RENSSELAER LAND TRUST

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Wetland Conservation: What Do We Have to Lose?

A Talk by Laura Heady, NYSDEC Hudson River Estuary Program and Cornell University
East Greenbush Community Library, New York, March 3, 2013

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Hudson River Estuary Program Goals

- Ensure clean water
- Protect and restore fish, wildlife and their habitats
- Provide water recreation and river access
- Adapt to climate change
- Conserve world-famous scenery

I WHAT ARE WETLANDS?

They are areas saturated by surface or ground water sufficient to support distinctive vegetation adapted for life in saturated soil conditions

There are **tidal wetlands** and **fresh-water wetlands.** This talk is about the latter

Wetlands include three main components:

1. Indicators of **water**, inundation or saturation
2. Unique **soils** that differ from adjacent upland soils
3. **Vegetation** that is adapted to wet conditions

SOME TYPES OF WETLANDS

"Emergent Marsh - vegetation that emerges out of the water, is not submerged

"**Wet meadow"** - grassy but not a lot of water; feels spongy when you walk on it
No canopy of trees; lots of dragonflies, butterflies

"Hardwood Swamp" – DOES have canopy of trees; often visible water but not necessarily

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"Woodland Pools" – often just isolated depressions that hold water – usually no canopy over a woodland pool; usually not connected to a stream, so they dry up in the summer; also, they don't have fish; so they are excellent breeding grounds for amphibians; spotted salamanders, wood frogs, etc.

"Riparian Wetland" - "Streamside wetlands" often only during spring, they contract during dry time of year; help keep soil in place when the stream is heavy in the spring

Wetlands often seen in the Capital District:
- Marsh
- Riparian wetlands
- Hardwood swamp

www.acris.nynhp.org

II VALUE AND FUNCTION OF WETLANDS

A. WATER AVAILABILITY
Some wetlands help maintain water table levels by **recharging** groundwater.
Some **discharge** groundwater, thus providing source water for adjacent wetlands or streams.

B. CLEAN WATER
Wetlands are like kidneys in terms of **water purification**. They retain sediment from runoff; they also get rid of nitrogen in areas where there is a lot of fertilizer from lawn care. Regional example: New York City water supply system provides clean drinking water to nearly half of NY's residents;
When it came time to select a system of filtration plants vs natural watershed protection, the latter was 4 billion dollars cheaper.

Regional example: West Brook wetland will help to filter water before it flows into Lake George

C. FLOOD CONTROL
They can 1) slow down floodwater, or 2) store it;
A single acre of wetland can store 1-1.5 million gallons of floodwater!

In the Charles River watershed in Massachusetts, the loss of all wetlands would incur an estimated $17 million annually in flood damages.

D. MOSQUITO CONTROL
Despite what many people think, a good healthy functioning wetland will function in favor of mosquito control; with amphibians, insects, etc that feed on mosquito larvae. When you change the natural hydrology of a wetland, then you eliminate these controlling elements and create a natural habitat for mosquitoes, with standing water; Degraded wetlands will produce nuisance levels of mosquitoes, healthy wetlands will not.

E. RECREATION
In a study of wildlife-related recreation in 2006 in New York State, $1.4 BILLION in retail sales was credited to wildlife watchers, birdwatchers, and people enjoying the outdoors.

F. WILDLIFE AND BIRD HABITAT
Although wetlands cover only five percent of the land in the lower 48 states, they are home to 31% of plant species; similar with birds
Up to 43% of threatened or endangered species rely directly or indirectly on wetlands for their survival

III WETLAND CONSERVATION
What wetlands are actually protected in New York?
For the most part, the **state** government protects "larger" wetlands, greater than 12.4 acres with 100' buffer

(see Environmental Resource Mapper at www.dec.ny.gov website)

Federal jurisdiction protects wetlands connected to permanent waterways (like the Hudson and its tributaries) but leaves many "isolated" wetlands unprotected (like vernal pools, bogs).
www.fws.gov has a National Wetlands Inventory – US Fish and Wildlife Service = FWS

Recent court rulings took away the jurisdiction of the (federal) Army Corps of Engineers to protect isolated wetlands; a GIS analysis estimated that 56% of wetlands in Rensselaer County, and 61% in Albany County are isolated and smaller than 12.4 acres. **OVER HALF THE WETLANDS ARE TOO SMALL TO BE PROTECTED BY NYDEC AND TOO ISOLATED TO BE PROTECTED BY ARMY CORPS OF ENGINEERS (IE, STATE AND FEDERAL AGENCIES)**

This implies that local agencies such as RLT and Audubon society need to step up, as well as local municipalities.
Local community efforts can 1) include smaller wetlands, and 2) include more buffer protection.

Some municipalities are creating detailed habitat maps to inform planning. Using multiple map resources is more effective at locating wetlands.

More Local Approaches to conservation of wetlands

- Create, update and USE plans to guide land-use decisions
- develop planning tools like critical environmental areas
- preserve and restore generous buffers along streams and wetlands

TAKE-HOME MESSAGES

- There are a variety of wetland types in the regions
- Wetlands have tremendous value and provide important services that support human and natural communities
- Wetland maps often have inaccuracies
- Many wetlands are not protected by state and federal regulations
- Local communities have opportunities to conserve vulnerable wetlands

Notes taken by Allan Stern