WETLANDS RESERVE PROGRAM

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The "Farm Bill"

Congressional legislation passed every 5 to 7 years that provides framework and guidance for USDA commodity support, conservation programs, emergency/disaster programs, and other agriculture/food-related programs. Includes intended budget, but actual appropriations decided annually (usually late in federal fiscal year)

2008 Farm Bill = "Food, Conservation, and Energy Act of 2008"

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"Farm Bill" Conservation Programs

Farm Service Agency (FSA)

- Conservation Reserve Program (CRP) – 32 million acres nationwide; ~235,000 acres in TN
- Also handles commodity programs, and emergency and disaster payments to farmers

Natural Resources Conservation Service (NRCS)

- Environmental Quality Incentives Program (EQIP)
- Wildlife Habitat Incentives Program (WHIP)
- Wetlands Reserve Program (WRP)
- Grassland Reserve Program (GRP)
- Conservation Stewardship Program (CSP)
- Farm & Ranchland Protection Program (FRPP)

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State, Federal, and NGO Programs

Tennessee Wildlife Resources Agency

- Farm Wildlife Habitat Program
- Landowner Incentives Program

U.S. Fish & Wildlife Service

- Partners for Fish & Wildlife – T&E, at-risk species in all habitats

Tennessee Division of Forestry

- Forest Stewardship Plan Development

TWRA, NRCS and Ducks Unlimited

- Tennessee Partners Project - wetlands

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Wetlands Reserve Program

- Wetlands Reserve Program (WRP)
  - WRP provides an opportunity for landowners to receive financial incentives to restore, protect, and enhance wetlands in exchange for retiring marginal land from agriculture.

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Introduction

- On average, only 5% of the lower 48 states is wetlands and other shallow aquatic habitats.
- Wetland abundance varies by region:
  - <1% of CA, NV, AZ, NM, UT, KS, MT, and WV
  - Approx. 30% of FL and LA
  - 45% of AK

Wetland Losses in the U.S.

Since the late 1700s, >50% of U.S. wetlands have been converted to other uses.

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Wetland Values

Wetlands provide benefits to society out of proportion to their extent on the landscape.

… water quality

… flood control

… habitat

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NRCS Policy

- NRCS Wetland Protection Policy
  - Executive Order 11990 (1977)

"Each agency shall provide leadership and take action to prevent the destruction, loss or degradation of wetlands, and to preserve and enhance natural and beneficial values of wetlands in carrying out the agency's responsibilities."

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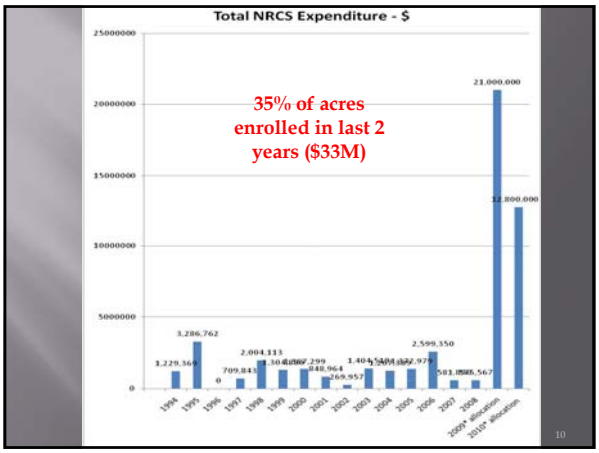

WRP Program Summary in Tennessee

- 133 TOTAL EASEMENTS FILED (92 permanent; 41 30yr) TOTALLING 21,306 ACRES UNDER EASEMENT
- 113 EASEMENTS PENDING TOTALLING AN ADDITIONAL 12,425 ACRES
- ALL CONTRACTS THROUGH 2005 ARE FULLY RESTORED
  - WETLAND REFORESTATION – 12,704
  - SHALLOW WATER DEVELOPMENT – 1,303
  - OPEN WET MEADOW – 505
  - UPLAND RESTORATION (TREES OR NATIVE GRASSES) – 2,441
  - EXISTING FORESTED WETLANDS – 4,041
  - EXISTING OPEN WATER – 318
- NRCS 2009 PROGRAM ALLOCATION - $21,000,000
- NRCS 2010 PROGRAM ALLOCATION - $12,800,000

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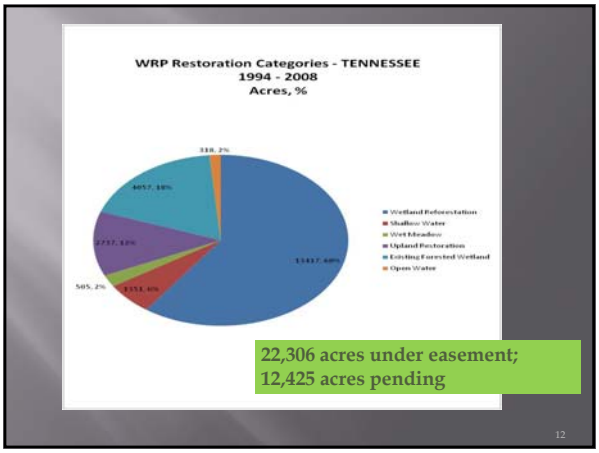
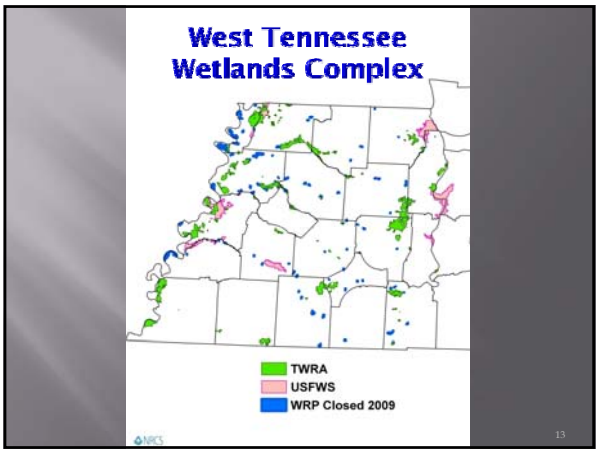
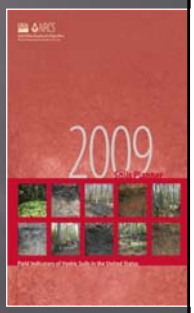




Wetland Criteria

- Three factors
  - Hydric soil
  - Hydrophytic vegetation
  - Wetland hydrology
- Must meet the definition of three wetland factors
- NRCS can "infer" the presence of hydrophytic vegetation



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Determinations

- Delineate
  - Outline the boundaries of a wetland determination
  - Can be on paper OR on the ground or both
- Determine
  - Make a technical decision regarding whether or not an area is a wetland
- Certify
  - Decision that a wetland determination is of sufficient quality to make a determination of ineligibility for USDA program benefits
  - All determinations made for Food Security Act purposes after July 3, 1996 considered "certified"

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Are these Wetlands?
Some wetlands are easy to identify . . .
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Are these Wetlands?
. . . others can be more difficult and controversial.
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Relevant Laws and Statutes

- State Laws and Regulations
- Clean Water Act of 1972 and Amendments
  - Authorized EPA and the Corps to regulate the placement of fill in wetlands and other waters
  - Permit (Section 404) required for discharge of dredged or fill materials
- Food Security Act of 1985 and Amendments
  - Authorized NRCS to make wetland determinations under the Act's "Swampbuster" provisions

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Scope of the Clean Water Act

Applies to all "waters of the United States" including these Special Aquatic Sites designated by EPA:

- Wetlands
- Sanctuaries and refuges
- Mudflats
- Vegetated shallows
- Coral reefs
- Riffle and pool complexes

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Swampbuster Violations

- Result in loss of ALL Farm Bill programs.
- Benefits may be reinstated when the wetland is restored or mitigated.

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Laws

- Food Security Act of 1985, as amended
  - "Swampbuster" provisions
  - Agricultural lands and activities
  - Eligibility for USDA programs
- Clean Water Act
  - Section 404
  - All waters of the U.S.
  - 2/25/05 Joint Guidance Memo to the Field

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NRCS Policy

- NRCS Wetland Protection Policy
  - Identify wetlands when providing assistance
    - Protect wetland functions by avoiding and minimizing impacts
  - Prohibits NRCS assistance resulting in adverse impacts to wetlands if practicable alternatives exist
  - Environmental Evaluation

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Swampbuster

- Prohibits:
  - Production of an agricultural commodity on a wetland converted between 12/23/85 through 11/28/90
  - Making the production of an agricultural commodity possible on a wetland converted after 11/28/90

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Swampbuster

- Agricultural commodity
  - Annually planted crops
  - After 11/28/1990, forages also prohibited
- Making production possible
  - Alteration of the hydrology and/or removal of woody vegetation that:
    - Allows or would allow production of an ag commodity where not previously possible
    - After 11/28/90, allows forage production or pasture and hayland use
    - Farmable more years than previously possible
    - Reduces crop stress and allows increased yield

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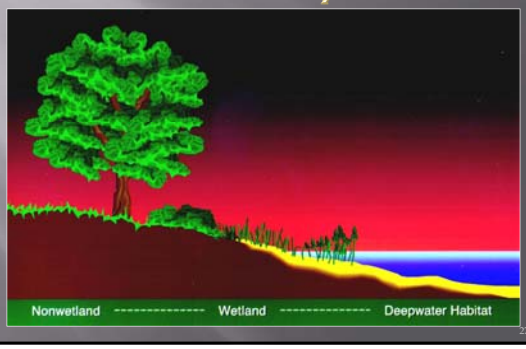
Where is the Wetland Boundary?



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Purpose

Provide guidance for identifying wetlands and delineating their upper boundaries for jurisdictional purposes

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Wetland Delineation Manuals

- Corps of Engineers Wetland Delineation Manual (1987)
  - Designed for Clean Water Act applications
  - Regional Supplements introduced in 2006
- National Food Security Act Manual (3rd Edition, 1994, as amended)
  - Designed for Swampbuster applications on agricultural lands

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Wetland Definitions

Corps/EPA definition - for Clean Water Act Section 404 purposes:

- Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

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Wetland Definitions

NRCS definition - for Food Security Act "Swampbuster" purposes:

- Areas that have a predominance of hydric soils and that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions … .

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Diagnostic Characteristics

- Hydrophytic Vegetation
  - Dominated by species that are tolerant of prolonged inundation or soil saturation
- Hydric Soils
  - Exhibit characteristics that develop under permanent or periodic soil saturation
- Wetland Hydrology
  - Evidence of ongoing and continuing wetland conditions

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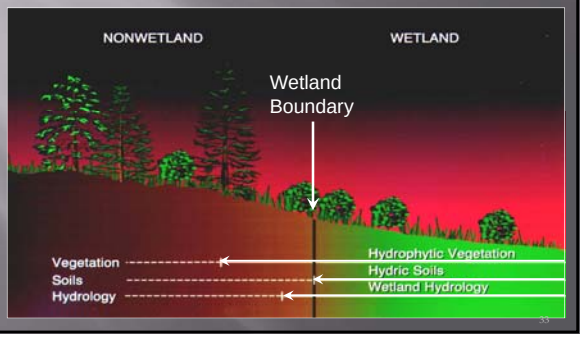
The 3-Factor Approach



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Normal Circumstances

- The condition indicated by the soils and hydrology on a site, whether or not the vegetation has been altered or removed
  - Cropping or cropping history is not the normal circumstance
- The long-term condition of the site, including any permitted or other legal alterations

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Proof of Flooding, Ponding, or Shallow Water Table

Ponded, flooded, or water table within 12 in. of the surface for 14 or more consecutive days during the growing season

- Water-table monitoring data
- Stream gauge data
- Repeated direct observation

Evaluating Wetland Hydrology

- Vegetation and soils
  - Reflect a site's medium- to long-term wetness history
  - Hydrophytic vegetation and hydric soils are evidence of wetland hydrology if hydrology has not been altered
- Wetland hydrology indicators
  - Provide evidence of recent inundation or soil saturation
  - Help ensure that soil and vegetation indicators are not relicts of a past hydrologic regime
- Direct hydrologic monitoring
  - When wetland indicators are absent or unreliable due to disturbance or other problems

Wetland Hydrology Indicators

- Presented in four groups
  - Observation of surface water or saturated soil (Group A)
  - Evidence of recent inundation (Group B)
  - Evidence of current or recent soil saturation (Group C)
  - Evidence from other site conditions or data (Group D)
- Categorized as "primary" or "secondary"
  - Primary – any one indicator from any group is sufficient
  - Secondary – two or more indicators are required

Wetland Hydrology Indicators

A1 – Surface water

Wetland Hydrology Indicators

A2 – High water table

- Water table is 12 inches or less from the surface

Wetland Hydrology Indicators

A3 – Saturation

- Indicated by water glistening on ped faces and interiors within 12 inches of the surface
- Requires a water table below the saturated zone

Wetland Hydrology Indicators

- Group B
  - Water marks
  - Sediment deposits
  - Drift deposits
  - Algal mat or crust
  - Iron deposits
  - Surface soil cracks
  - Inundation visible on aerial imagery
  - Sparsely vegetated concave surface
  - Water-stained leaves
  - Drainage patterns
  - Salt crust
  - Aquatic invertebrates or fauna
  - Marl deposits
  - Moss trim lines

Wetland Hydrology Indicators

B1 – Water marks

Wetland Hydrology Indicators

B7 – Inundation visible on aerial imagery

Wetland Hydrology Indicators

B16 – Moss trim lines

Wetland Hydrology Indicators

- Group C
  - Hydrogen sulfide odor
  - Dry-season water table
  - Oxidized rhizospheres along living roots
  - Presence of reduced iron
  - Recent iron reduction in tilled soils
  - Thin muck surface
  - Crayfish burrows
  - Saturation visible on aerial imagery
  - Fiddler crab burrows

Wetland Hydrology Indicators

C1 – Hydrogen sulfide odor

- Rotten egg odor
- Also indicates hydric soil

Wetland Hydrology Indicators

C3 – Oxidized rhizospheres along living roots

- Within 12 inches of the surface

Wetland Hydrology Indicators

C8 – Crayfish burrows

Wetland Hydrology Indicators

- Group D
  - Stunted or stressed plants
  - Geomorphic position
  - Shallow aquitard
  - Microtopographic relief
  - FAC-neutral test

Wetland Hydrology Indicators

D1 – Stunted or stressed plants

Wetland Hydrology Indicators

D2 – Geomorphic position

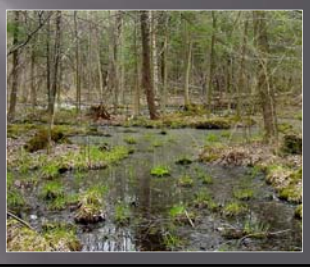
- Examples:
  - Localized depression
  - Drainageway
  - Concave position on a floodplain
  - Toe of slope
  - Fringe of water body
  - Discharge zone (seep)

Wetland Hydrology Indicators

D4 – Microtopographic relief

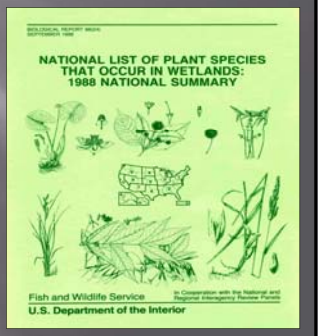
Examples:

- Hummocks
- Tussocks



Plant Lists

- Developed by interagency panels
- Vascular plants only (no bryophytes)
- Compiled by region
- Assign each species a "wetland indicator status"



Wetland Indicator Status

Indicator category	Symbol	Occurrence in Wetlands
Obligate wetland plants	OBL	> 99%
Facultative wetland plants	FACW	67 - 99%
Facultative plants	FAC	34 - 66%
Facultative upland plants	FACU	1 - 33%
Obligate upland plants	UPL	< 1%

Selecting Dominant Species

Dominant plant species are selected independently from each stratum of the community

- Dominant species are needed for certain hydrophytic vegetation indicators

Basic sampling protocol

Estimating the abundance of plant species

- Use absolute percent cover for all species and strata
- Estimate visually within a plot or across the entire community (a plot is recommended)
- Exclude plants that overhang the plot if rooted in different soil and/or hydrologic conditions

Selection of Dominant Species

The "50/20 rule":

Dominant species are the most abundant plant species that individually or together account for more than 50 percent of the total coverage of vegetation in the stratum, plus any additional species that, by itself, comprises at least 20 percent of the total.

Selection of Dominant Species

Example for the sapling/shrub stratum:

Species Present	Absolute % Cover
Cornus foemina	25*
Spiraea alba	20*
Cornus amomum	15*
Rhamnus frangula	10
Toxicodendron vernix	5
TOTAL COVER	75

* Selected as dominants

50/20 Thresholds:

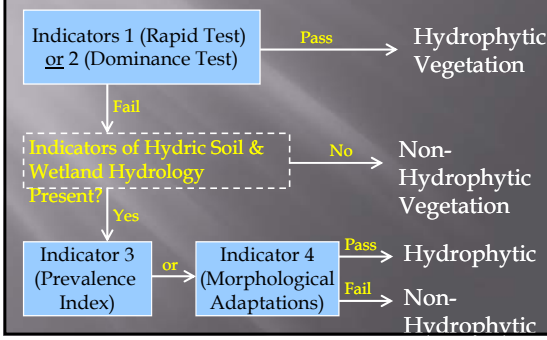
50% of total cover = 50% of 75 = 37.5%

20% of total cover = 20% of 75 = 15%

Hydrophytic Vegetation Indicators

- 1 – Rapid Test for Hydrophytic Vegetation (currently all but Alaska and Arid West)
- 2 – Dominance Test (all regions)
- 3 – Prevalence Index (all regions)
- 4 – Morphological Adaptations (all regions except Coastal Plain, Hawai'i, & Caribbean Islands)
- 5 – Wetland Non-Vascular Plants (Pacific Northwest area in the Western Mtns region)

Applying Vegetation Indicators:



Criteria for Hydric Soils

1. Organic soils (most Histosols and Histels)
2. Mineral soils with high water tables (generally ≤12 inches below the surface)
3. Soils that are frequently ponded for long (7-30 days) or very long (≥30 days) duration during the growing season
4. Soils that are frequently flooded for long or very long duration during the growing season

Hydric Soils Lists

- Local or county hydric soils lists are developed for each detailed soil survey
- Rate each soil component in the survey area as hydric or non-hydric based on estimated soil properties
- Useful as background information for an on-site wetland delineation
- Available from local NRCS offices or the Soil Data Mart and Web Soil Survey

Hydric Soil Indicators

Indicators presented in Regional Supplements are subsets of the NTCHS "Field Indicators of Hydric Soils in the United States"

http://soils.usda.gov/use/hydric/

Flexibility

Wetland delineations must be based on the best available information, interpreted in light of the investigator's training, experience, and professional judgment.

In a Problem Area, the wetland determination must be based on "the best evidence available to the field inspector."

WRP Land Eligibility

- Must be private lands or Tribal lands.
  - New under 2008 Farm Bill
- Must be a degraded wetland!
- 7-year ownership requirement
  - Prevents the purchase of land for WRP enrollment
  - Waivers may be granted if proven otherwise
- NGO lands are eligible
- NRCS conducts preliminary title search and hazardous substance record ASAP.

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Federal Programs (WRP)

- Eligibility
  - Farmed wetlands
  - Prior converted wetlands
    - Prior to 12/23/85
  - Pastured wetlands
  - Lands and riparian areas adjacent to protected wetlands
    - Up to 50% in upland buffers
    - Connective corridors

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WRP Land Ineligibility

- Wetlands converted after 1985
- CRP lands
- Public lands (State and Federal)
- Lands under easement with similar restrictive rights.
  - Cultural resource issues
  - Interfere with neighbors, roads, etc.
- When restoration is technically or financially infeasible.
- A functioning wetland already.

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Federal Programs (WRP)

- Three enrollment options
  - Permanent Easement
  - 30-Year Easement
  - Restoration Cost-Share Agreement (10 years)

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Easement Definition

- The United States has a right of reasonable ingress and egress to the easement area over the Landowner's property, ……for restoration, management, maintenance, monitoring, and enforcement purposes whether or not the property is adjacent or appurtenant to the easement area, for the exercise of any of the rights of the United States under this easement deed.
- It is useful to imagine a bundle of rights that can be separated and reassembled. A "bundle of sticks" - in which each stick represents an individual right - is a common analogy made for the bundle of rights. Any property owner possesses a set of sticks related directly to the land.

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WRP Permanent Easement

- USDA pays the lower of 100% of fair market value or an amount offered by the landowner.
- USDA pays 100% of restoration costs.
- USDA purchases appraisal, survey, and closing services.
- USDA has operation responsibility unless assumed by the landowner or other party.

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WRP 30-year Easement

- USDA pays the lower of 75% of fair market value or 75% of an amount offered by the landowner.
- USDA pays 75% of restoration costs.
- USDA purchases appraisal, survey, and closing services.
- USDA has operation responsibility unless assumed by the landowner or other party.

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WRP 10-year Agreement

- USDA only pays 75% of restoration costs.
- USDA offers no easement for property.

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WRP Enrollment

- Ranking process for each application
  - Cost benefit ratio
  - Environmental benefits
  - Proximity to protected lands
  - Focus on T and E's and species of concern
  - Wetland type
  - Percent of land enrollment
  - Percent upland buffer

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WRP Restoration

- Developed in cooperation with landowner.
  - Implemented by landowner
- Can convert up to 30% into alternative habitat.
  - Open water areas
  - Food Plots

"Restore native plant communities and hydrologic regimes."

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WRP Restoration

- Typically plant in bottomland hardwood trees
- Fencing to keep livestock out
- Restoration of Hydrology
  - Ditch Plugs
  - Water control structures
  - Re-contouring and berms if necessary
  - Management
- Can convert up to 30% into alternative habitat.
  - Open water areas/emergent marsh
  - Food Plots

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WRP Offers

- Prior to 2008 USDA offered landowners accepted in WRP a "Yellow Book Value".
- Typically the difference in land value as is minus the value of the land after restoration.
- Generally about one half of land value.
- Now use Geographic Area Rate Caps for each county.

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Geographic Rate Caps

County	Crop/Pasture Land	Other Land
Greene	$4,750	$4,750
Bradley	$9,500	$7,130
Sullivan	$11,880	$9,500
Davidson	$7,890	$7,890
Lake	$2,660	$2,170
Dyer	$2,590	$2,170
Lauderdale	$2,520	$1,240
Knox	$9,500	$8,550
Lincoln	$3,330	$2,710

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WRP Offers

- Easement Process (Typically 12-18 months)
  - Enrollment Process
  - Determine Landowner and Land Eligibility
  - Complete Final Engineering Designs and Restoration Plan
  - Provide Agreement to Purchase Easement
  - Landowner Accepts Offer
  - Implement Restoration Plan
  - Monitor, Manage, Enforce if Necessary

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Easement Restrictions

- Landowner maintains Title to Property but can not do anything to alter or destroy natural values of the easement area.

  Can Use:

  For Quiet Enjoyment

  Recreational Use

  Controls Access by others

  Maintains water use and water rights

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Compatible Use

- If determined to have "no adverse impact" the landowner may conduct certain activities
  - Timber Harvest
  - Haying, mowing, or limited grazing
  - Maintenance of drainage systems
  - Manage water levels
  - Applying pest management
  - Wildlife food plots

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Labels – Wetlands

- Wetlands (W)
  - Natural wetlands
  - Wetlands farmed under natural conditions
    - No removal of woody vegetation
    - No manipulation of water regimes
- Manipulated Wetlands (WX)
  - Not for the purpose of commodity production ("intent") AND
  - Production not made possible
- Artificial Wetland (AW)
  - Non-wetland under natural conditions
  - Exhibits wetland characteristics due to human activity

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Areas in Ag Production

- Prior Converted Cropland (PC)
  - Manipulated prior to 12/23/85
  - Capable of producing a commodity on 12/23/85
  - Commodity produced at least once before 12/23/85
  - Does not meet Farmed Wetland hydrology criteria
  - Hydrologic manipulations can be maintained or improved
- Farmed Wetlands (FW)/Farmed Wetland Pasture (FWP)
  - Manipulated prior to 12/23/85
  - Meets appropriate FW/FWP hydrology criteria
  - Not abandoned
  - Can be maintained
- ONCE A PC ALWAYS A PC

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Wetland Conversions

- Converted Wetland (CW)
  - Area that was formerly wetland
  - Manipulated and an agricultural commodity planted between 12/23/85 and 11/28/90
  - Production not possible but for manipulation action
  - Producer in violation if commodity planted or additional manipulation
  - Can maintain to scope and effect of original manipulation

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Wetland Conversions

- Converted Wetland (CW+year)
  - Area that was formerly wetland
  - Manipulated after 11/28/90 for the purposes of or to have the effect of **making production possible**
  - Production not possible but for action
  - Producer in violation indefinitely until wetland restored or mitigated

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Exemptions

- Converted Wetland Technical Error (CWTE)
  - Incorrect determination by NRCS results in noncompliance
  - Can only be approved at the State level
- Third Party Conversion Exemption (TP)
  - USDA participant did not control action
    - Conversion by persons unassociated with the USDA program participant
    - Indirect effect of action taking place off the tract

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Exemptions

- Minimal Effect Exemption (MW)
  - Wetlands converted through an action having minimal effect on wetland functions and values
  - State-level procedures
  - Requested by the USDA participant
  - Pre- or post-conversion
  - Functional assessment required
  - Minimal effect agreement may be required if special conditions are applied
  - 404 permit may be required

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Exemptions

- COE Permit with Mitigation Exemption (CPD)
  - No Swampbuster violation if
    - Permit issued under Section 404 AND
    - Acreage and functions of the converted wetland adequately mitigated
  - No easement required

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