

# Wetland Restoration in the Great Cypress Swamp

Delaware Wild Lands, Inc.

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- Started in 1961 by founders of Delaware's land conservation movement
- Our focus and geography is Delaware-centric
- Helped protect 30,000 acres in Delaware, 21,000 which we now own and manage making us the largest non-profit, non-government landowner in Delaware
- Strong commitment to economic and environmental productivity of land and maintaining traditional uses of landscape with active forestry, farming, and hunting programs on our properties



# The Great Cypress Swamp

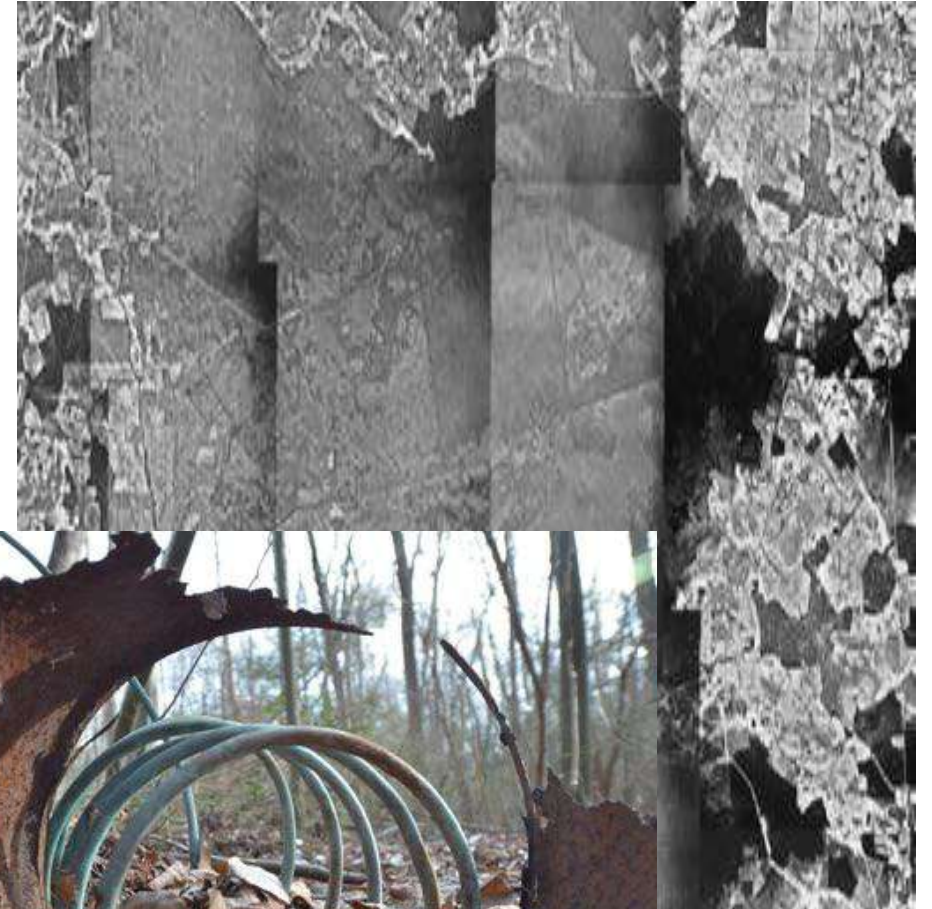


# The Great Cypress Swamp: 1700-1900

- Described as 50-60,000 acres
- Dense, nearly impenetrable swamp
- ~25% Atlantic White-cedar\* 10-15% Baldcypress
- Forestry developing, AWC and Baldcypress desirable for shipbuilding and construction. Timber-cutting and “log-mining”
- First major fire 1780’s burned tens of thousands of acres
- 1800’s peninsula shifting from “forest society” to agriculture
- Acreage cleared and ditched for farming, conversion of land to “useful” state

# The Great Cypress Swamp: 1900-1970's

- Early 1900s, Layton Family begins buying up Swamp
- 1930's ditching of remaining Swamp diverts some drainage from Pocomoke River (Chesapeake Bay) to Delaware Inland Bays
  - Goal to turn swamp into timber and ag production property
  - Plant communities/forest changed
- Massive fire in 1936 likely started by exploding still
- DWL begins purchasing Swamp in early 1970's



# The Great Cypress Swamp: 1970-2005

- Property bought piecemeal, largest portions in early 1970s
- Early restoration efforts were planted ag fields, focus on Baldcypress
  - Most turned to Sweet gum, Red Maple, and Loblolly Pine
- Late 70's first look at hydrological restoration
- Installed 2 water control structures
  - Not effective: too low and too many "back doors" for water
- Early 2000's began looking at forestry as alternative revenue
  - Previously impossible before Sustainable Forestry certification, due to negative view of forestry among the conservation community
- Plan began to take shape
- Roman Fisher Farm purchased 2005

# Certified Sustainable Forestry

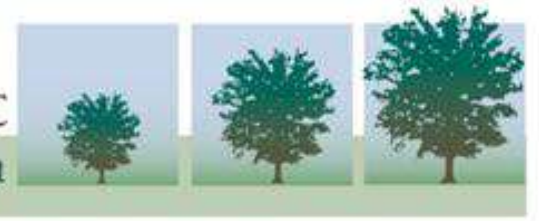
- **Sustainable forest management (SFM)** is the management of forests according to the principles of sustainable development.
- The “Forest Principles” adopted by the United Nations in 1992 captured the general international understanding of sustainable forest management at that time.
- In 2005, the Sustainable Forestry Initiative standard was recognized by the Programme for the Endorsement of Forestry Certification



# Certified Sustainable Forestry

- Certified Sustainable Forestry
  - Contracted Vision Forestry to create a forest management plan and walk us through SFI certification
  - Source of revenue to fund infrastructure and restoration AND use forestry for site prep for planting desired trees
- Forest Management Plan identifies Natural, Managed, and Reserve areas

Vision Forestry, LLC  
Sustainable Forest Management

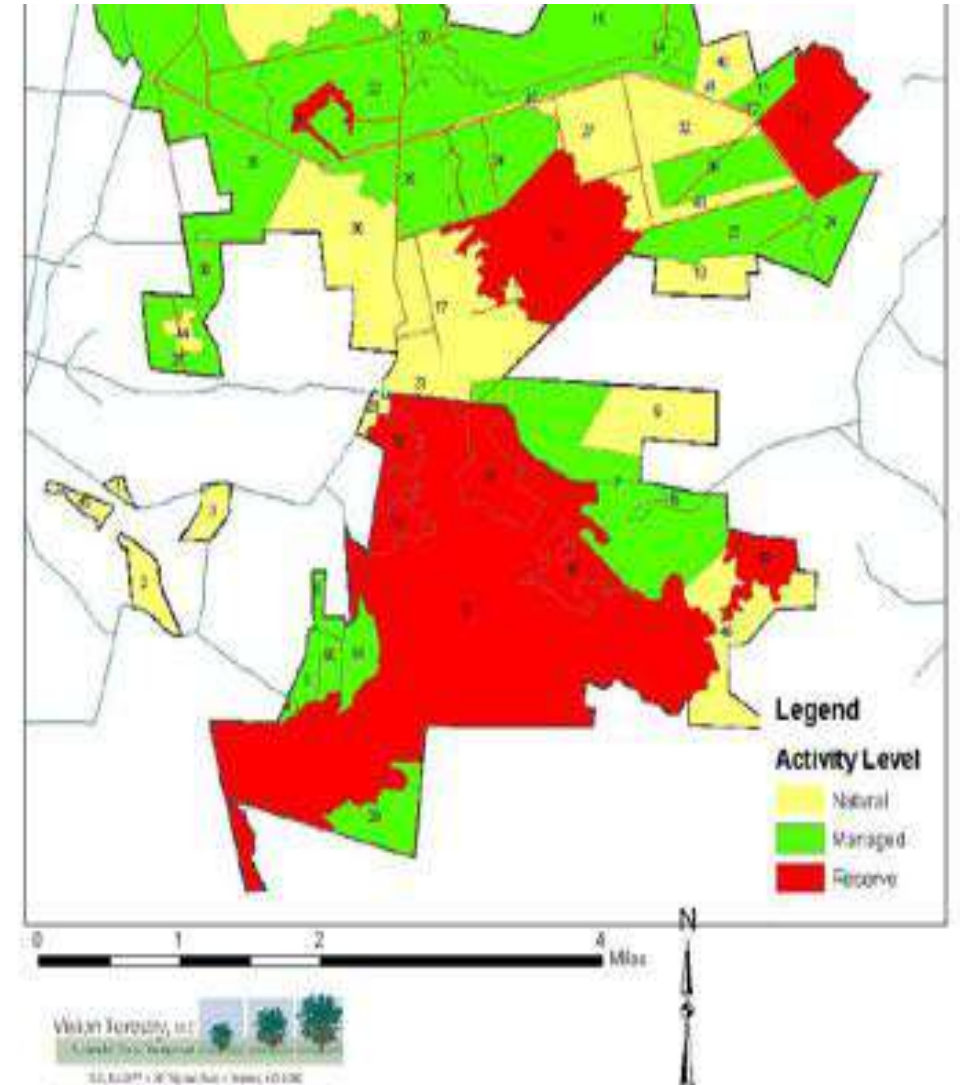


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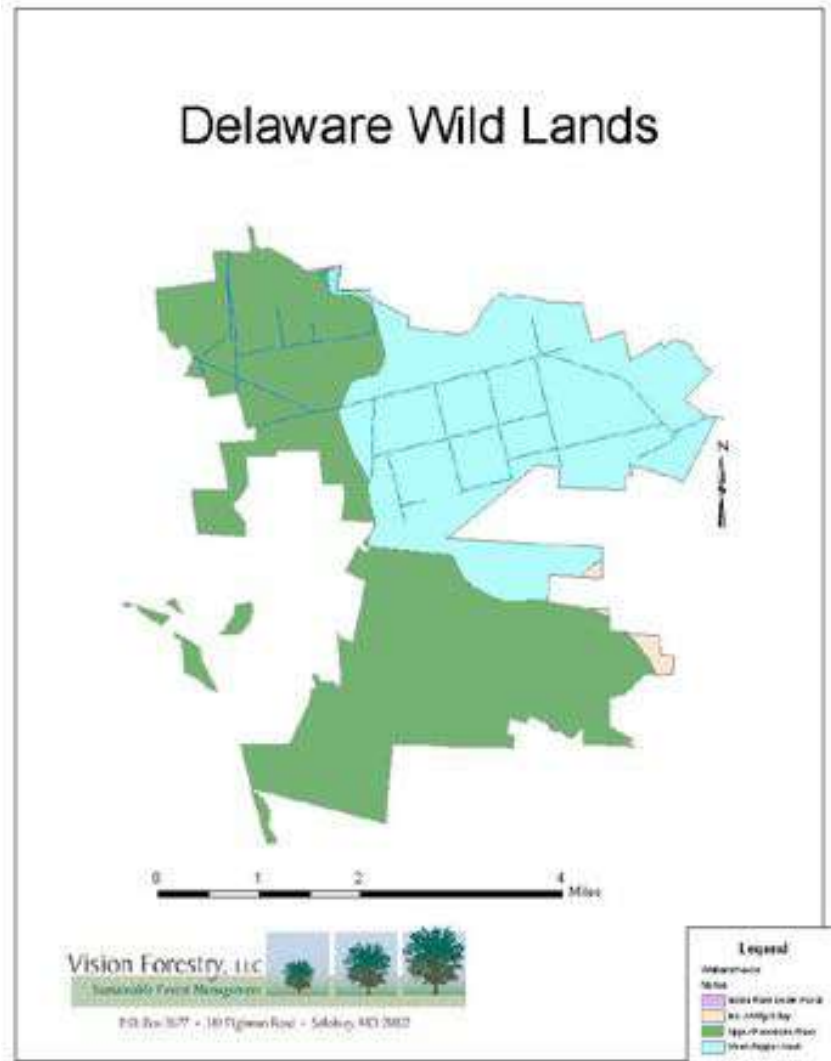
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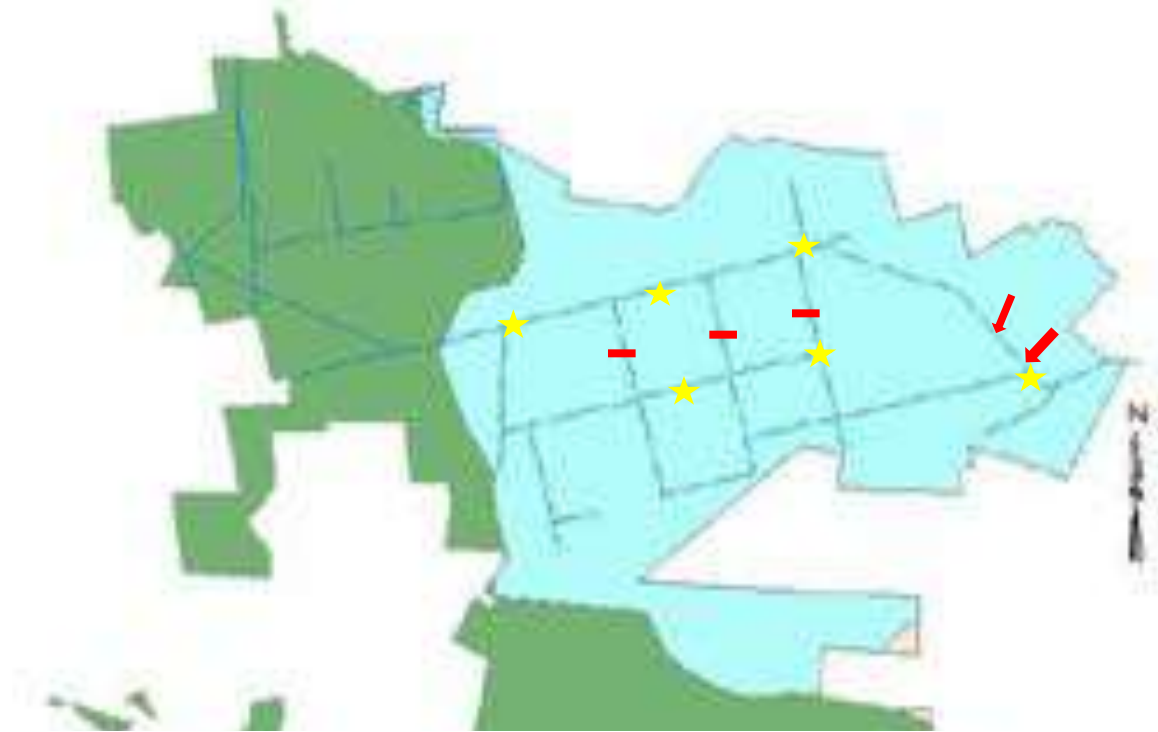


# Hydrologic Restoration



- Worked with US Fish & Wildlife Service, Ducks Unlimited, Delaware Center for the Inland Bays, DNREC, and Vision Forestry to develop plan
- Projected started with small NAWCA grant secured by DU and rest funded with forestry revenue
- Installed 6 water control structures and several ditch plugs
  - Resistance from permitting office finally overcome with support from US FWS and Delaware Heritage Program

# Hydrologic Restoration



# Hydrologic Restoration



Before:



After:



2010



2011



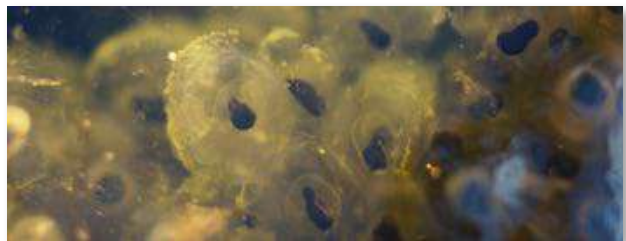
2015















# Visitation and Research



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# Questions?

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