

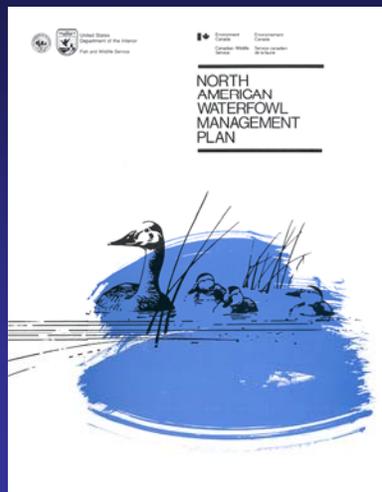
# North American Bird Habitat Joint Ventures

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Division of Bird Habitat Conservation  
US Fish and Wildlife Service



## North American Waterfowl Management Plan 1986 – Canada & United States

- Restore NA waterfowl populations to 1970's levels
- 43 species or populations of Anatidae
- Focus on habitat conservation actions
- Regional habitat objectives linked to continental population objectives
- 5-year updates
- "Joint Venture" concept for implementation

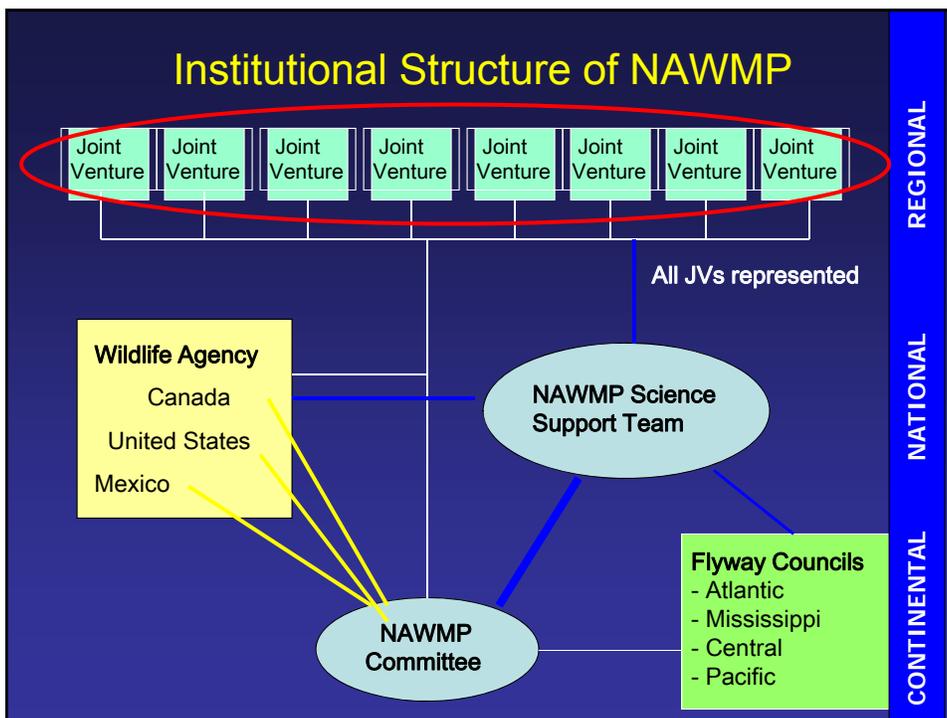


# Bird Habitat Joint Ventures

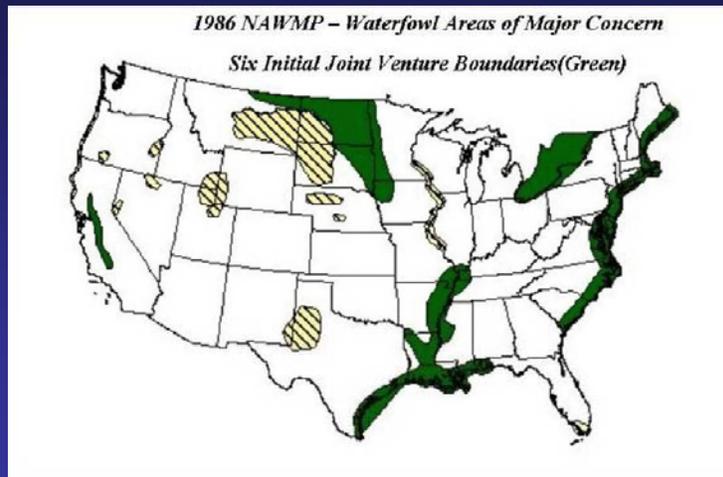
Private & public sector partners working together to conserve N.A. waterfowl populations & their essential habitats



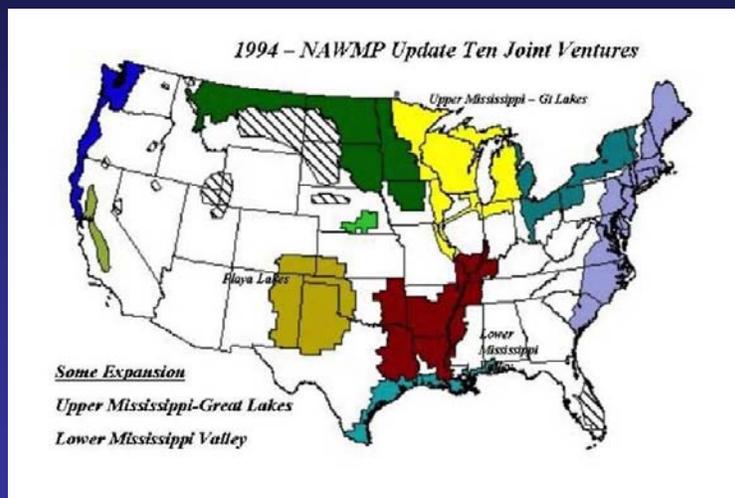
## Institutional Structure of NAWMP



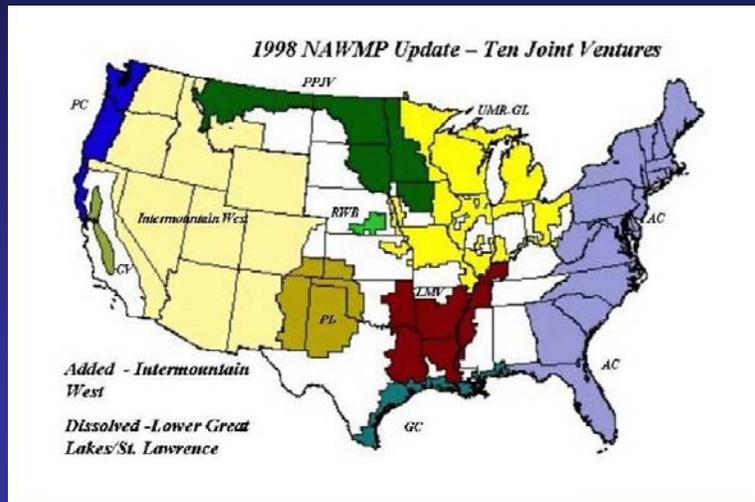
1986



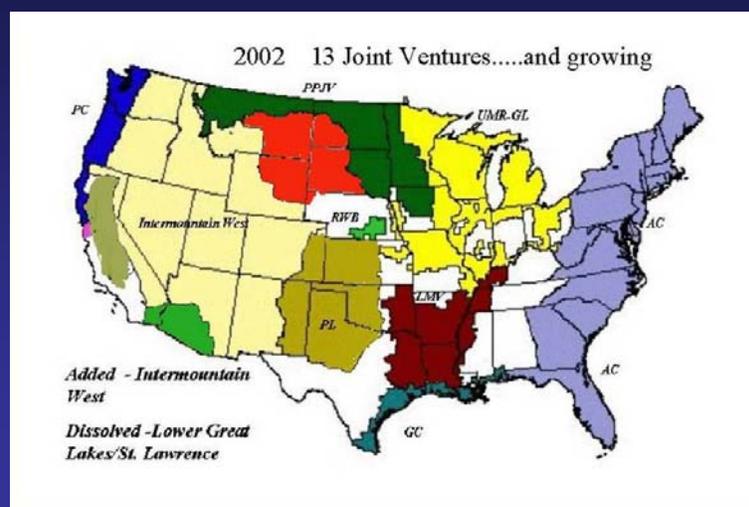
1994



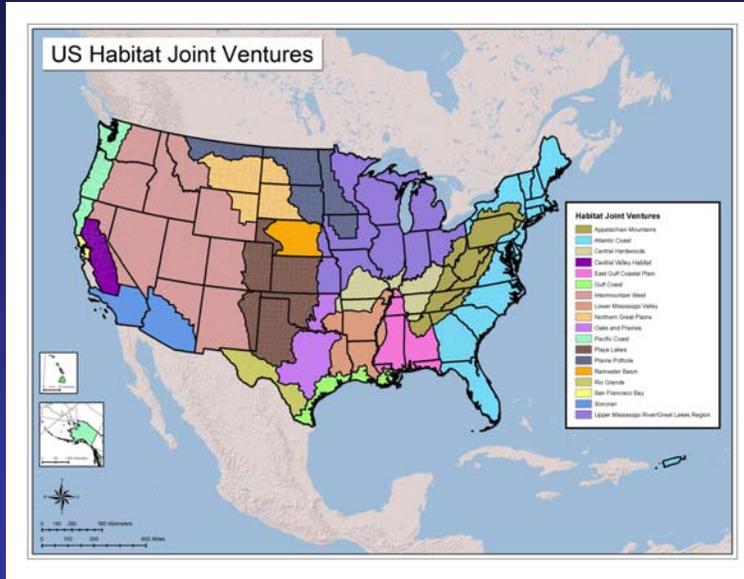
1998



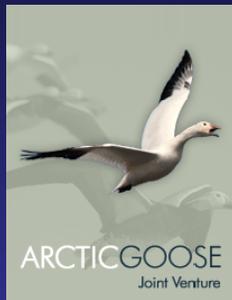
2002



2011



### 3 Species Joint Ventures



## Joint Venture

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A unique set of PARTNERS who have taken a set of migratory bird OBJECTIVES to apply to specific GEOGRAPHIC REGIONS of North America.



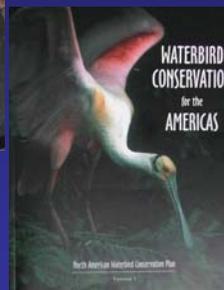
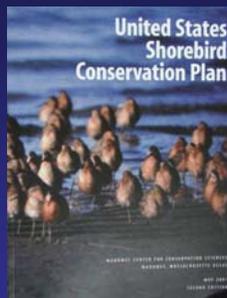
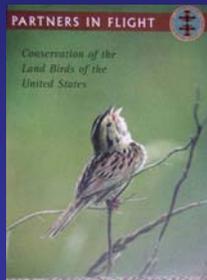
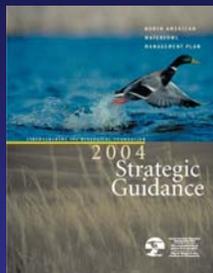
## Joint Venture Criteria

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- Responsible for delivery of national and international bird conservation plans



## Joint Ventures - All Bird

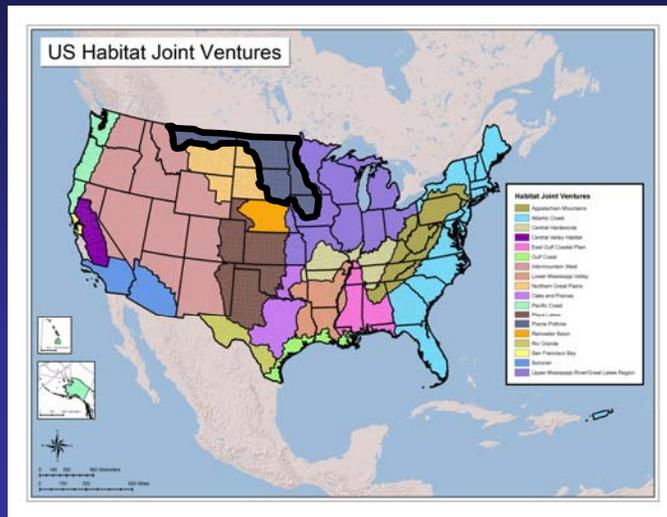


## Joint Venture Criteria

- Responsible for delivery of national and international bird conservation plans
- Directed by a diverse management board representing public and private organizations



# Prairie Pothole Joint Venture Management Board



# Prairie Pothole Joint Venture Management Board

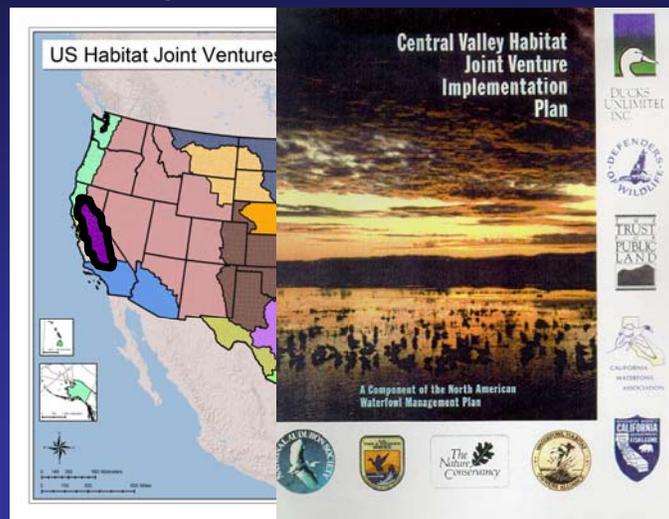
- Iowa Department of Natural Resources
- Minnesota Dept of Nat. Resources
- Montana Dept. of Fish, Wildlife and Parks
- North Dakota Game and Fish
- South Dakota Department of Game, Fish and Parks
- National Wildlife Refuge Association
- Natural Resources Conservation Science
- Ducks Unlimited, Inc.
- Pheasants Forever
- National Audubon Society
- The Nature Conservancy
- North Dakota Natural Resources Trust
- Delta Waterfowl Foundation
- Wildlife Management Institute
- Bureau of Land Management
- Farm Service Agency
- US Fish and Wildlife Service

## Joint Venture Criteria

- Responsible for delivery of national and international bird conservation plans
- Directed by a diverse management board representing public and private organizations
- Guided by an implementation plan developed by the management board



## Central Valley Joint Venture Implementation Plan



# Planning Basins



# 1990 Plan Objectives

## Focus: wintering waterfowl

### Wetlands:

- Protect 80,000 acres
- Restore 120,000 acres
- Enhance all existing

### Agricultural land:

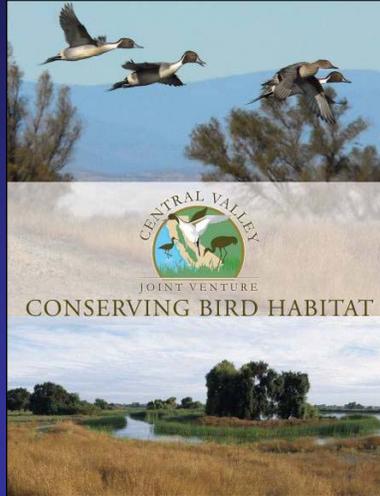
- Enhance 443,000 acres

### Wetland Water Supplies:

- Secure 402,450 ac/ft (level 4) water for existing NWR's and WA's and Grasslands



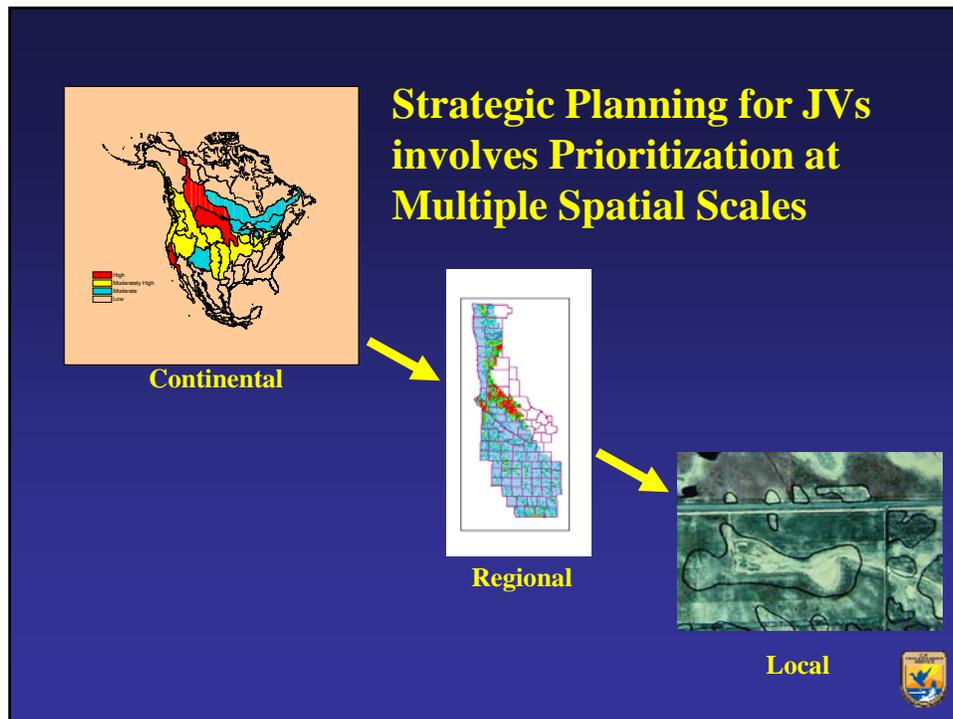
## 2006 CVJV Implementation Plan



## Joint Venture Criteria

- Responsible for delivery of national and international bird conservation plans
- Directed by a diverse management board representing public and private organizations
- Guided by an implementation plan developed by the management board
- Capacity to implement conservation actions identified in the plan





## Joint Venture Activities

- Biological planning, conservation design and prioritization
- Project development and implementation
- Monitoring, evaluation, and applied research
- Communications and outreach
- Fund-raising for projects and activities



# “JV Matrix”

➤ **Desired Characteristics for Habitat Joint Venture Partnerships: a way to assess JVs**

- Organizational Performance
- Biological Planning
- Conservation Design
- Habitat Delivery
- Monitoring
- Research
- Communication and Outreach



## Desired Characteristics for Habitat Joint Venture Partnerships

<u>Biological Planning</u>	<u>Conservation Delivery</u>	<u>Habitat Delivery</u>	<u>Monitoring</u>	<u>Research</u>	<u>Communication and Outreach</u>
Biological Planning Unit	Landscape/Habitat Characterization and Assessment	Program Objectives	Conservation Tracking System	Species/Habitat Model Assumptions	Priority audiences and objectives
Priority Species	Decision Support Tools	Conservation Actions	Habitat Inventory and Monitoring Programs	Conservation Treatment Options	Tactics and Objectives
Population Objectives	Habitat Objectives	Delivery Capacity	Population Monitoring Program	Sensitivity Analysis	Audience Assessment
Limiting Factors				Spatial Data Analysis	
Species/Habitat Relationships					

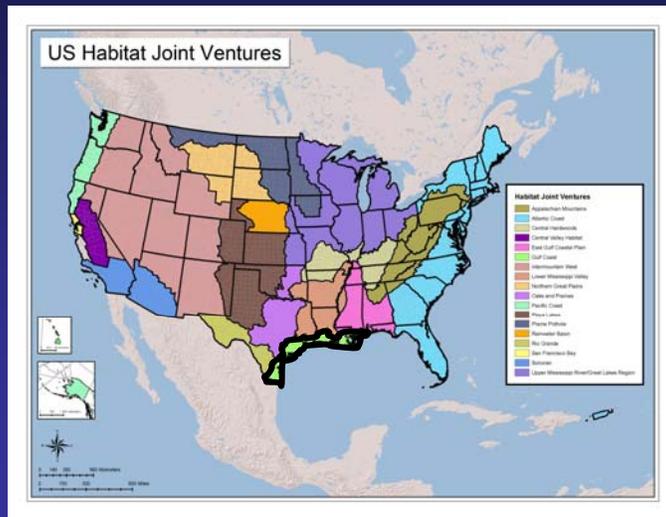


# JV Project Examples

1. Biological Planning
2. Conservation Delivery
3. Habitat Delivery
4. Monitoring
5. Research
6. Communications and Outreach



## Biological Planning in the Gulf Coast JV



## Biological Planning - Gulf Coast JV

- Deepwater Horizon Oil Spill – April 20<sup>th</sup>, 2010
- Leaking oil posed significant risks to birds and bird habitats in coastal areas of the Northern Gulf of Mexico
- Coastal wetlands, beaches, and barrier islands in the northern Gulf provide critical habitat for millions of migratory and resident birds annually, serving as essential foraging habitats during migration and winter and nesting and brood rearing habitats during breeding seasons.



## Biological Planning - Gulf Coast JV

- Developing reliable expectations for direct and indirect impacts of the Deepwater Horizon oil spill on birds and bird habitats is difficult, if not impossible.
- Knowledge of species-habitat relationships and an examination of various scenarios of oil impacts to coastal habitats may help elucidate the potential impacts to bird populations



# Biological Planning - Gulf Coast JV



# Biological Planning - Gulf Coast JV

- These scenarios were envisioned as broad sideboards for oil spill impacts to help bird habitat conservationists visualize and quantify the range of potential impacts to bird habitats and populations.
- Measures of potential impacts could then be translated into habitat conservation actions necessary to mitigate impacts or otherwise facilitate population recoveries.

**Habitat Response to Reduce Potential Oil Spill Impacts to Migratory Birds along the Northern Gulf of Mexico:**

**Increase Habitat Enhancement on Private Lands across the Agricultural Landscape**

Depending on ultimate oil spill impact, it may be necessary to pursue activities that would compensate for potential losses of coastal food resources for migratory birds. Forcing efforts only on state and federal public lands is restricted in the amount of additional habitat resources that can be provided. Therefore, it may be difficult to dedicate those public resources for the continued management of additional habitat for an extended period. Developing efforts to include private lands should be considered. Much of the private land base in the Gulf Coast region is agricultural and has the potential to support augmented populations. In addition, there are specific agricultural production regions such as the cotton/soybean managing land for migratory birds, such as waterfowl, has a long-standing tradition (i.e., the farming industry).

The Gulf Coast Joint Venture (GCJV) recognizes the potential of agricultural based habitats and has quantified land capacity to support the management of agricultural and shorebirds. Current information suggests a deficit in the Gulf of Mexico of habitats in the agricultural zone relative to expected populations of waterfowl and shorebirds that require the Gulf Coast (Verillion 2007, GCJV unpublished data). This deficit can be addressed through the GCJV (Verillion 2007, GCJV unpublished data). This deficit can be addressed through the GCJV (Verillion 2007, GCJV unpublished data). This deficit can be addressed through the GCJV (Verillion 2007, GCJV unpublished data).

**Emergency Funding for Short-Term Enhancement of Agricultural Fields**

Immediate actions that will provide migratory benefits are warranted as migratory birds will arrive within the Gulf Coast. Agricultural fields, specifically those cultivated for grain crops or other forage, may provide suitable foraging habitat to mitigate potential oil spill impacts on the landscape. Many species of waterfowl, shorebirds and waders use flooded agricultural lands as foraging habitat during migration and winter (Cahoon et al. 2005). Potential food resources available in flooded agricultural lands include grain, seeds of water and plants, and aquatic invertebrates. These food resources can provide a significant source of energy for waterfowl and shorebirds. For example, an acre of harvested cotton (i.e., second crop of rice in the case of rice) can provide the potential to support the energetic demands of approximately 1,722 mallards (Lesser Pheasant) for one day (GCJV unpublished data). Similarly, one acre of agricultural land cultivated for cotton can provide the potential to support the energetic demands of approximately 1,250 average-sized shorebirds, such as mallards (Cahoon, unpublished), for one day (Verillion 2007).

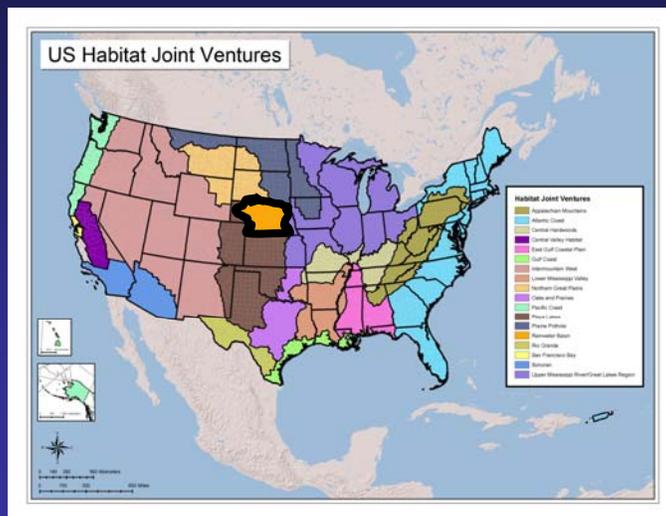
Emergency funding could be used to pay agricultural producers along the Gulf Coast, or further north in the Lower Mississippi Valley, to implement short-term (e.g., 1 year) management practices on agricultural lands to enhance the quality of these areas for waterfowl, shorebirds, and waders. Fields managed for rice production have the greatest potential as

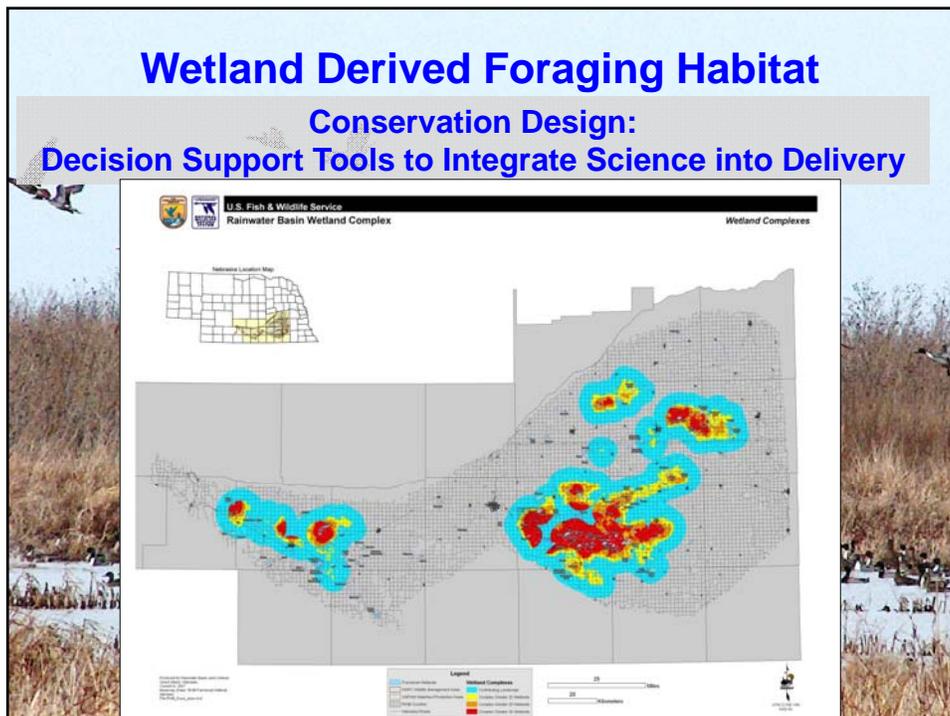
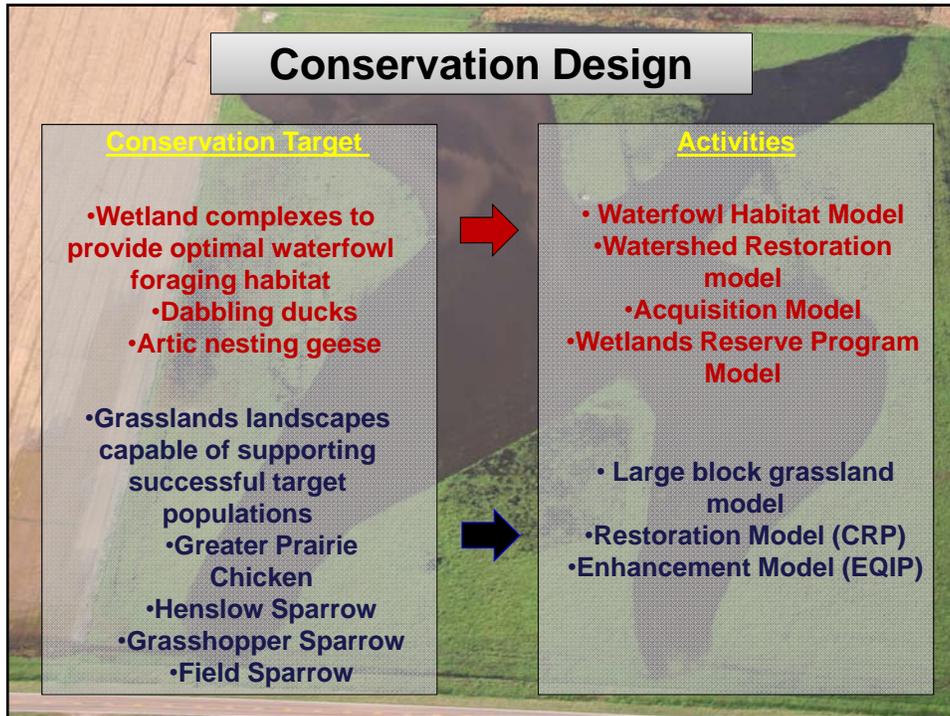
# JV Project Examples

1. Biological Planning
2. Conservation Delivery
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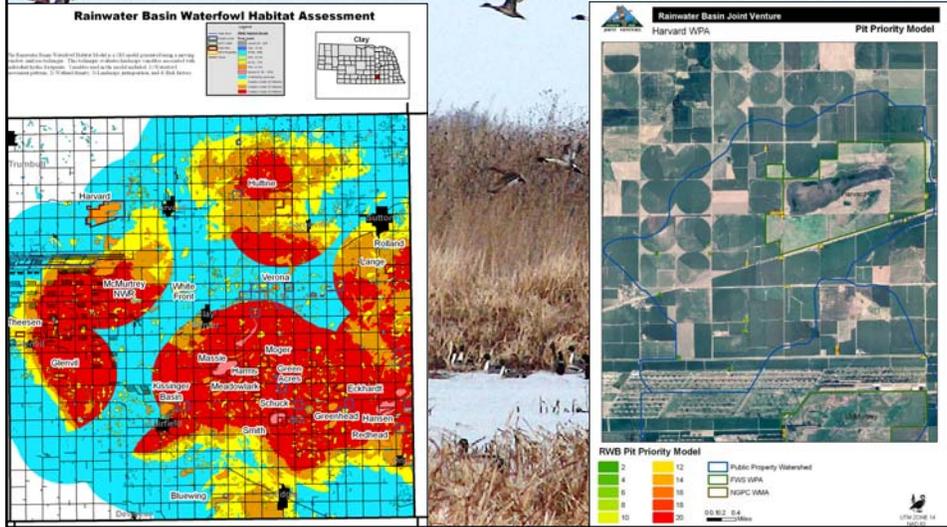
## Conservation Delivery in the Rainwater Basin JV





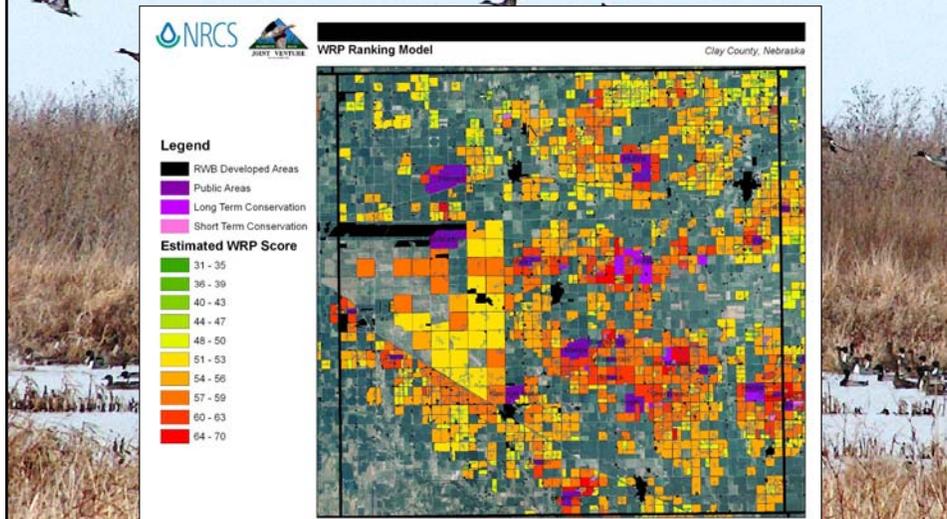
# Wetland Derived Foraging Habitat

## Conservation Design: Decision Support Tools to Integrate Science into Delivery



# Wetland Derived Foraging Habitat

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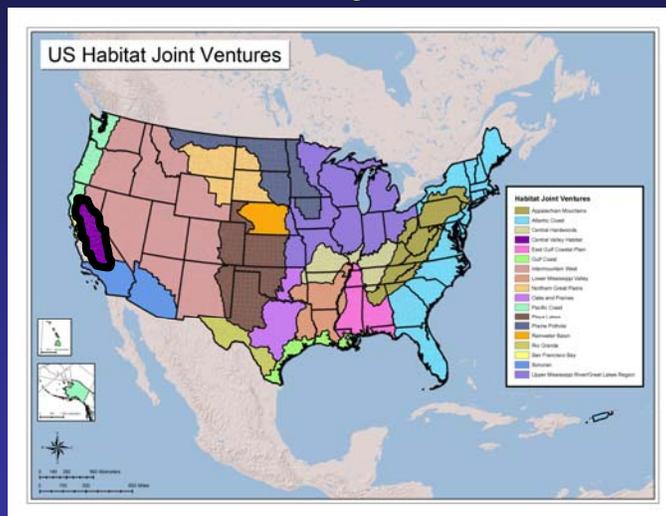


# JV Project Examples

1. Biological Planning
2. Conservation Delivery
- 3. Habitat Delivery**
4. Monitoring
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## Habitat Delivery in the Central Valley JV



# 1990 Plan Objectives

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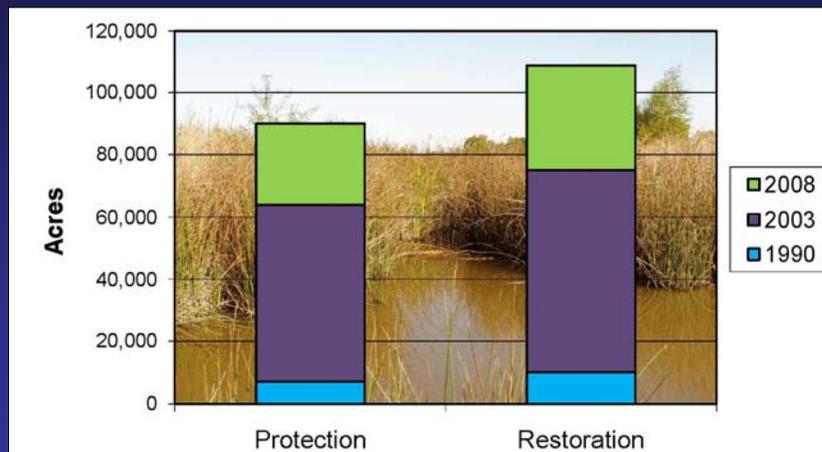
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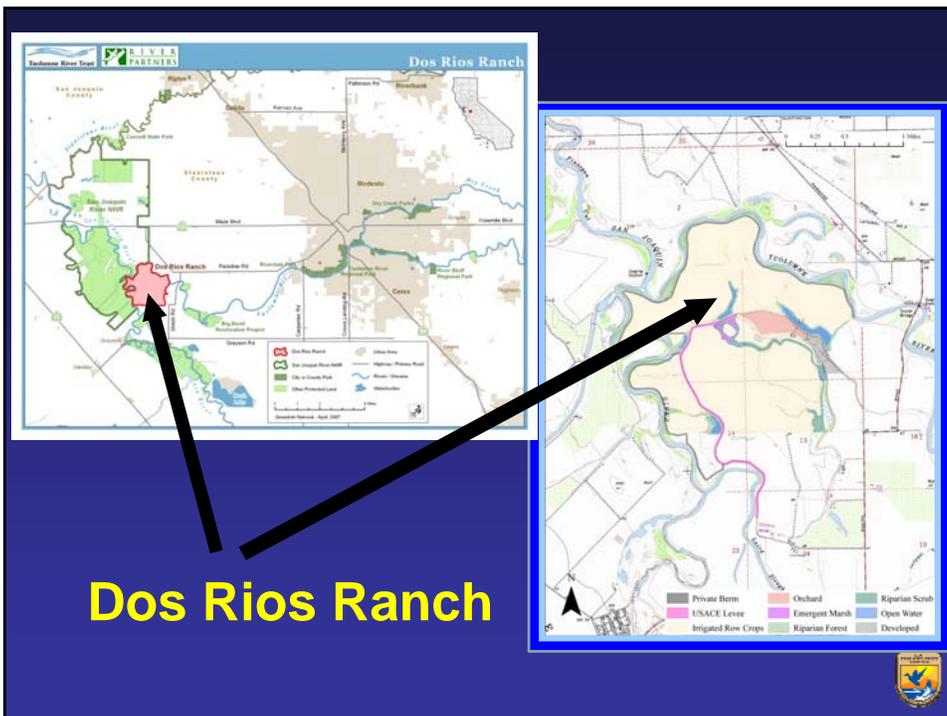


# CVJV Accomplishments 1986-2008



# The Dos Rios Ranch Acquisition and Habitat Restoration Project

- 1,603-acre integrated flood protection, habitat restoration project
- adjacent to the 8,000-acre San Joaquin River National Wildlife Refuge.
- Connects the largest contiguous block of riparian habitat restoration in California
- 6 miles of river frontage and over 1450 acres of historic floodplain.





**Tuolumne River  
corridor**

**Dos Rios Ranch**



## **The Dos Rios Ranch Acquisition and Habitat Restoration Project**

Restoration activities target state and federal listed species including:

- Riparian brush rabbit (FE, SE)
- Riparian woodrat (FE)
- Least Bell's vireo (FE, SE)
- Yellow warbler (CSC)
- Valley Elderberry Longhorn Beetle (FT)
- Swainson's hawk (FSC, ST)
- Spring-run Chinook salmon (FT, ST)
- Fall-run Chinook salmon (FSC, CSC)
- Steelhead trout (FT)



## Dos Rios Ranch Funding partners

- Bureau of Reclamation
- National Fish and Wildlife Foundation
- Resources Legacy Fund Foundation
- River Partners
- Tuolumne River Trust
- California Department of Water Resources
- California Natural Resources Agency
- North American Wetlands Conservation Act Grant
- San Francisco Public Utilities Commission
- California Wildlife Conservation Board
- NRCS Wetland Reserve Program



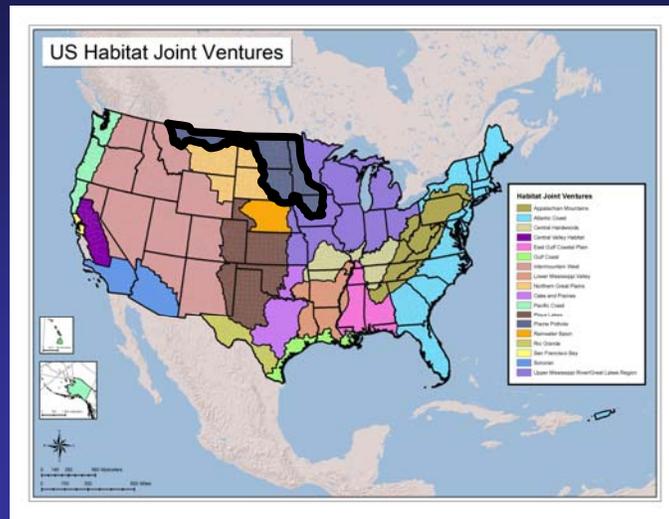
## JV Project Examples

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1. Biological Planning
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# Monitoring in the Prairie Pothole JV



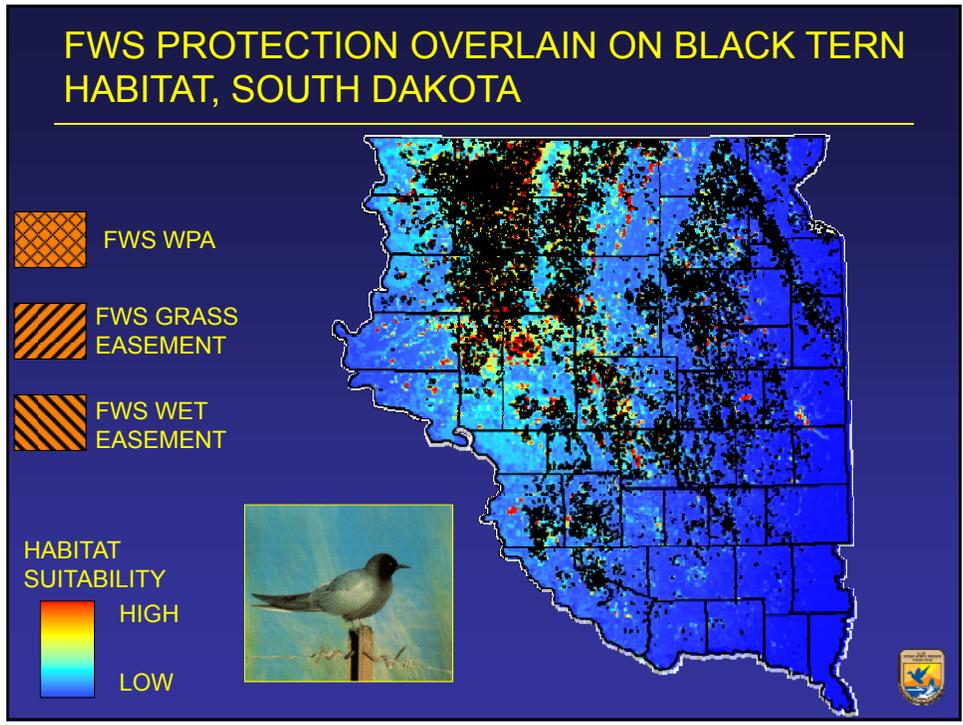
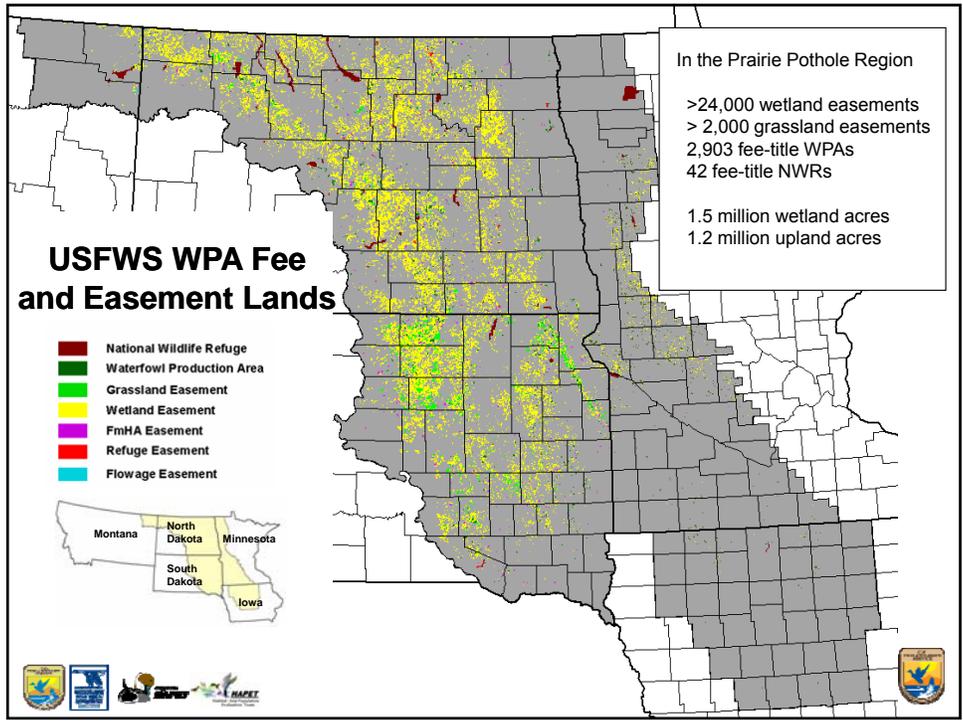
## LANDSCAPE-LEVEL BENEFITS OF WATERFOWL CONSERVATION TO NON-GAME BIRDS IN THE U.S. PRAIRIE POTHOLE REGION

Project example courtesy of:  
Neal Niemuth, Mike Estey, Chuck Loesch, and Ron Reynolds  
USFWS HAPET Office, Bismarck, North Dakota

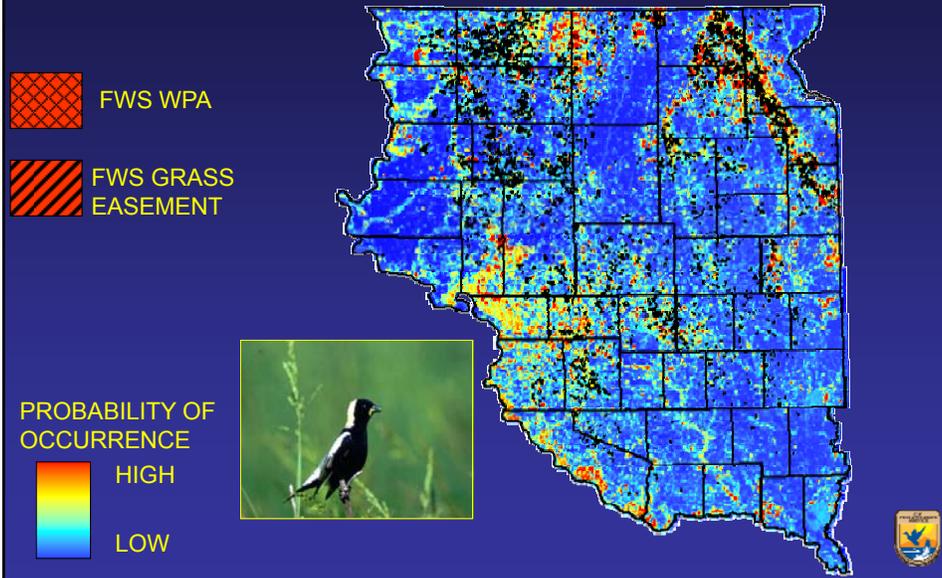
### BIRD DATA USED TO DEVELOP MODELS CAME FROM TWO SOURCES

NORTH AMERICAN  
BREEDING BIRD SURVEY

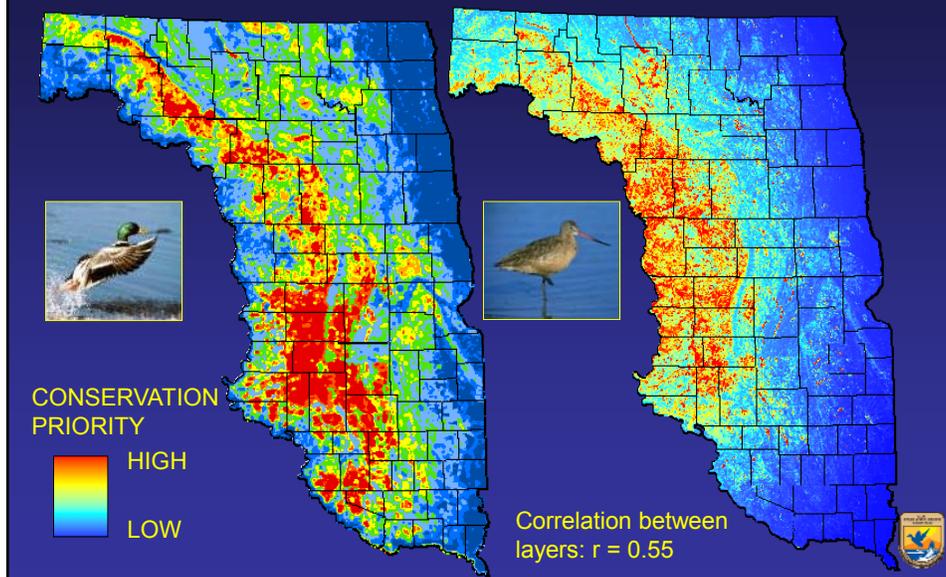
PRAIRIE POTHOLE BREEDING  
SHOREBIRD SURVEY



## FWS PROTECTION OVERLAIN ON BOBOLINK HABITAT, SOUTH DAKOTA



## MODELED WATERFOWL AND MARBLED GODWIT DISTRIBUTION

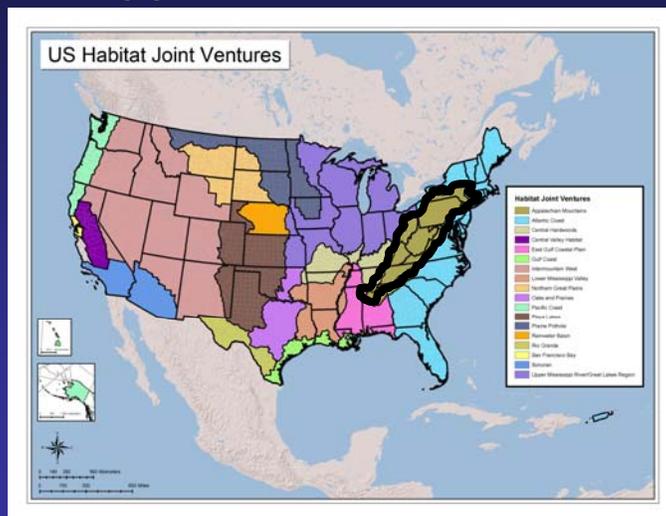


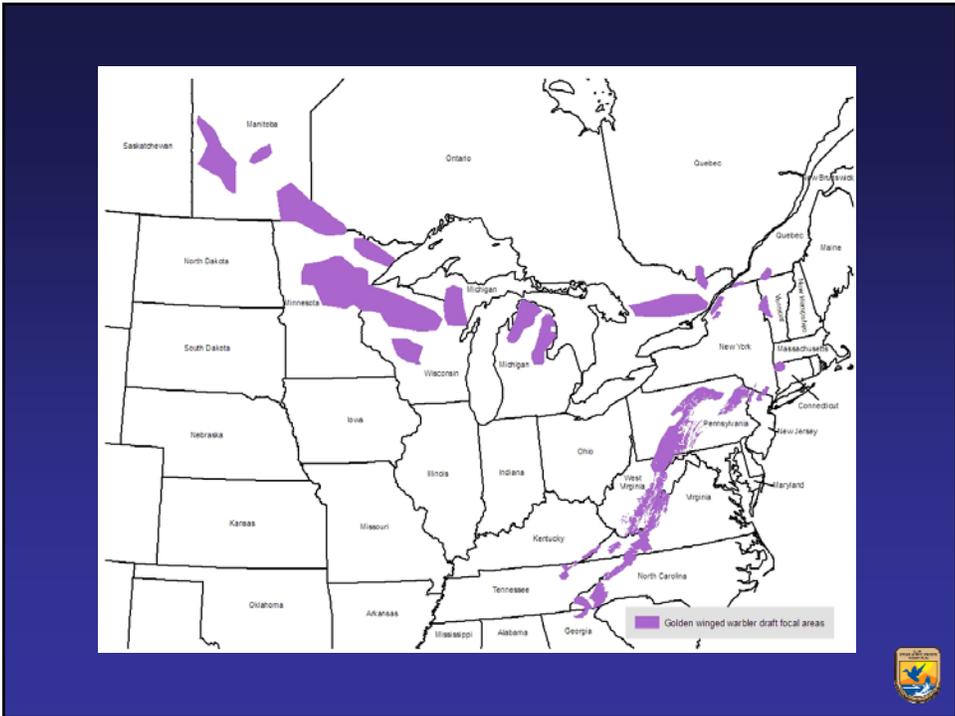
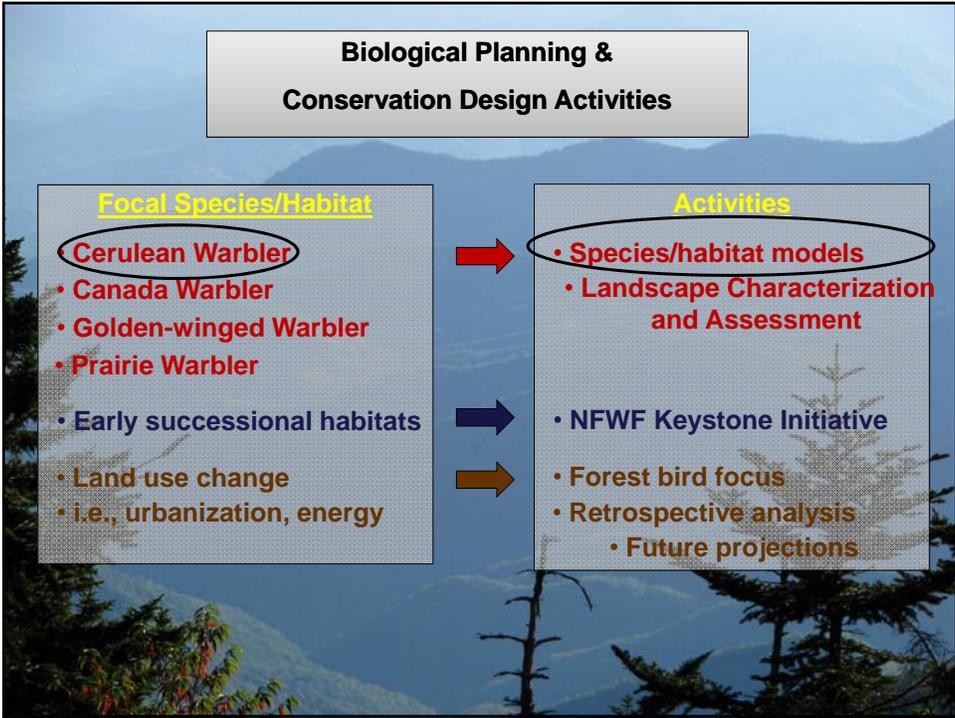
# JV Project Examples

1. Biological Planning
2. Conservation Delivery
3. Habitat Delivery
4. Monitoring
- 5. Research**
6. Communications and Outreach



## Golden-winged Warbler BMPs in the Appalachian Mountain JV







## Goals of Project:

1. To understand breeding habitat characteristics of Golden-winged Warblers in forestland habitats (e.g., timber harvests and scrub barrens) in PA and MD.
2. To develop BMPs where we provide habitat-specific management prescriptions to land managers interested in creating breeding habitat for GWWAs.



## Methods – Stand Selection

- In areas of known persistence of GWWAs in Delaware and Sproul State Forests
- Harvest prescription type (e.g., shelterwood)
- Time since harvest ( $\leq 12$  years post-harvest)
- Results: DESF = 48 stands with 56 point counts  
SSF = 48 stands with 71 point counts
- Stand treatments typically classified as overstory removal, shelterwood, or salvage operations



## Avian Survey Methods

- 10-minute point count (125 m radius)
- Recorded all *Vermivora* spp. (GWWA, BWWA, and hybrids)
- Visual confirmation of birds (using playback if necessary)
- Recorded other species also within point count
- 3 visits, 4-7 days apart from 10 May – 15 June



## Habitat Survey Methods

- Associated with each point count
- $\geq 30$  sampling plots located along lines oriented in a random direction
- At each 1-m radius plot ( $n \geq 30$ ):
  - % cover for grasses, ferns, *Rubus*, *Solidago*, surface water, bare ground, shrubs  $< 1\text{m}$ , shrubs  $> 1\text{m}$ , saplings, canopy
  - Distance to nearest microedge
- At each 5-m radius plot ( $n = 6$ )
  - # and species of shrubs (1-2m,  $> 2\text{m}$ ) and saplings
- At each 11.3-m radius plot ( $n = 6$ )
  - # and species of trees, # of snags



## Developing Forest Land BMPs for PA and MD



- 17 (35.4%) stands in Delaware State Forest.
- Most of the detections occurred in shelterwoods and overstory removal.



## Early Successional Habitat

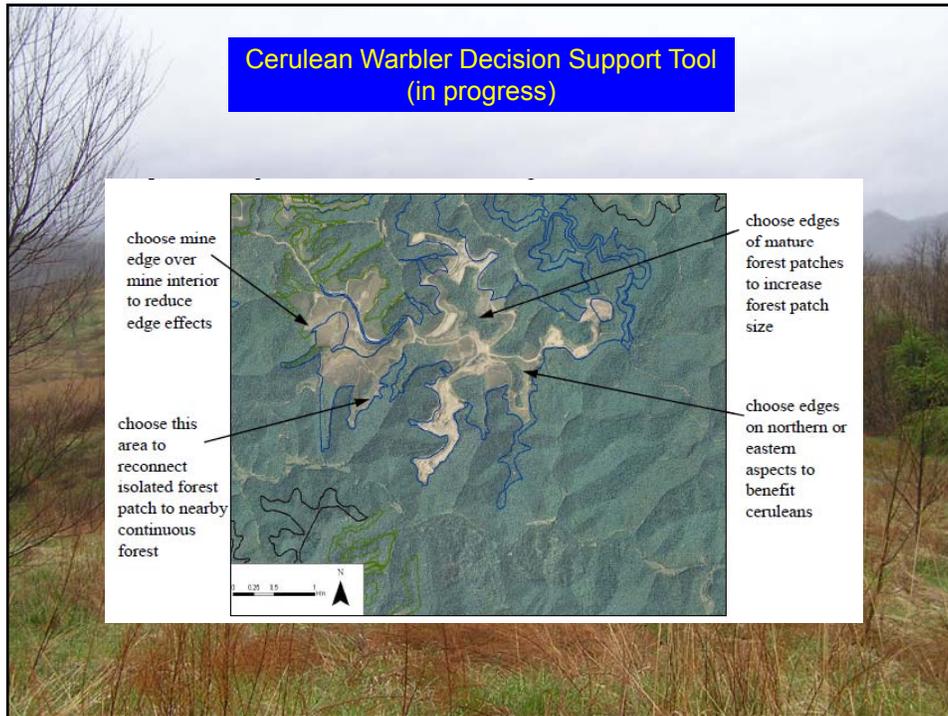
Conservation Delivery

NFWF Early Successional  
Habitat Keystone Initiative



10 yrs,  
\$600k+/year





## JV Project Examples

1. Biological Planning
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## Communication and Outreach in the Playa Lakes JV



## Communication and Outreach in the Playa Lakes JV

- \$10,000 capacity grant from Playa Lakes JV to Ogallala Commons helped them expand their Playa Festivals
- The festivals are designed to educate school children and communities about these seasonal wetlands (playas) found throughout the Southern High Plains



## Communication and Outreach in the Playa Lakes JV

➤ Capacity grant also enabled Ogalala Commons to incorporate playa conservation workshops for landowners.

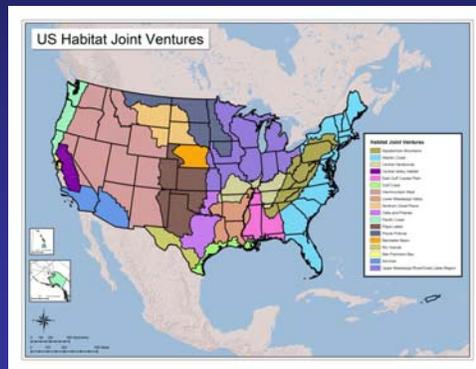
➤ In 2010, the landowner workshops resulted in five playas in the Texas Panhandle being enrolled in conservation programs; more enrollments are expected in the near future.



## Thank you!

For more information please visit:

<http://www.fws.gov/birdhabitat/JointVentures/index.shtm>



Or send an email to

[ken\\_kriese@fws.gov](mailto:ken_kriese@fws.gov)

