Applying Vulnerability Assessment Results: Means, Mechanisms, Questions

Vulnerability Assessments

- Applying the results is easy provided you have clearly defined your objective

My Objective

- Provoke thoughts on how vulnerability assessment results can be used in practice

Value of Vulnerability Assessments

- Where will opportunities or conflicts occur?
  - Examine management strategies
  - Examine conservation priorities

Value of Vulnerability Assessments

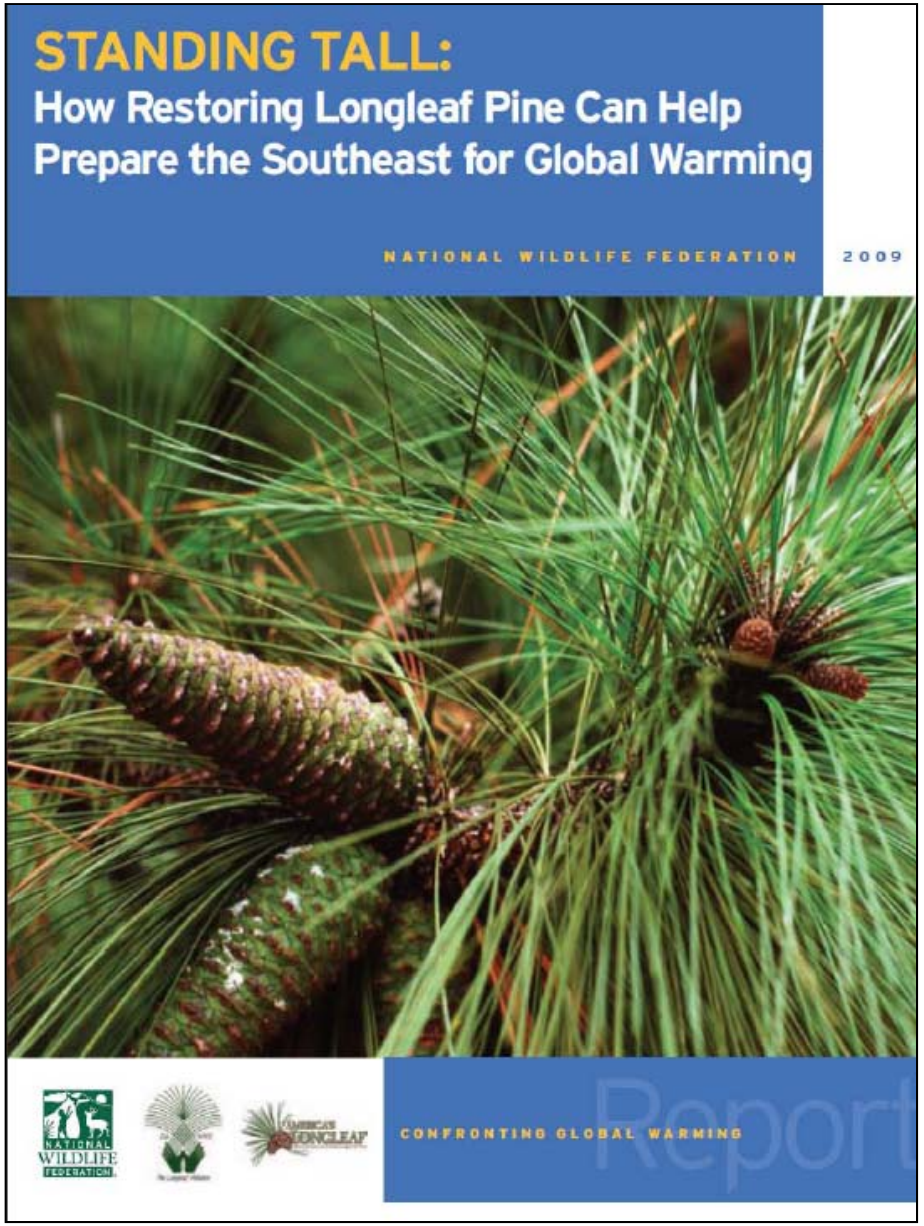
- Where <u>will</u> opportunities or conflicts occur?
  - Examine management strategies
  - Examine conservation priorities

"Skate to where the puck is going, not to where it has been"

-Wayne Gretzky

Longleaf Pine

- SE forests are at risk
  - Hotter, drier
  - Extreme events
- Longleaf is resilient
  - Long-lived
  - Wide climate niche
  - Disturbance-dependent
  - Disease-resistant



Collaborative Forest Landscape Restoration Program (CFLRP)

PROPOSAL

United States Department of Agriculture Forest Service, Region 8
National Forests in Mississippi
February 2011

De Soto Ranger District, De Soto National Forest
Forrest, George, Greene, Harrison, Jackson, Pearl River, Perry and Stone Counties, Mississippi

Longleaf Pine Ecosystem Restoration and Hazardous Fuels Reduction

STANDING TALL:
How Restoring Longleaf Pine Can Help Prepare the Southeast for Global Warming

NATIONAL WILDLIFE FEDERATION 2009

CONFRONTING GLOBAL WARMING

Report

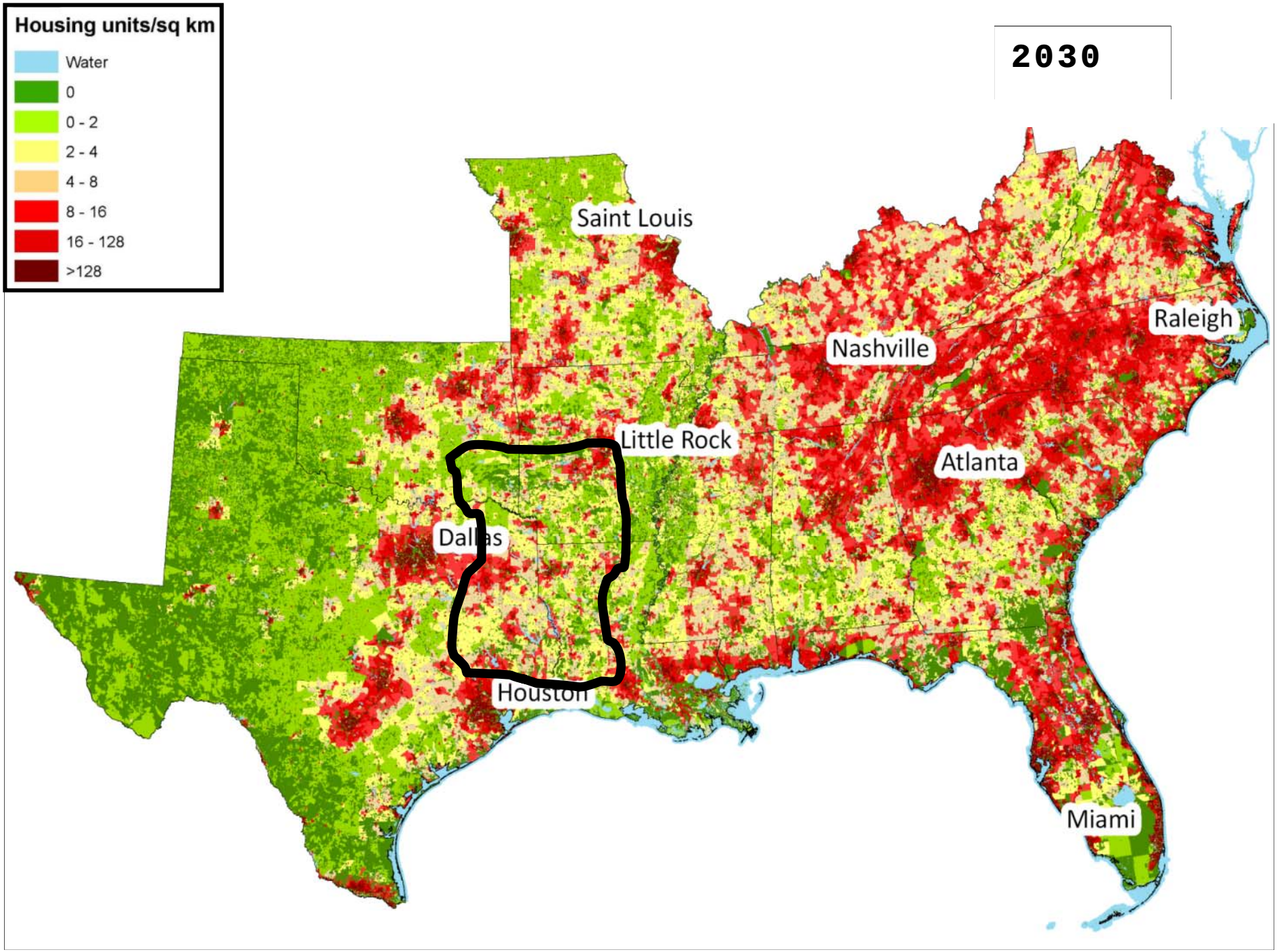
Climate Change & Ecological Adaptation

Based on current projections, the primary regional-level effects of climate change in the Southeast are expected to include: 1) warmer temperatures and a rising heat index, 2) moisture

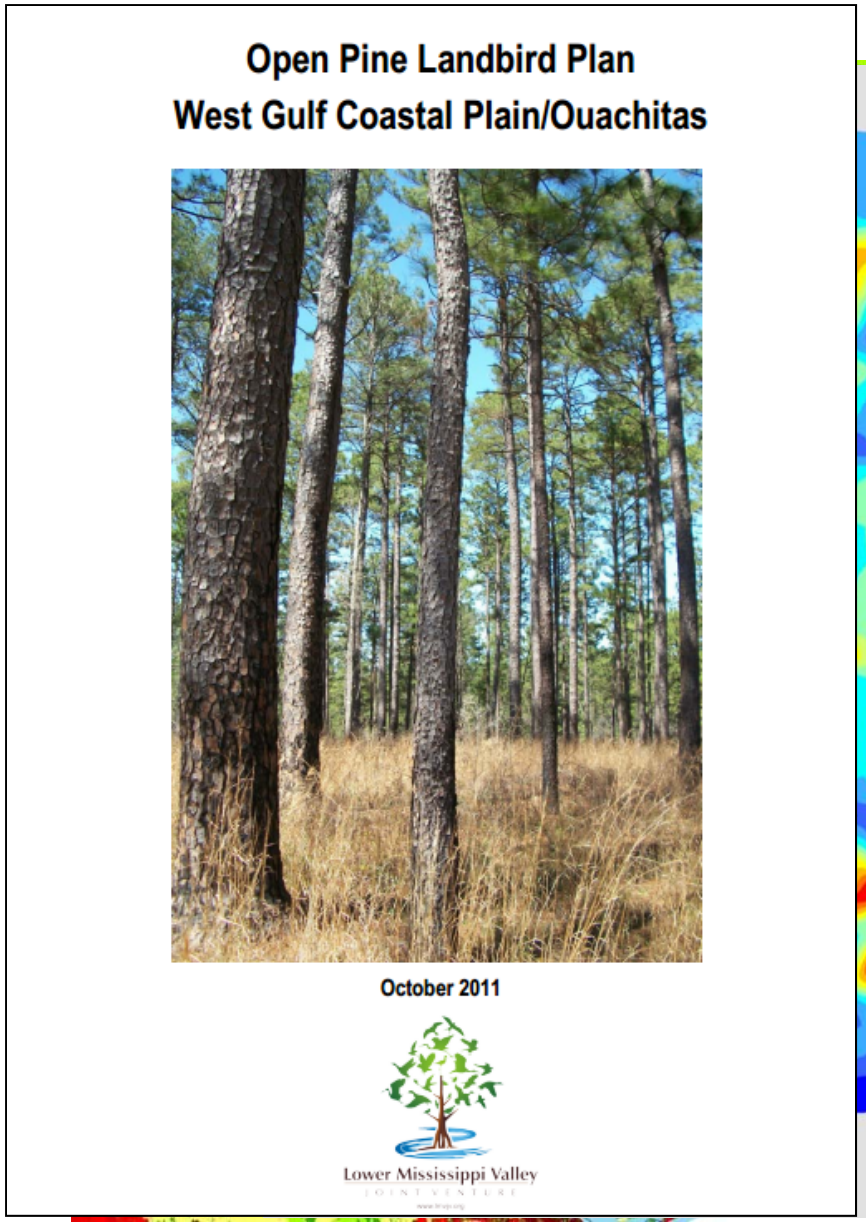
Table 2. Projected accomplishments for the Longleaf Pine Ecosystem Restoration and Hazardous Fuels Reduction Project.

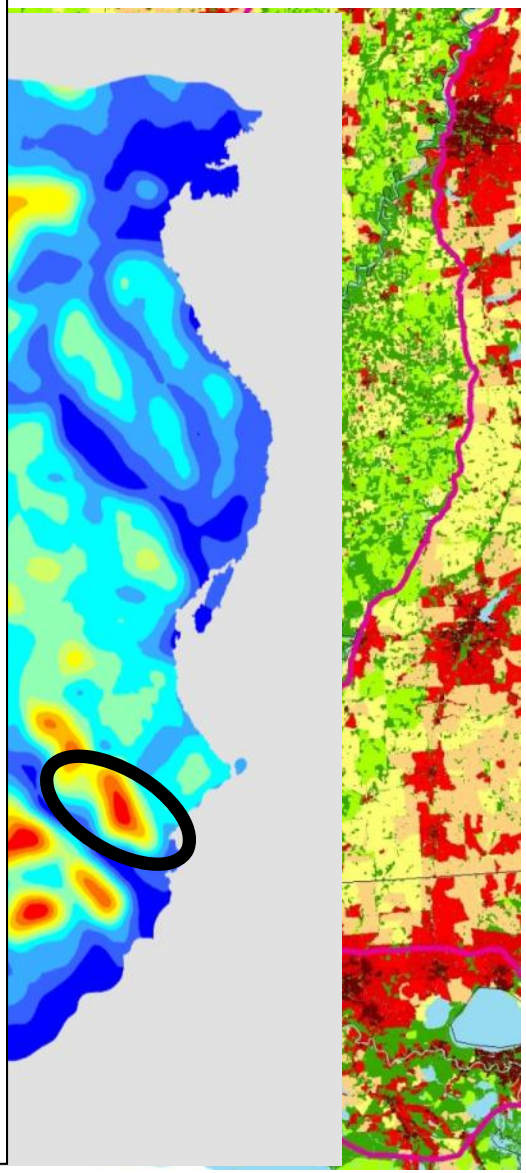
Performance Measure	Code	Number of units to be treated over 10 years using CFLR funds	Number of units to be treated over 10 years using other FS funds	Number of units to be treated over 10 years using Partner Funds[5]	CFLR funds to be used over 10 years	Other FS funds to be used over 10 years[6]	Partner funds to be used over 10 years
Acres treated annually to sustain or restore watershed function and resilience	WTRSHD-RSTR-ANN	52,479	52,389	90	$2,814,555	$3,438,000	$62,700
Acres of forest vegetation established	FOR-VEG-EST	-	13,428	-	-	$6,313,505	-
Acres of forest vegetation improved	FOR-VEG-IMP	468,843	468,844	-	$23,038,000	$23,038,000	-
Manage noxious weeds and invasive plants	INVPLT-NXWD-FED-AC	405	90	720	$687,028	$8,397	$611,455
Highest priority acres treated for invasive terrestrial and aquatic species on NFS lands	INVSPE-TERR-FED-AC	-	-	-	-	-	-
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions.	S&W-RSRC-IMP	100	100	-	$161,473	$161,473	-
Acres of lake habitat restored or enhanced	HBT-ENH-LAK	-	90	-	-	$10,800	-
Miles of stream habitat restored or enhanced	HBT-ENH-STRM	-	-	-	-	-	-
Acres of terrestrial habitat restored or enhanced	HBT-ENH-TERR	468,843	468,844	810	$23,645,500	$23,038,000	$607,500
Acres of rangeland vegetation improved	RG-VEG-IMP	40	40	-	$3,200	$3,200	-
Miles of high clearance system roads receiving maintenance	RD-HC-MAIN	2,500	2,500	-	$1,562,500	$1,562,500	-
Miles of passenger car system roads receiving maintenance	RD-PC-MAINT	250	250	-	$156,250	$156,250	-

The Harrison Experimental Forest, in coordination with the De Soto Ranger District, has begun implementation of a study that will examine the effects of variable density thinning, re-establishment of longleaf, and the impacts of these treatments on carbon storage and removal. This study will help provide valuable data regarding carbon sequestration and longleaf pine.


Housing units/sq km
Water
0
0 - 2
2 - 4
4 - 8
8 - 16
16 - 128
>128
2030
Saint Louis
Nashville
Raleigh
Little Rock
Atlanta
Dallas
Houston
Miami

Urbanization and Open Pine





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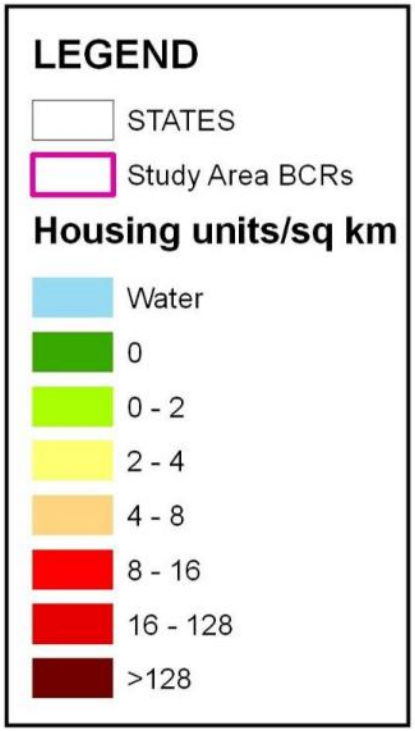
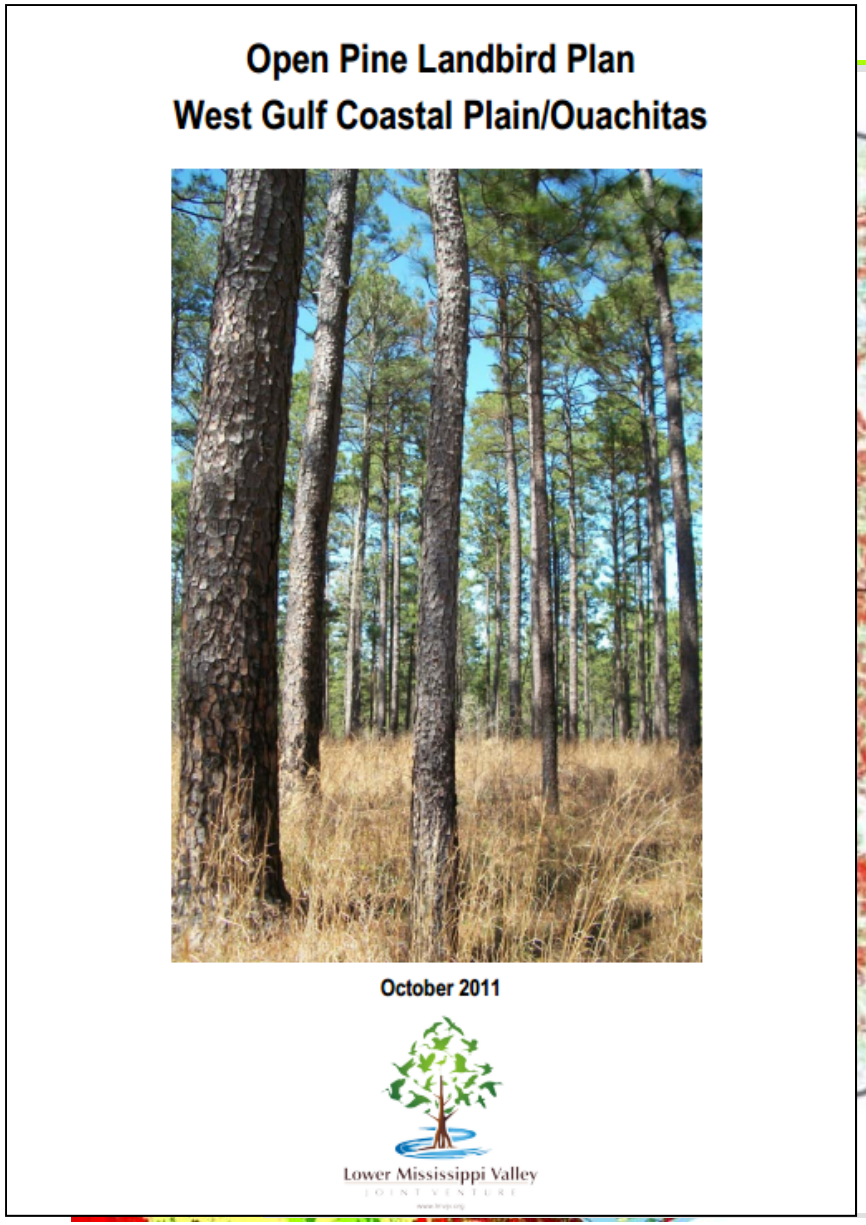
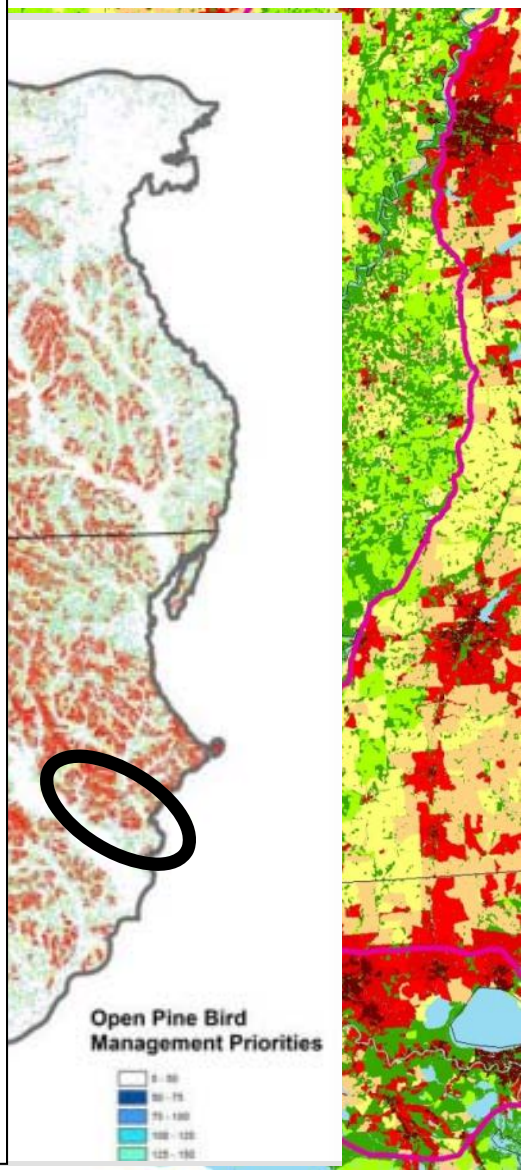


Urbanization and Open Pine





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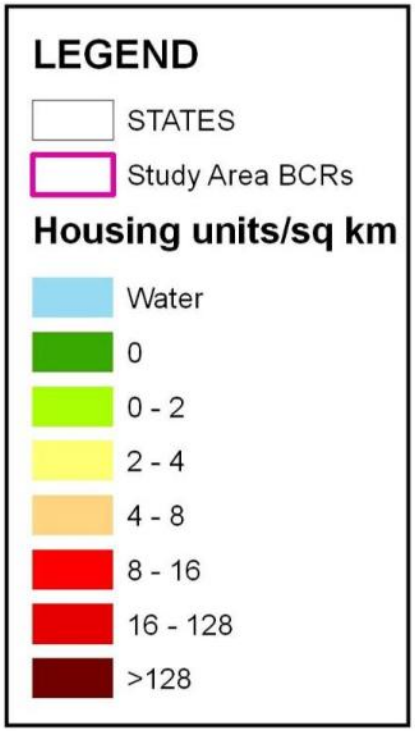


HURRICANE IKE
PROJECTED PATH
EARLY SAT AM
EARLY FRI AM
DEVIATIONS IN TRACK AND/OR INTENSITY
FROM CURRENT PROJECTIONS COULD
RESULT IN SIGNIFICANT DIFFERENCES
FROM THE INFORMATION ON THIS GRAPHIC
08 Sep 2008 09
HURRICANE IKE
PROJECTED PATH
SAT AM
FRI AM
MON EVE
08 Sep 2008 04:51 PM EDT
TROPICAL DEPRESSION
FIVE
TUE AM
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SUN AM
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70 mph
60 mph
50 mph
45 mph
35 mph
The Weather Channel
weather.com
02 Aug 2012 10:34 AM EDT
HURRICANE IKE
PROJECTED PATH
SAT PM
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DEVIATIONS IN TRACK AND/OR INTENSITY
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RESULT IN SIGNIFICANT DIFFERENCES
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The Weather Channel
weather.com
12 Sep 2008 15:24 GMT / 12 Sep 2008 11:24 AM EDT
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DEVIATIONS IN TRACK AND/OR INTENSITY
FROM CURRENT PROJECTIONS COULD
RESULT IN SIGNIFICANT DIFFERENCES
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The Weather Channel
weather.com
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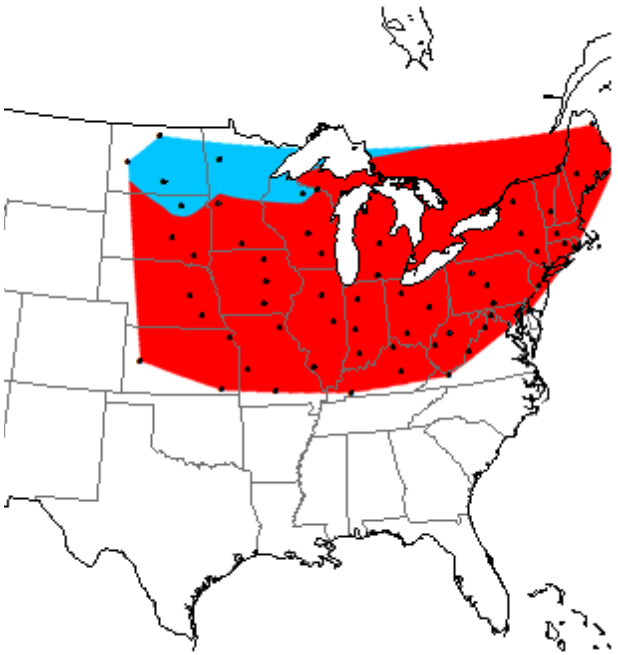
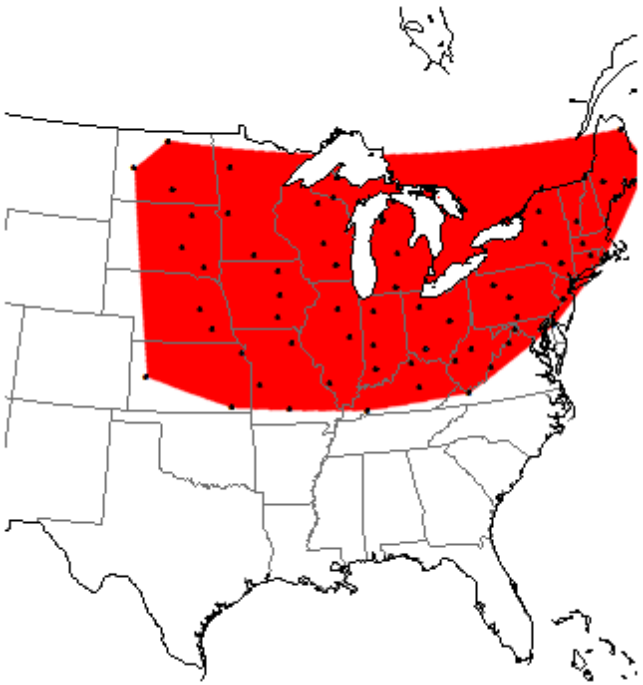
November Weather Severity Index - Mallards

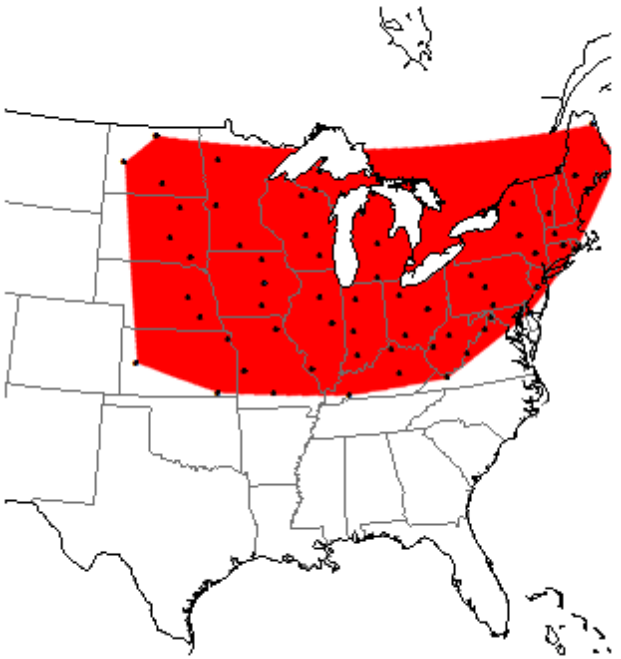
Mean distributions 1950 – 2010



+4 C° distributions

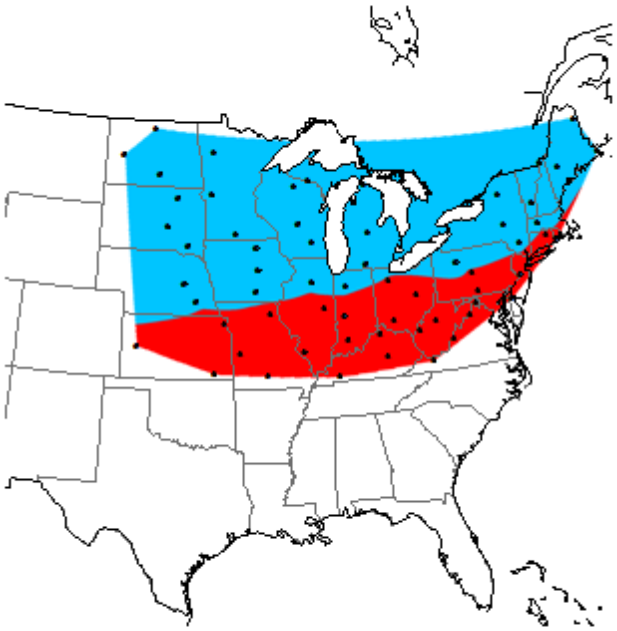


+8 C° distributions

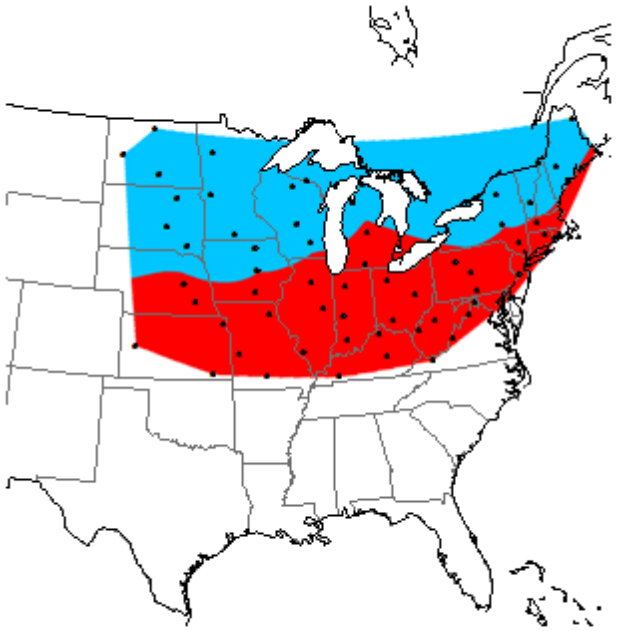


December Weather Severity Index - Mallards

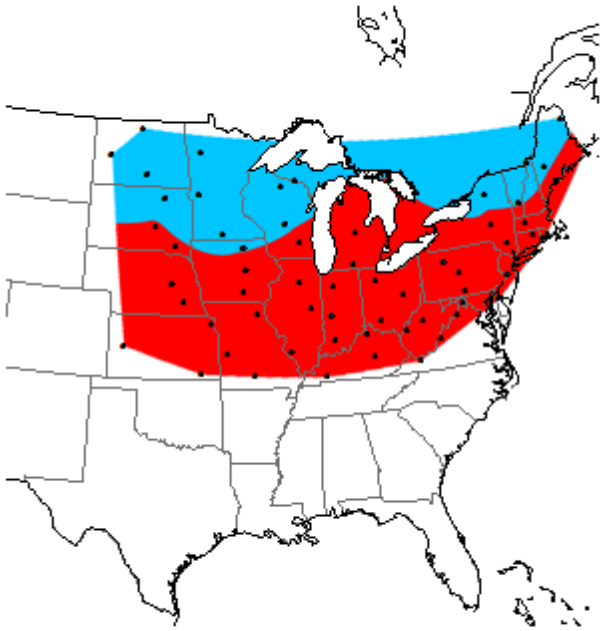
Mean distributions 1950 – 2010



+4 C° distributions

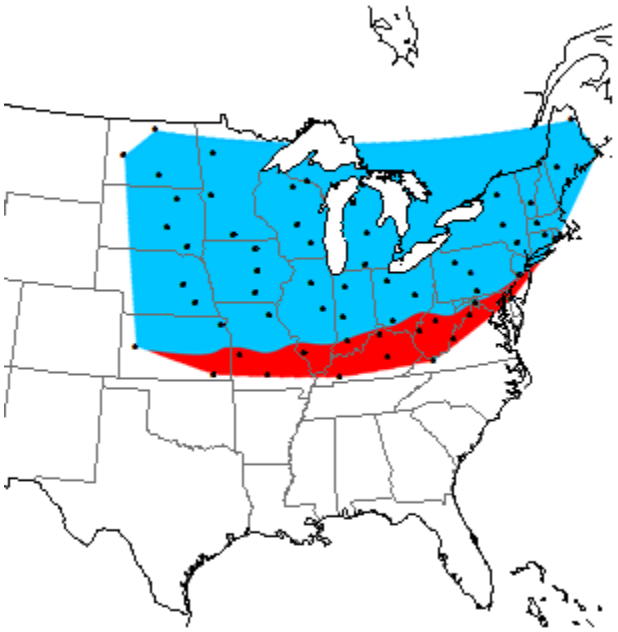


+8 C° distributions



January Weather Severity Index - Mallards

Mean distributions 1950 – 2010



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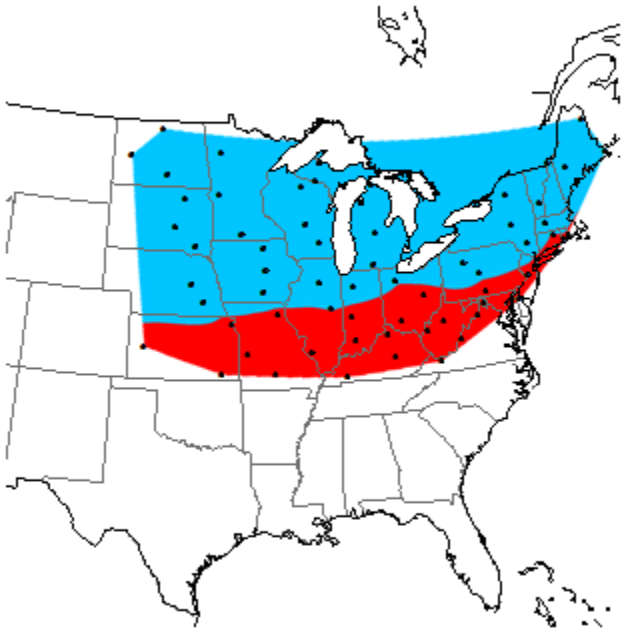

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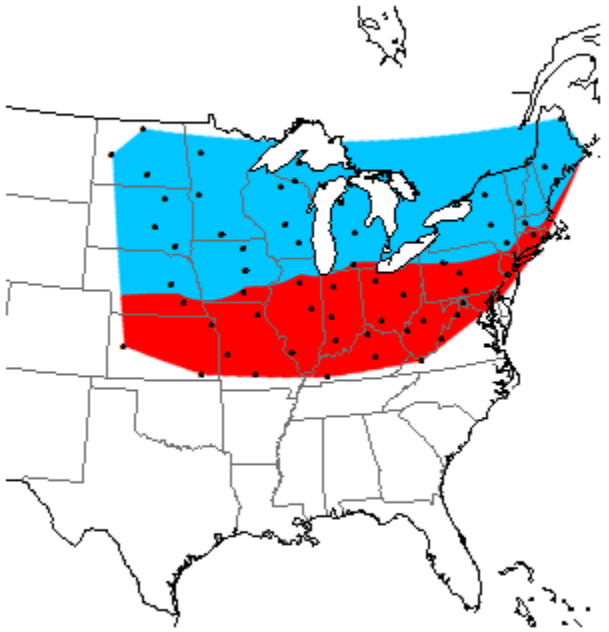
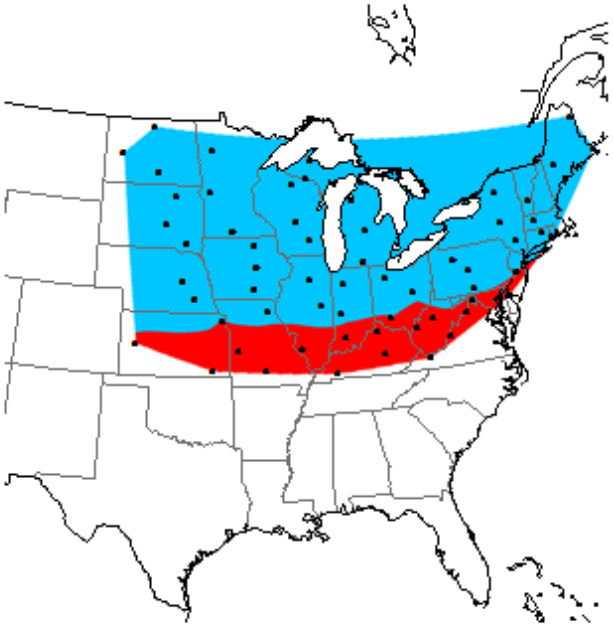


February Weather Severity Index - Mallards

Mean distributions 1950 – 2010



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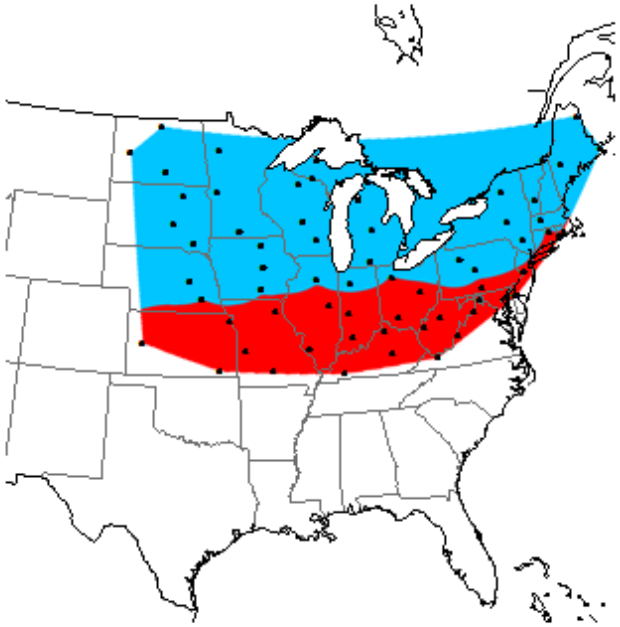

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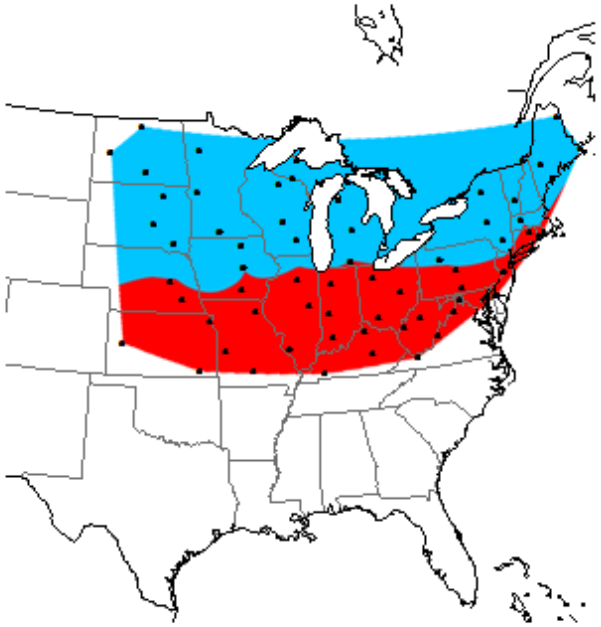
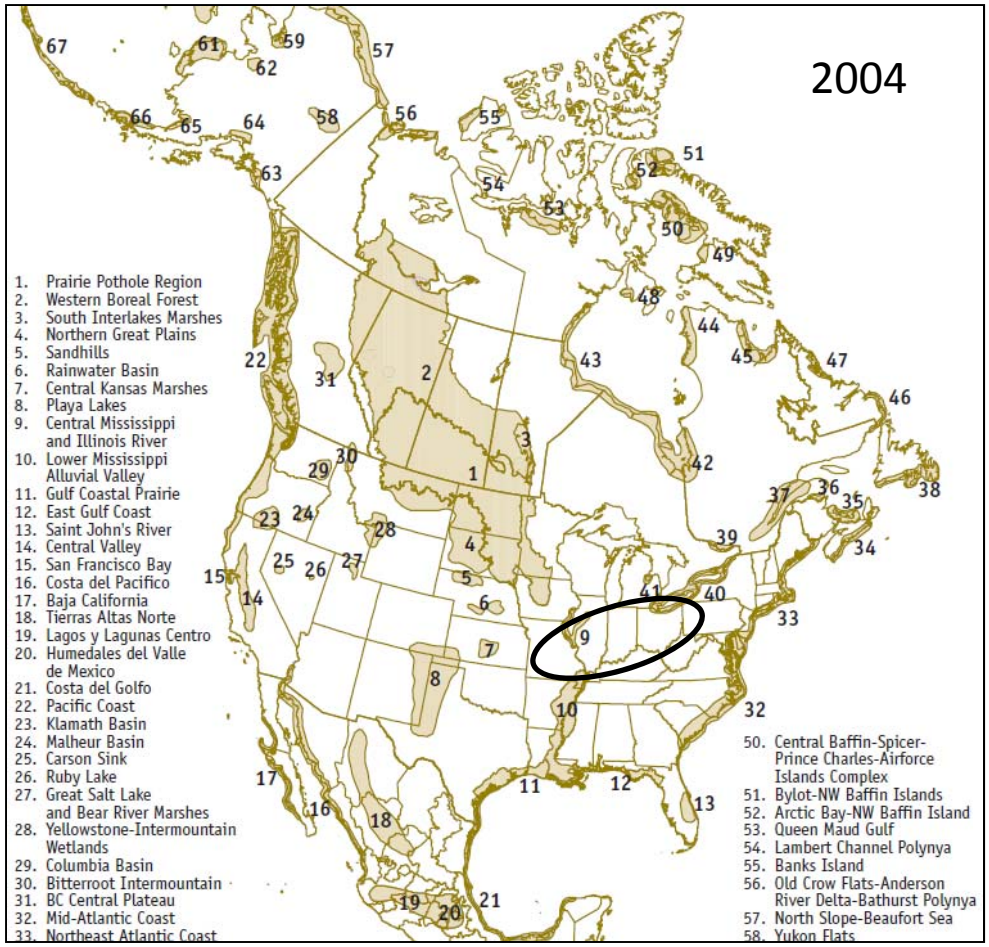
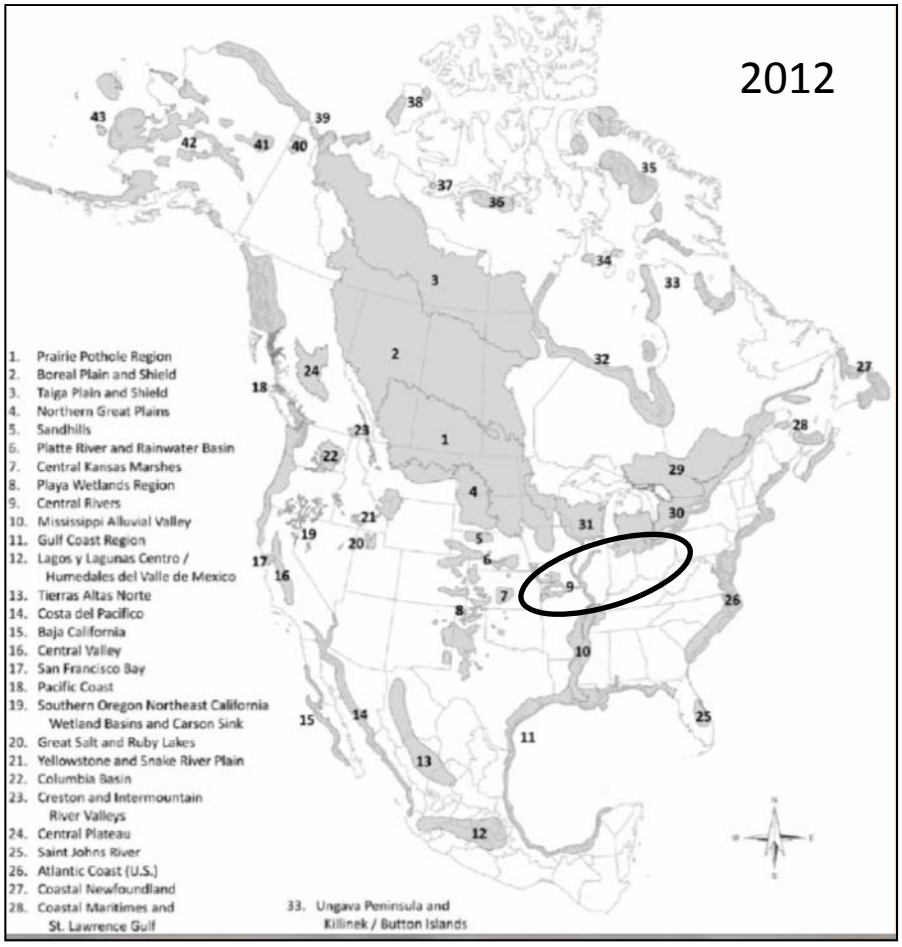


North American Waterfowl Management Plan Priority Geographies





Take Home Messages

- Vulnerability Assessments can be used to open the conversation about anticipated change
- Vulnerability Assessments don't need to be detailed and precise in order to be useful
- Vulnerability Assessments offer a means to document assumptions, increase transparency, and enter into adaptive cycle
- Adaptation doesn't always mean that you need to make wholesale changes
  - Need to answer the question, "Did you consider…"