Wetland Policy In Vermont and Louisiana

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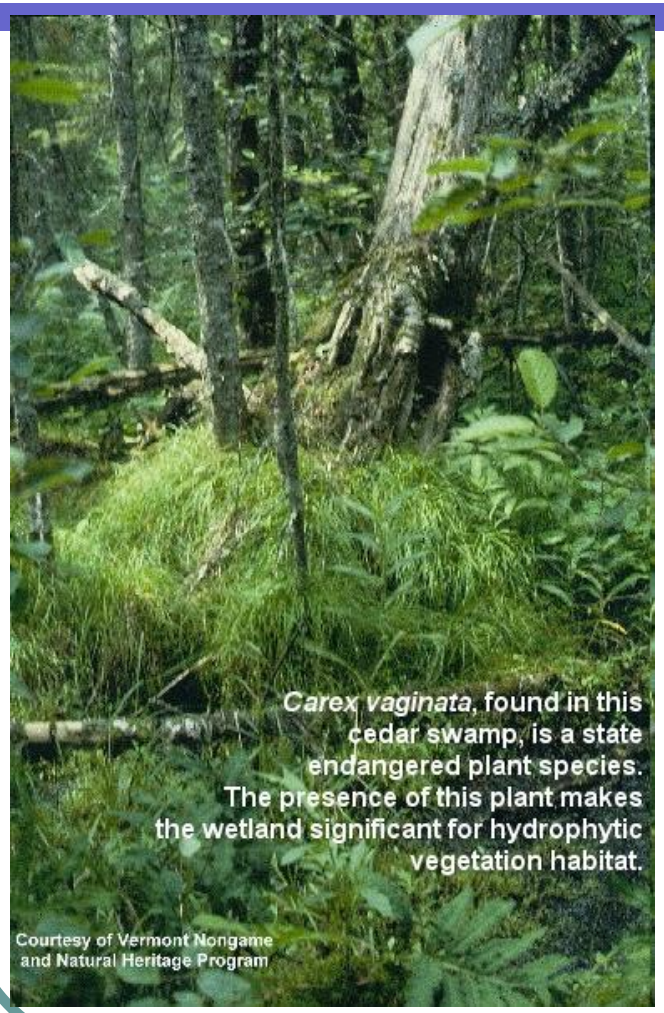
What is a wetland?

- An area inundated by surface or groundwater with a frequency sufficient to support plants and animals that depend on saturated or seasonally saturated soil conditions for growth and reproduction
- commonly known as ponds, bogs, fens, marshes, wet meadows, and swamps

Why are wetlands important?



- surface and ground water quality: “Nature’s water filters”
- flood water detention
- erosion control
- Habitat for biota, fish, wildlife, including many threatened and endangered species
- Nutrient cycling
- Biodiversity
- retention of sediments and toxic substances,
- societal values: recreation, education, aesthetic quality, and scientific use

Importance of Louisiana Costal Wetlands

- LA costal zone contains 40% of the nation's costal wetlands
- Supports major industries including: commercial and recreational fisheries, trapping, and recreational activity
- Contains extensive canal system
  - 20% of the nation's waterborne commerce travels through Southern Lousiana's ports
- Protects oil and gas infrastructure
  - 80% of the nation's offshore oil and gas travels through Lousiana's wetlands

Importance of Lousiana's Coastal Wetlands Continued

- Offers protection from flooding and storm surges
  - 2.7 miles of wetlands can absorb 1 foot of storm surge
  - Insurance companies have already discontinued coverage and stopped issuing new policies in vulnerable areas, severely diminishing long term investment in the region

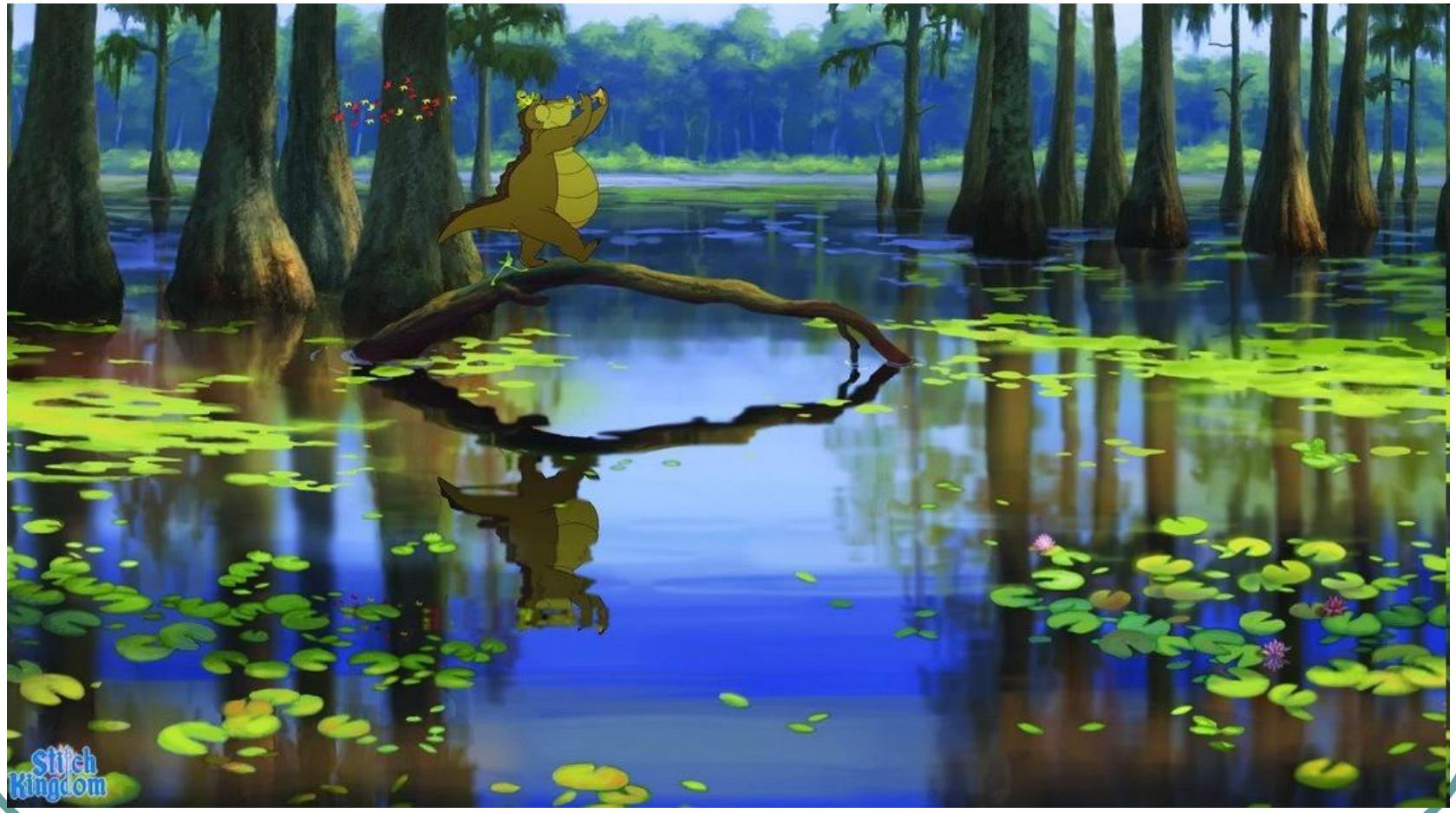
So what happens when they're lost?

- Habitat loss and potentially species loss
- Flooding
- Inability of nutrients to be absorbed and returned to the soil -> inhibits the sustained growth of plant species and leads to low soil quality
- Water pollution
- (pic of flooded area, toxic dump, lonely animal with no place to go)

Where are Vermont wetlands going and why?

- 35% of the original wetlands in Vermont have been lost
- Had been seen as useless and a breeding ground for mosquitoes
- Drained and filled for residential, commercial and industrial development

What is Destroying the Lousiana Wetlands?



Artificial Levee Construction

- Contain Mississippi river and prevent the creation of new delta regions
- Sediment travels down the river and is discharged over the continental shelf into the Gulf of Mexico, rather than out to nourish the wetlands
- Dams and other structures have reduced amount of sediment flowing down to the delta region

Canals

- Permits to build canals are issued for navigation, pipeline routes, and access to drilling
- Directly convert wetlands to open water
- Wave action from boats erodes the marsh
- Allow saltwater to rapidly flow into wetlands and increase salinity
- “Spoil Banks”, deposition of material dredged from canals, interrupt flow of water and nutrients

Rising Sea Level

- Global warming is predicted to raise the sea level up to one meter over the next century.

How to protect?

- Establish buffer zones
  - Reduce the impacts of adjacent land uses
- Compensatory mitigation
  - when wetland degradation is unavoidable
  - replacement of lost functions by creating, restoring, or enhancing other wetlands
- Conservation easements
  - Buying land that can never be developed

Legislation

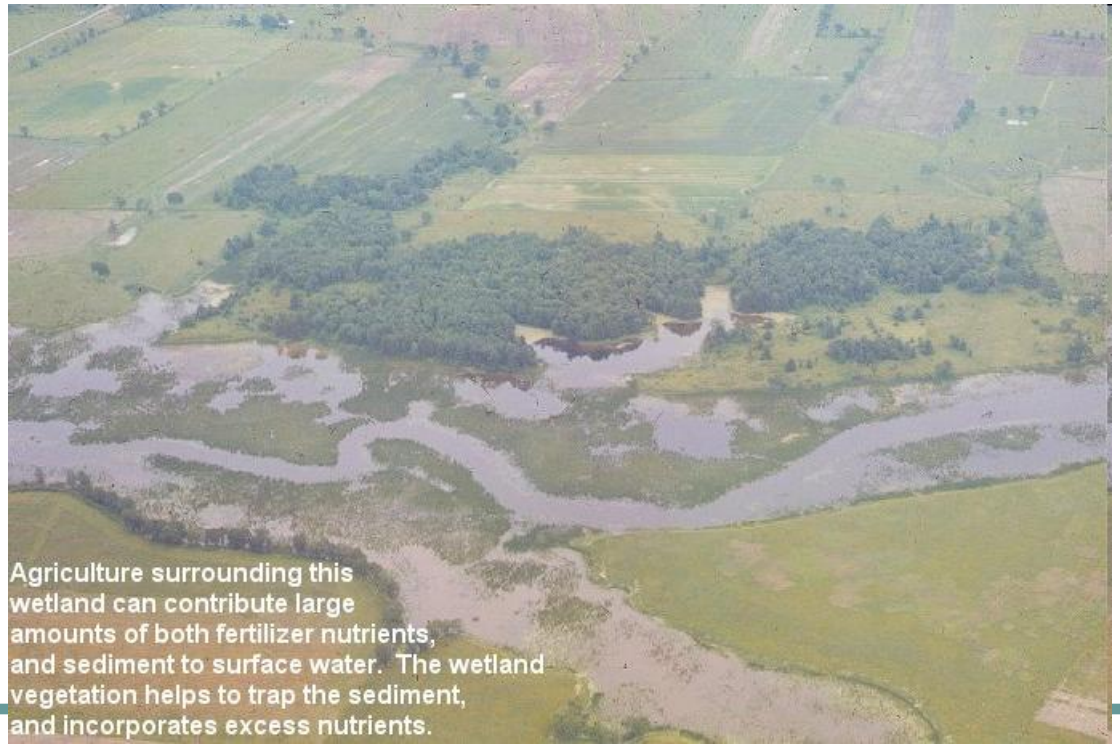
- The Vermont Wetland Rules (1990)
  - identify and protect 10 functions and values of "significant" wetlands and establish a 3-tier wetland classification system
  - Use of Vermont Significant Wetland Inventory Maps to denote location and configuration of these wetlands
- H 447 (2009)
  - requires inaccurate state wetlands maps to be updated and also mandates better protections for wetland

Legislation Continued

- Clean and Clear Action Plan (2003)
  - Meant to address phosphorus loading and sedimentation which threaten the health of Vermont lakes and streams
  - Creates comprehensive programs to offer a multi-pronged attack
  - Wetlands Protection and Restoration Program (WPRP)

Wetlands Protection and Restoration Program (WPRP)

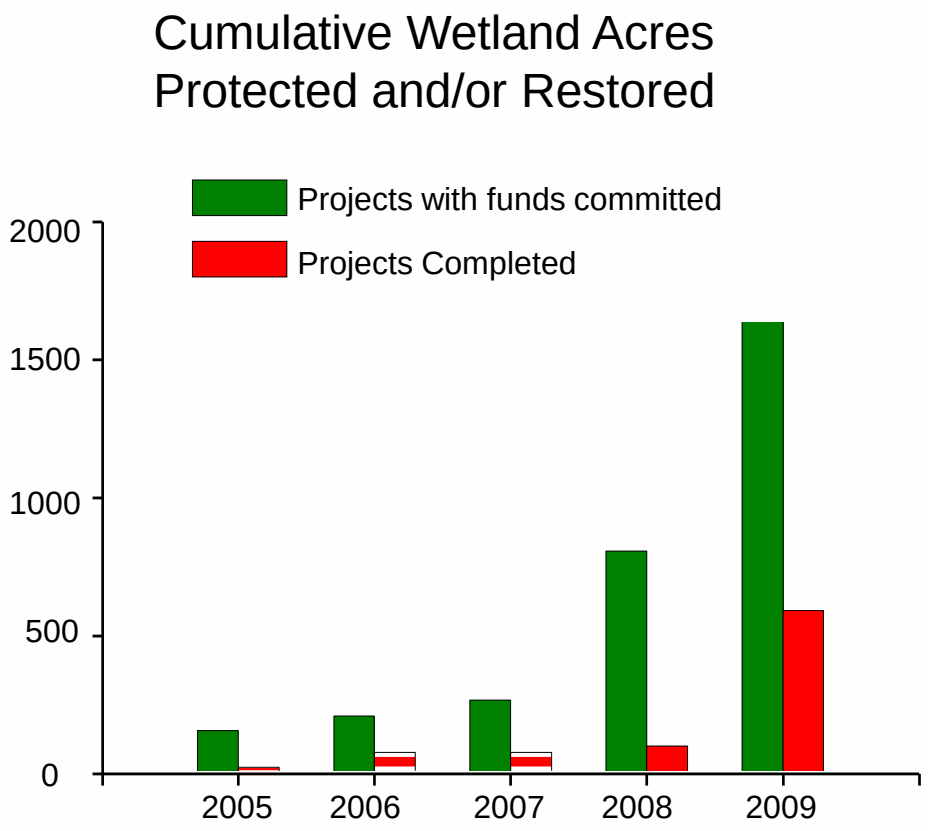
- voluntary program designed to provide financial and technical assistance to landowners for restoring and protecting wetlands created by the Clean and Clear Action Plan



WPRP Success

- 2008 Farm Bill has made available more than $2 million annually and the U.S. Natural Resources Conservation Service (NRCS) significantly increased the amount it pays, per acre
- Benjamin-Wing Wetland Restoration Site
  - Win-win situation
  - cooperation between willing landowners, the state, and conservation groups
  - Secured 50 acres of land bordering a river
- Lake Champlain Basin Wetlands Restoration Plan
  - identifies impaired wetlands within the Vermont portion of the Lake Champlain Basin and prioritizes them for restoration
- Bissonette Farm Wetland Restoration Site
  - Conserved a 631-acre area and in the process of restoration

Success

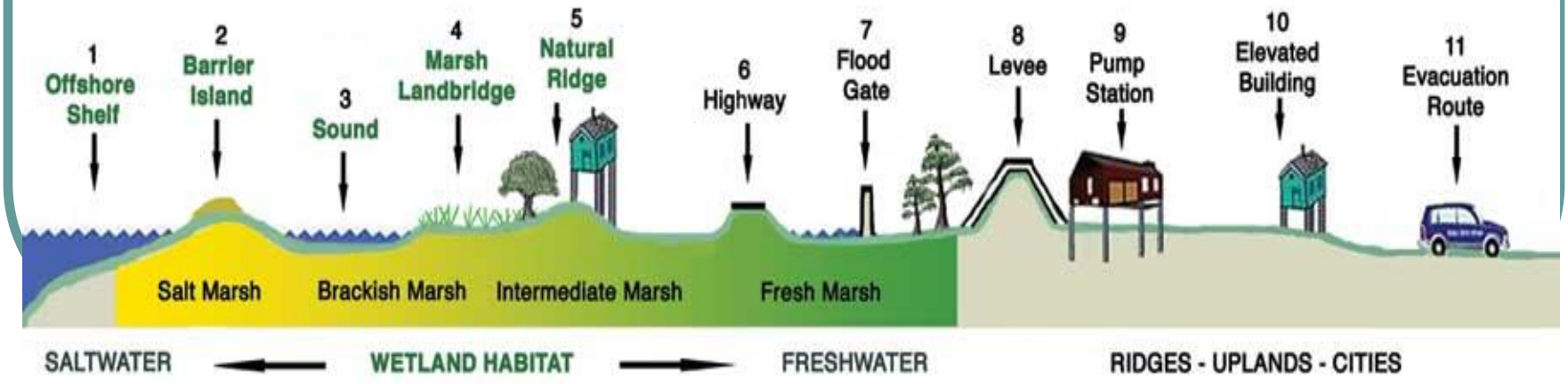

Cumulative Wetland Acres
Protected and/or Restored
Projects with funds committed
Projects Completed
2000
1500
1000
500
0
2005
2006
2007
2008
2009

Conclusions

- Cooperation Matters
  - A range of agencies, both federal and state, have jurisdiction over wetland management
- Despite the existence of protection laws, improper information can prevent proper action
  - Example: Improper classification of wetlands may prevent them from protection under existing law
- Non-profit organizations matter
  - Provide policy advice, put pressure on lawmakers, work with governments to fund reclamation and restoration projects
- Difficult to balance conservation and development needs
- On the most part, Vermont's efforts have been very successful
  - Cooperation among groups
  - educated citizens
  - concerned legislators
  - Action taken

Strategies for Louisiana Wetland Restoration

- Short term solutions: restore barrier islands, marsh creation, regulate water flow to control water levels and salinity
- Long term solution: “Diversion”
  - Allow the Mississippi River to change course to the Atchafalaya River to create a new delta
  - Would require change in Federal policy of maintaining flow ration, which has already been heavily invested in
  - Voluntary abandonment of riverside communities



Traditional Strategies for Wetlands Management

- Authority for costal restoration and flood management was given to separate agencies
  - **Lousiana Department of Natural Resources** used cost benefit analysis to design wetland policies, but did not take into consideration the benefits of storm protection
  - **Lousiana Department of Transportation and Development** managed levee planning and construction

ACT 8

- Passed in November 2005, after Hurricane Katrina
- Established the Costal Protection and Restoration Authority (CPRA)
  - a single state authority designed to integrate hurricane protection and costal restoration

The Master Plan

- CPRA has developed a master plan to manage the coastal area
  - Prioritizes costal restoration projects that will provide storm protection (Ex: Terrebonne and Barataria Basins vs. Chandeleur Islands)
  - Prevents flood management efforts from further destroying the wetlands

Differences between Vermont and Louisiana

- Vermont has many more laws and regulations in place to protect and restore wetlands
- the different Vermont agencies and offices are well coordinated, though Louisiana has recently made efforts to do so
- Louisiana loss spurred by public/government

Universal Difficulties in Managing Wetlands

- Development vs. conservation
- A range of governmental agencies have jurisdiction
- Bureaucracy
- Determining the best strategy