

Waterbird and Wetland Monitoring at The Emiquon Preserve



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Chris Young – SJ-R

Monitoring



2007

- **Bird Inventories**
 - Fall only
- **Duck Behavior**
- **Seed sampling**
- **Wetland Habitat Mapping**



Monitoring



2007

- **Bird Inventories**
 - Fall only
- **Duck Behavior**
- **Seed sampling**
- **Wetland Habitat Mapping**

2008

- **Bird Inventories**
 - Fall and Spring
- **Brood Monitoring**
- **Duck Behavior**
- **Seed/Invertebrate Sampling**
- **Wetland Habitat Mapping**



Brood Observations

- **Counted broods every-other week**
- **5 June – 20 August**
- **Fixed points**
- **Four Observers**
- **2 Flush Counts**



Brood Monitoring

- **Passive Counts - 2008**

- 6 observations
 - 4 observers

Species	#
Wood Duck	53
Coot	24
Mallard	19
Pied-billed Grebe	9
Canada Goose	3
Unknown Duck	1
BCNH	1
Total	111



Brood Monitoring

• Passive Counts 2009

Species	#
Wood Duck	71
Mallard	14
Coot	13
Pied-billed Grebe	12
Canada Goose	10
Blue-winged Teal	1
Hooded Merganser	1
Total	122



Bird Inventories

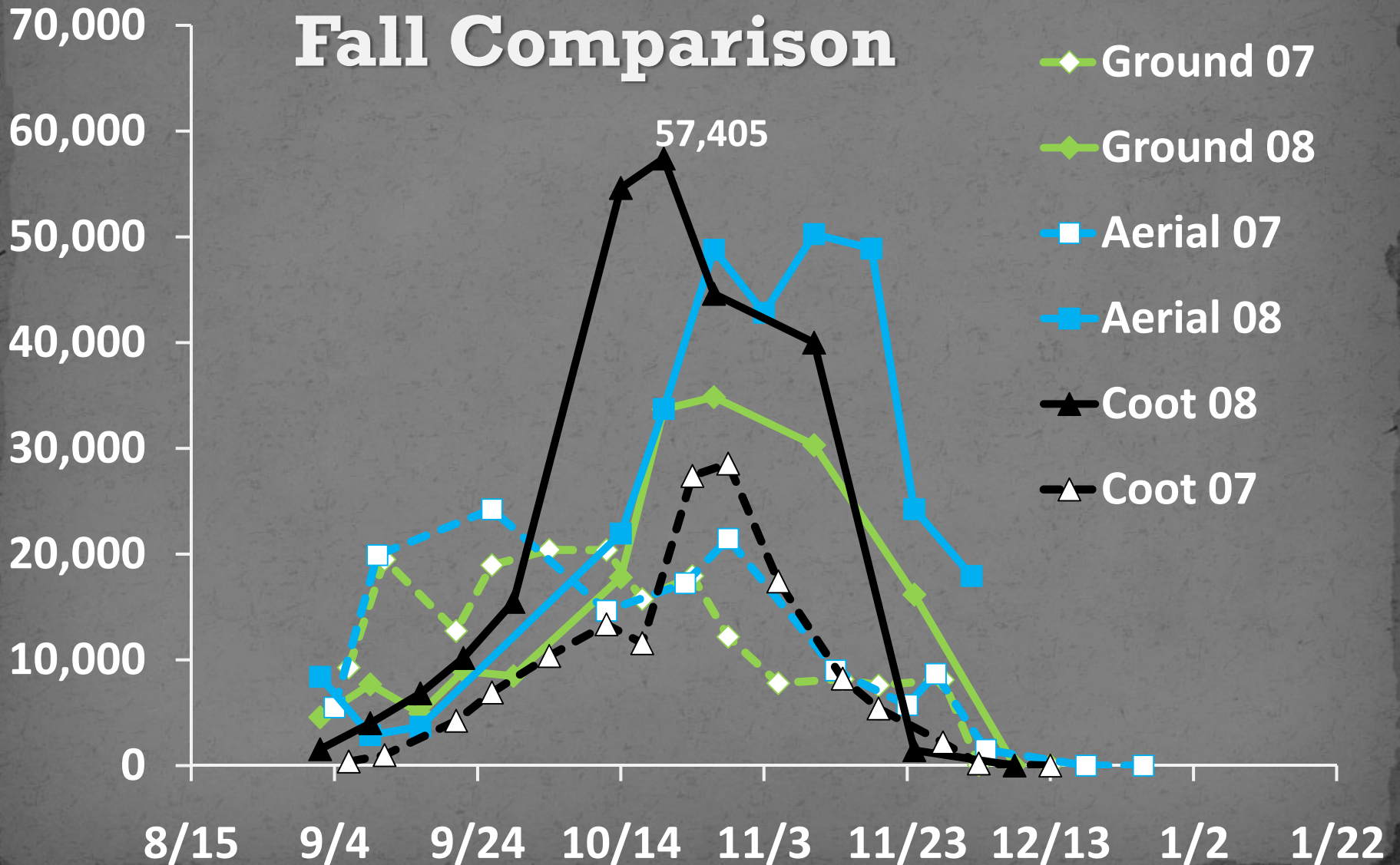
Ground

Air



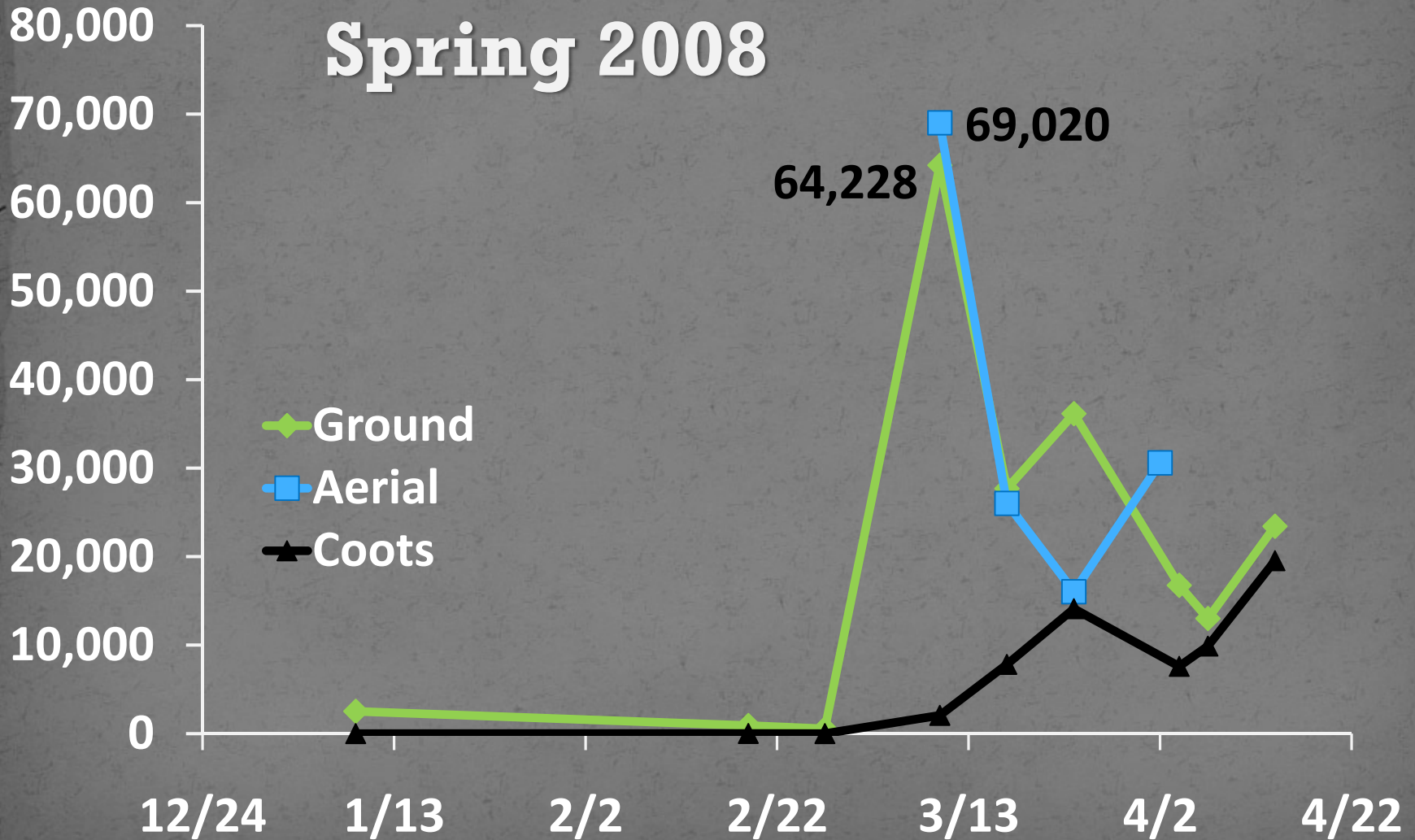
Waterfowl Inventories

Fall Comparison



Waterfowl Inventories

Spring 2008



A little perspective

- **Fall use of Emiquon by dabbling ducks**
 - 26.5% and 45.6% of Use-days (UDs) in the IRV during 2007 and 2008
- **Diving duck use of the IRV was low**
 - Nonetheless, Emiquon accounted for 1.4% (2007) and 46.3% (2008) of use
- **American coot UD's at Emiquon were exceptional**
 - Emiquon accounted for 51.7% total UD's in 2007 and 94.3% in 2008

Waterfowl Behavior

- **Why?**

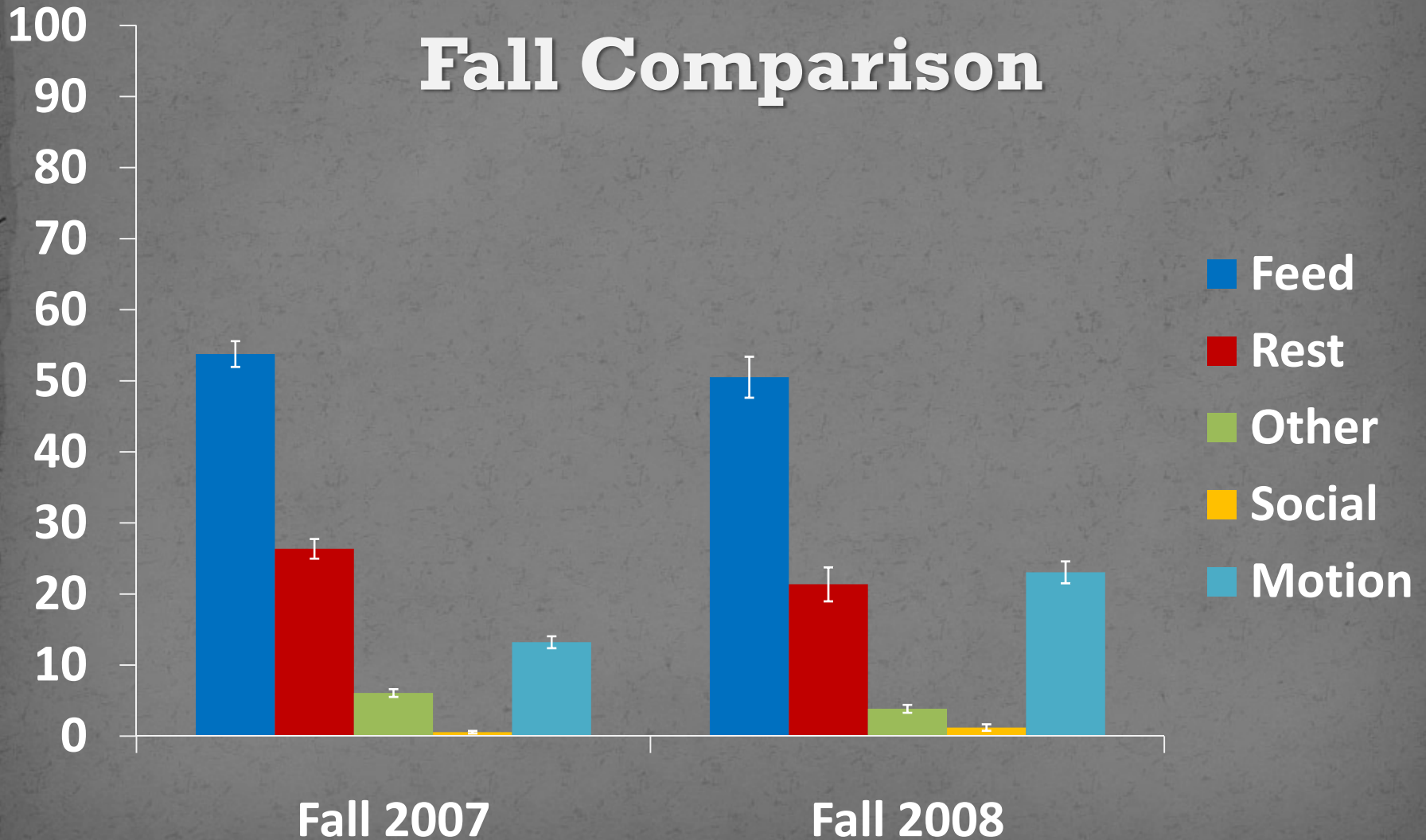
- Numerical and Functional Response
- What are ducks doing?
 - Feeding Site? Roost Site?



- Seasonal differences
- Address missing habitat components

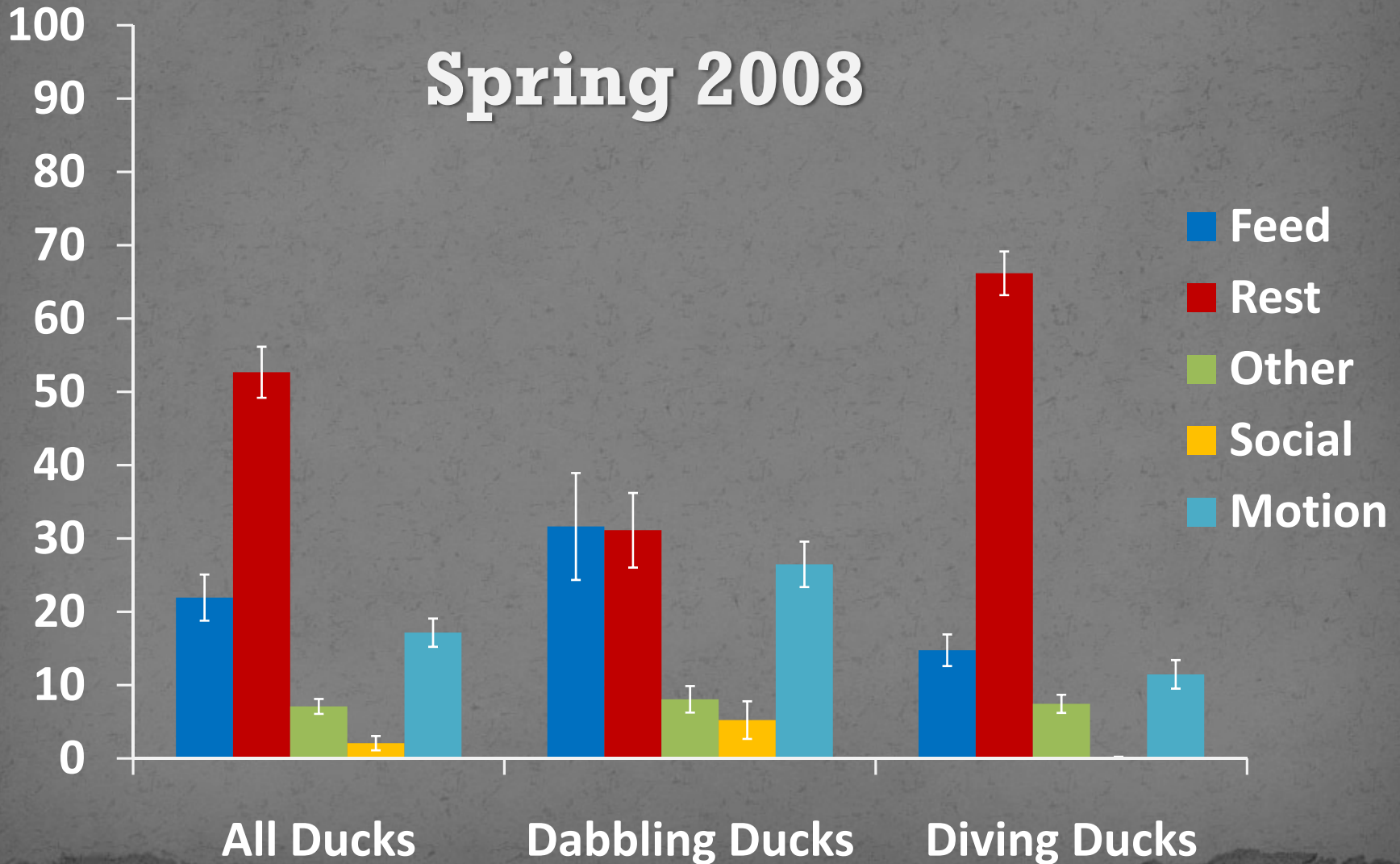
Waterfowl Behavior

Fall Comparison



Waterfowl Behavior

Spring 2008



Moist-soil Seed Sampling

- 20 core samples each year (07, 08)
- Thompson Lake only
- Estimate kg/ha
 - Estimate available energy using acreages from covermap

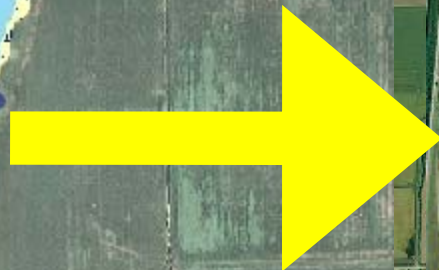


Year	<u>n</u>	Seed Size	Kg/ha	DUD/ha
2007	20	Large	748.2	6,405.5
	20	Small	244.2	2,090.9
	20	Total	992.4	8,469.4
2008	20	Large	435.8	3,731.5
	20	Small	59.5	509.8
	20	Total	495.4	4,241.3
IDNR	735	Large	384.0	3,284.7
	735	Small	308.9	2,642.2
	735	Total	691.9	5,918.3

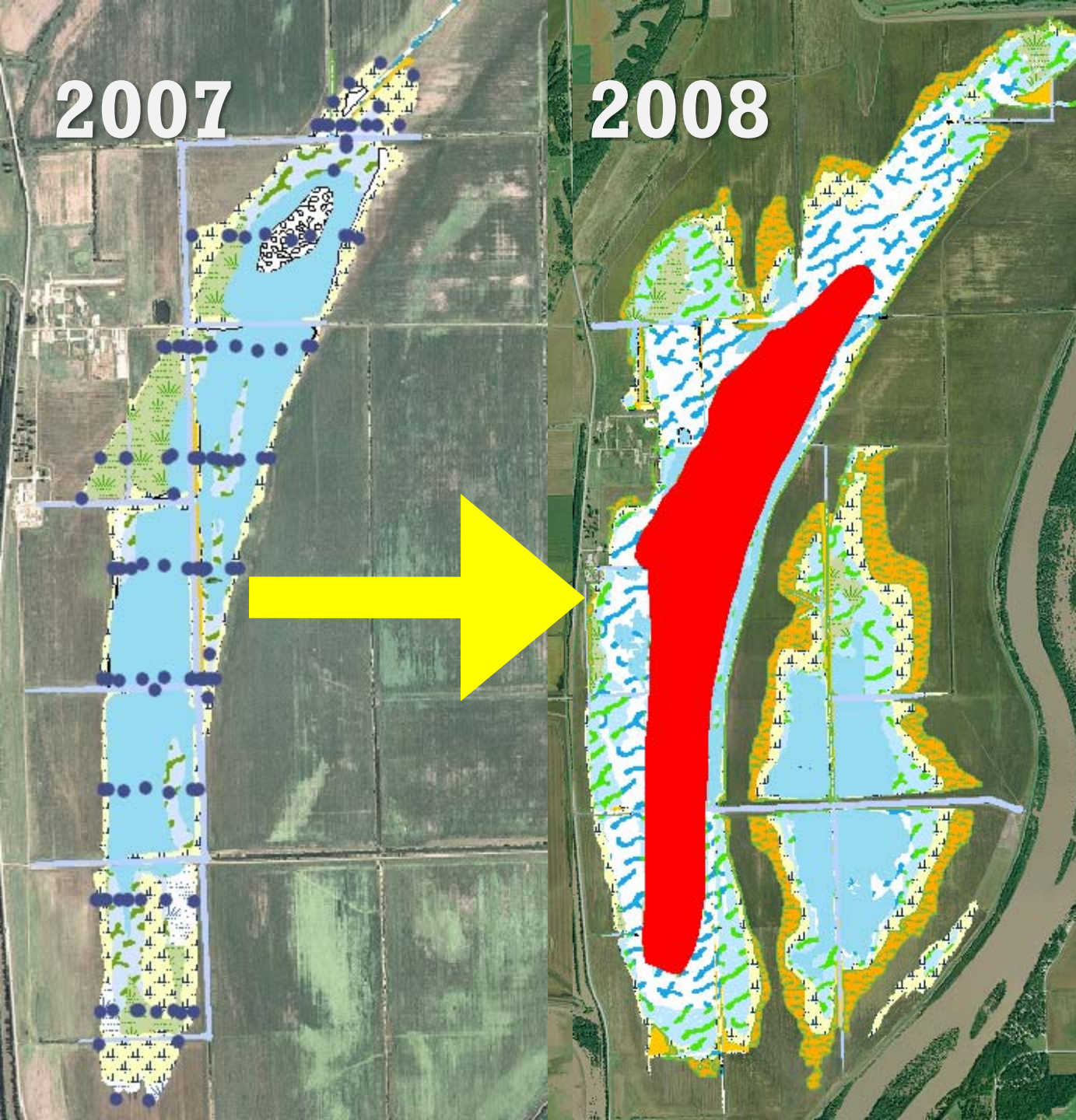
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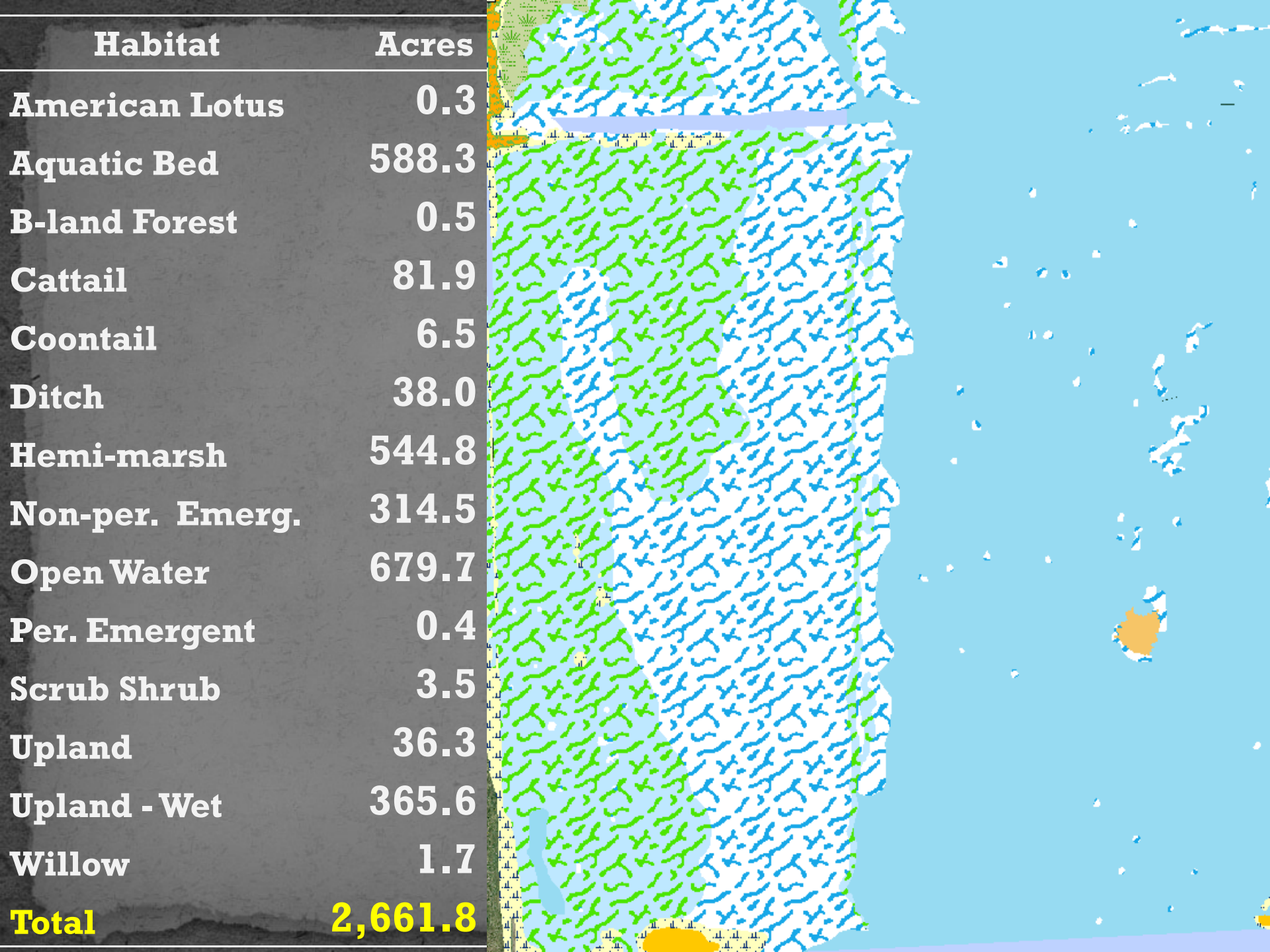
2007

2008



**629 ac
to
2,662 ac**





Habitat	Acres
American Lotus	0.3
Aquatic Bed	588.3
B-land Forest	0.5
Cattail	81.9
Coontail	6.5
Ditch	38.0
Hemi-marsh	544.8
Non-per. Emerg.	314.5
Open Water	679.7
Per. Emergent	0.4
Scrub Shrub	3.5
Upland	36.3
Upland - Wet	365.6
Willow	1.7
Total	2,661.8

Future Monitoring

- **Continue existing efforts**
- **Disturbance Monitoring?**
 - Researchers and recreational users
 - Waterbird nesting
- **Other Projects**
 - Mallard ecology during fall migration

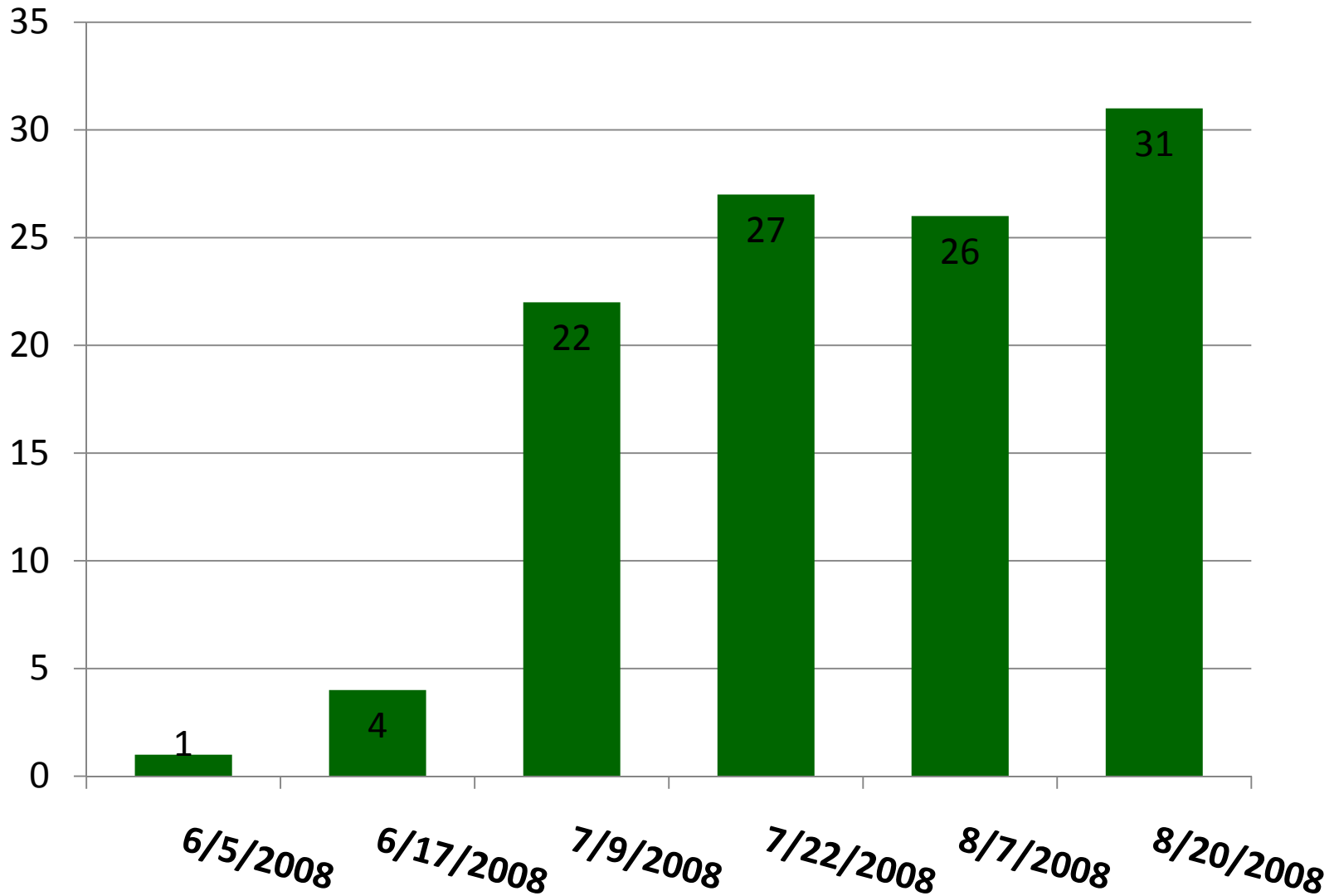
Questions?



Emiquon Preserve 11/29/2007



Waterbird Broods at Emiquon - 2008



2009 Monitoring

- Similar to 2008
- Disturbance Monitoring
 - Researchers and recreational users
 - Waterbird nesting
- Other Projects
 - Mallard ecology during fall migration
 - Giving up density

Waterfowl Inventories

- Fall 2008
 - 11 Ground
 - 2 September – 8 December
 - Peak: 34,855
 - DUDs: 1,786,547
 - 17 Duck Species
 - 87.6% Dabbling Ducks
 - 13 Aerial
 - 2 September – 28 December
 - Peak: 50,260





Waterfowl Inventories



- Spring 2008
 - 8 Ground
 - 19 February – 14 April
 - Peak: 64,228
 - DUDs: 1,219,605
 - 19 Duck Species
 - 56.2% Diving Ducks
 - 4 Aerial
 - 10 March – 2 April
 - Peak: 69,020

Brood Monitoring

- Passive and Active Counts
 - 6 Passive observations
 - 4 Observers

Species	#
Mallard	19
Ruddy Duck	1
Wood Duck	53
Unk. Duck	1
Canada Goose	3
Coot	24
Pied-billed Grebe	9
BCNH	1
Total	111



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