands. South Wilmington is still faced with problems like poor drainage and chronic flooding, pollution from past and current industrial activity, unemployment, and a deteriorating housing stock in the Southbridge neighborhood. The area is unique for an urban area because of the large amount of undeveloped and underutilized land and the great potential for redevelopment. New residential and commercial development projects have begun and many more are in the works.

Development of Proposed South Wilmington Wetland Restoration

A key concept of the South Wilmington Neighborhood Plan, one of the six components of the SAMP, is the restoration of the highly degraded South Wilmington Wetland. Its restoration has also been proposed in the draft Walnut Street Urban Renewal Plan. This 27-acre site has historically been filled with debris including incinerator ash, has been extensively drained by a tide-gate system, and is dominated by *Phragmites australis*, an invasive reed.

The restoration effort provides the opportunity to attenuate flooding, provide water quality improvements and naturally store stormwater runoff while converting a contaminated Brownfield site which plagues the environmental justice community in the Southbridge neighborhood into a Greenfield. The restoration project will also allow for separation of rooftop

from an active combined sewer overflow system, provide passive recreational opportunities in a green urban landscape, and provide some social connection between the existing community and new communities of the redeveloping area. The restoration project would drastically improve the urban wetlands ecology and wildlife use as part of the Christina River Wetland Complex. When combined with other recommendations from the Neighborhood Plan, such as low impact development, green roofs and other best-management practices, the proposed South Wilmington Wetland Restoration Project can result in significant water quality improvements for the Christina River, which has been in non-attainment of water quality standards for many years.

The proposed South Wilmington Wetland Restoration would seek to:

- Increase stormwater storage capacity in South Wilmington
- Provide water quality improvement for the Christina River
- Improve existing habitat within the South Wilmington Wetland
- Provide pedestrian access between the western and eastern portion of South Wilmington and greenway linkages
- Provide urban green space

Several preliminary investigations have taken place or are currently on-going:

- Site Investigation for contaminants conducted by DNREC SIRB (2005)
- South Wilmington Drainage Plan (2006)
- Functional Assessment (to be completed June 2007)
- Initial investigation of flow patterns and tidal influence (to be completed June 2007)

RESTORATION IN A CONTAMINATED URBAN WATERWAY: If We Build It, They Will Come – But Is That Good?

Eli Reinharz (NOAA)

Restoration planners are forced to weigh the pros and cons of restoring habitat in, and access to, a heavily contaminated river. They must also consider how soon restoration can safely occur, how much can be implemented, how it can be designed to minimize adverse impacts (e.g., attractive nuisance), and what benefits the project can provide. The arguments are strong both for and against restoration in contaminated urban rivers and “restoration before remediation.”

This presentation and discussion will explore the variety of challenges encountered when seeking to conduct habitat restoration in a Superfund site and in urban environments in general. Site-specific issues on the Lower Passaic River will be used as one case example.

Sediments of the Lower Passaic River are heavily contaminated with dioxins, PCBs, heavy metals, and PAHs as well as a suite of other constituents. The entire lower river has been designated a Superfund Site as well as an Urban Rivers Restoration Initiative pilot project. Stakeholders on the lower river include a large group of potentially responsible parties, non-governmental organizations, municipalities, and government agencies, each with their own views on how, why, and when restoration along the river must be implemented.

Ultimately some level of restoration may occur before the Lower Passaic River is completely remediated. Regulators and restoration planners must ensure that those projects are conducted with an awareness of how to maximize benefits while minimizing risks to the public and the environment. And all stakeholders need to recognize the importance of both the risks and rewards of “restoration now.”