

Watersheds

Do you know your watershed? When water falls on your land, where does it flow and what is the route it takes to get there? If you live on a river or stream, where does that water come from before it reaches your land? We learned in grade school that all water eventually flows to the sea, but we never really seemed to get the lesson that this water can carry with it a heavy load of pollution in the form of nutrients, toxins, heavy metals and bacteria, all of which are picked up as the water flows through the watershed. Watershed management is the functional framework for effective water resource management. In the NH coastal watershed there are 42 municipalities and there is great need for effective watershed management practices. The Coastal Training Program is addressing this need.



Watersheds and their Social Context

Ecosystem Based Management (EBM) on the watershed scale is a dominant approach in the NERR System as it works to create sustainable estuarine ecosystems around the country. Taking a watershed approach to land use planning and decision making is improved by understanding the social framework affecting these decisions. Understanding the social framework helps explain questions such as how impervious surface area and sprawl are increasing within coastal watersheds, despite the general knowledge that these trends have many negative social and environmental consequences.

In 2008, NOAA offered five Social Science Fellowships around the country through NERRS. The Great Bay NERR and Erika Washburn, a

Ph.D. Candidate at the UNH Natural Resources and Earth Systems Science Department, were awarded one of these fellowships. Erika's project "A Social Landscape Analysis of Land Use Decision Making in the Towns of the Lamprey River Watershed" will be the basis of CTP projects this spring. These projects will build upon Erika's work.

Coastal areas worldwide suffer complex environmental problems stemming from human pressures originating in upstream areas throughout their watersheds. EBM addresses these pressures and effects by including both natural and cultural systems in its approach. By drawing in social and cultural com-

ponents, coastal managers can better address watershed decisions. In New Hampshire's coastal communities, population pressure and growth are the most significant challenges to ecosystem and community sustainability. These are evident in indicators measuring the health of Great Bay which receives water from six watersheds, all of which are under population pressures.

Most work in coastal communities focuses on bringing scientific information and training to land use decision makers, but has not been able to fully utilize the social context in which local decisions are made. Training and increasing the use of information for land use planning are critical, but expanding stakeholder participation in the process is equally critical. The NOAA Social Science Fellowship did just this, by exploring this information gap with an analysis of the socio-cultural issues characterizing land use decision-making in a case study of the towns in one watershed of Great Bay.

The Coastal Training Program is planning town information sessions in the Lamprey River Watershed to present the results of the NOAA Fellowship and to gather ideas on how to move forward as a watershed. This will support the development of the Lamprey River Watershed Land Use Policy Conference, a watershed-wide conference focusing on stormwater management, local policy and land use decision making. This policy conference is planned for June. Look for more information later this spring and to be sure you are on the contact list send an email to Steve at Steve.Miller@wildlife.nh.gov and request to be added to the Lamprey River Watershed Conference contact list.

Steve J. Miller
CTP Coordinator, GBNERR

Update on Exhibits

With summer fast approaching, you will soon begin seeing new exhibits popping up all around the Discovery Center and inside the Hugh Gregg Coastal Conservation Center. Here is a sneak peak of what we have coming!

Outdoor exhibits:

The NERRS Post:

Back by popular demand is the “NERRS Post”, originally developed by Beth Heckman, this twenty foot post uses the “camp sign” approach to show the direction and distances of all other Reserves from the Center. The new post location will be at the main entrance to the Discovery Center so visitors and students in the school programs can get a better orientation and understanding of the NERRS System before entering the building.

Storm Water Exhibit:

With the successful installation of the porous concrete walkways and asphalt driveway, visitors of all ages will enjoy the “storm water rain barrel”, a hands-on, interactive exhibit in which visitors can pull a cord and make it rain onto the porous and non-porous sample surfaces. Visitors will be able to see the difference in the rate at which water infiltrates the surfaces.

Trail Head to Great Bay:

In this outdoor exhibit, visitors will learn about the successful land acquisition program within the Great Bay Watershed. The Passport program will be highlighted as well as the land stewardship efforts throughout Reserve properties.

Map of Sandy Point:

A new outdoor map will give visitors an overview of the grounds to include the boardwalk, waterfront, Great Bay Discovery Center and the Hugh Gregg Center.

Hugh Gregg Center – the Uplands of Great Bay Exhibits:

Land Use Change over Time:

A realistic diorama will be installed featuring a Native American and colonial scene, including wildlife representative of a classic Appalachian Oak-Pine forest. In addition, 3-D exhibits will highlight vernal pools, early successional forests and freshwater wetlands.

Aerial Photographs:

From the earliest aerial images available to present day, maps of the Great Bay Estuary will interpret land use change over time.

Green Design Features:

Exhibits interpreting the functions and advantages of the geothermal heating and cooling system and the Phoenix composting toilets will allow visitors the opportunity to see if some of these features make sense for their own homes.

Movable Exhibits:

A number of creative exhibit solutions have been developed by Doug Mund to allow maximum flexibility in using the space. “Mini rooms” will be created using pull down exhibit panels to allow smaller groups to use the Center with a more intimate feel.

Technology:

In addition to the wireless projector and new larger screen, a 50 inch HDTV will be available, providing PC input, and SD card capability. The theater system will include a Blu-ray disc player which also supports DVD’s, CD’s, MP3 and JPEG formats.

Kelle Loughlin
Education Coordinator, GBNERR
Director, Great Bay Discovery Center

Spotlight

Young Women in Wildlife

The Great Bay Discovery Center is offering a week long day camp July 13 – 17th for girls, ages 12 – 15, who are interested in science and want to experience real hands on learning.

Each day girls will have a chance to meet and learn from women in the fields of wildlife biology, marine biology, environmental education and land management. Activities include going out on Fish and Game’s research vessel to study and monitor the water quality and shellfish of Great Bay, how wildlife biologists capture and band birds and mammals, on site fisheries research, monitoring and mapping lands, kayaking and team building activities. The camp will run from 9:00 to 3:30 each day with pick up by 4:00pm. The cost is \$200 for the week for Great Bay Steward members and \$250 for non-members. The cost includes all activities, transportation, daily snacks, and a cookout on the last day.

Registration is limited to 14 girls. Call the Center at (603) 778-0015 to request a brochure, for more information or to register.



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