



*Colleen Childers*



# Adaptive Management Working Group Meeting 03 December 2020

Platte River Recovery Implementation Program

Contribute to the survival of WC during migration.

**Is PRRIP meeting this management objective?**

**Why or why not?**

**How do we know? How do we measure it?**

# Is PRRIP meeting its Management Objective for Whooping Cranes?

Until we can determine if whooping cranes that land on the Platte River are better or worse off than those that don't we will not know for sure. Program assumes more use is good thing.

Yes, the Program is meeting the management objectives as we have protected, improved, and maintained migrational habitat for whoopers.

The Q is too narrowly focused. In a black-white, yes-no framework one can easily compile sufficient evidence to suggest yes. I think the better question is - where can we make improvements within program constraints to enhance benefits to WHCRs

Yes, i would say we currently are. Will need to continue investigating throughout extension.

Yes

Yes. Whooping crane use of the Central Platte River has increased in areas of the river managed by the Program.

Yes. WC use of the AHR has increased significantly and proportionally to increases in habitat suitability due in part to Program mgmt actions.

Read through  
Let's check understanding



# Contribute to the survival of WC during migration.

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Let's check understanding

**5 Yes, based on:**

**WC *use*\* of central Platte**

**WC *use*\* of PRRIP Managed Habitat**

**Increase in WC *use*\* as habitat suitability increases**

**Protection, improvement, management of WC habitat**

**1 Asking wrong ? - Where can we make improvements within Program constraints to enhance benefits?**

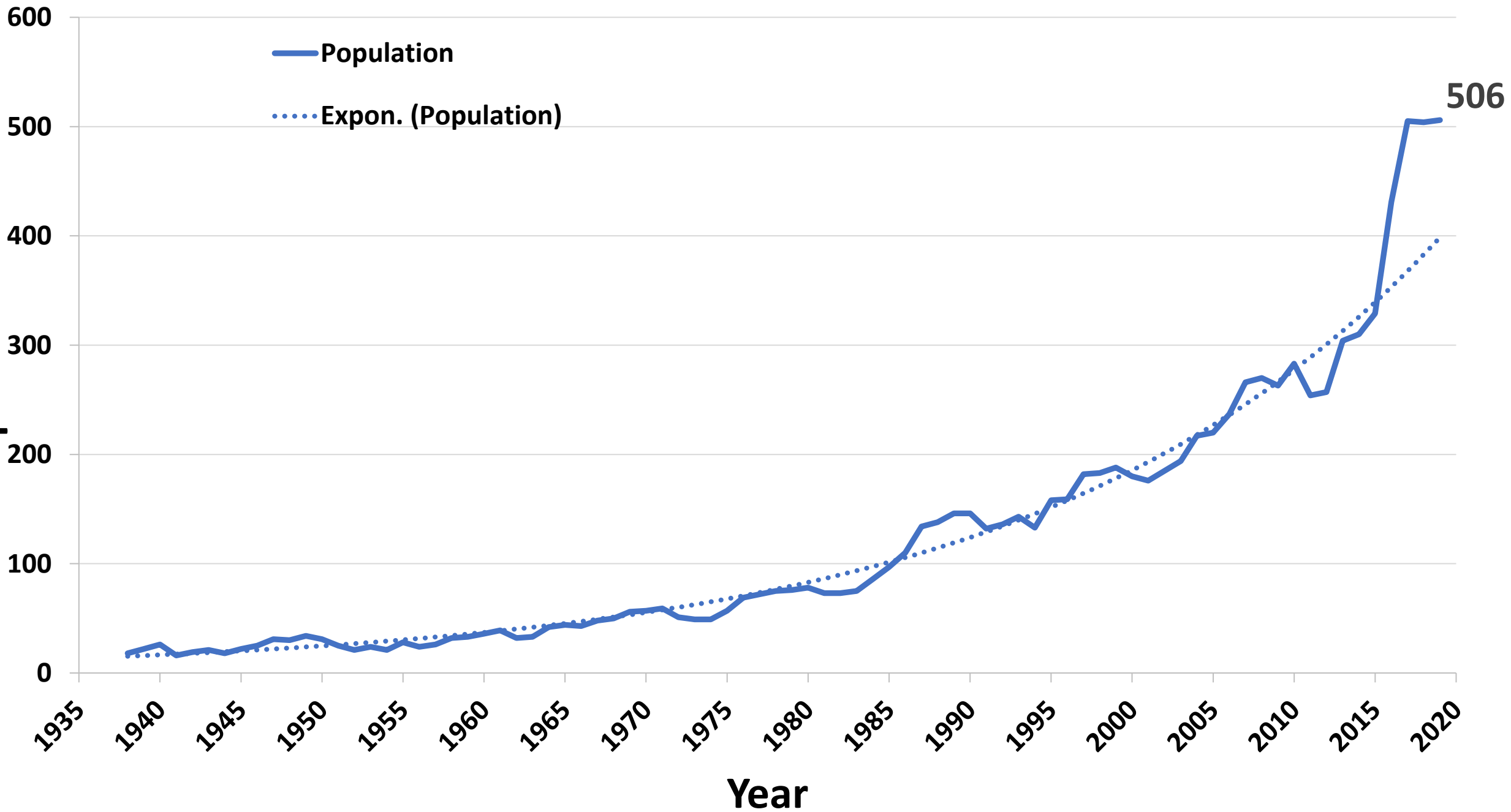
**1 Maybe not, based on:**

**WC Fitness (better off or not if stop?)**

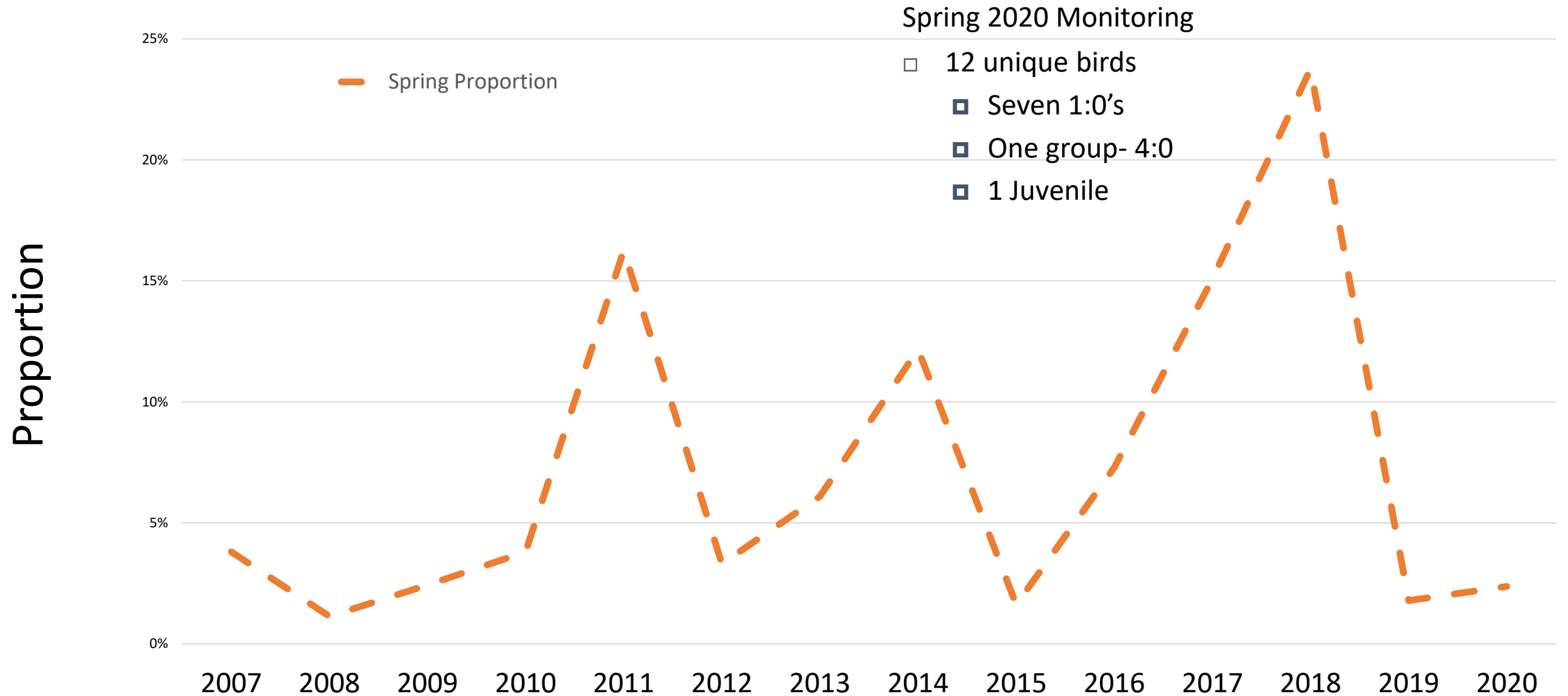
**\*How do we want to define this, specifically?**

**Previous Performance Indicators**

# AWB Population Estimate

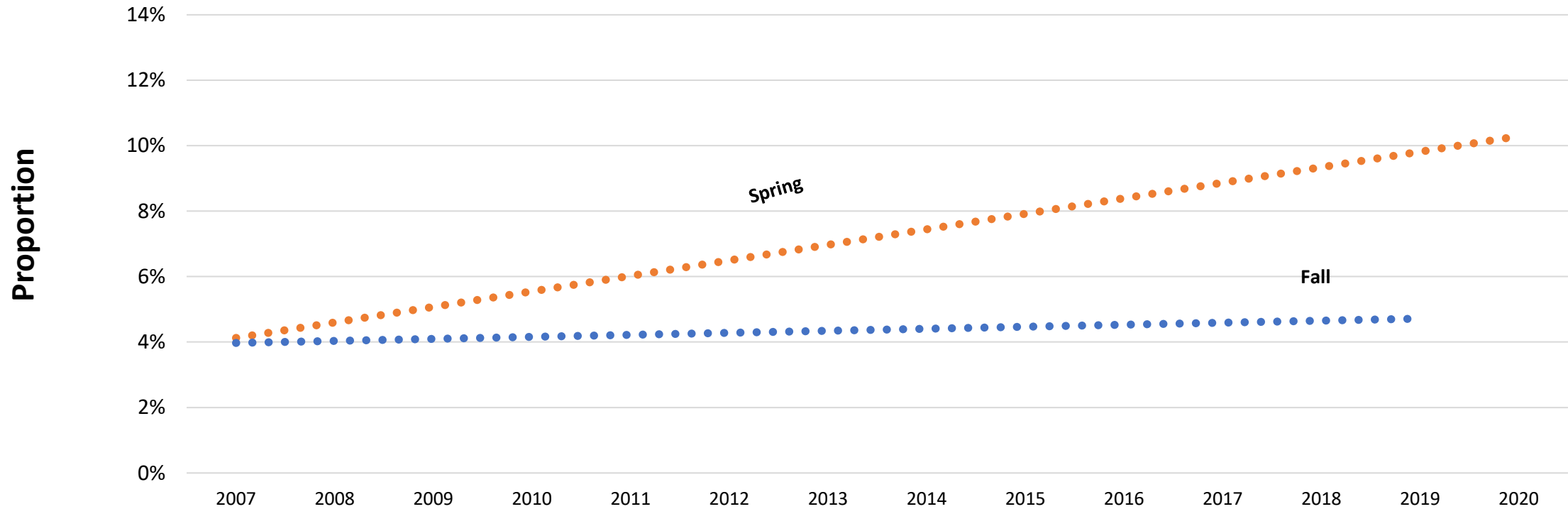


# Proportion of whooping crane population observed during systematic or opportunistic aerial flights, 2007-2020.

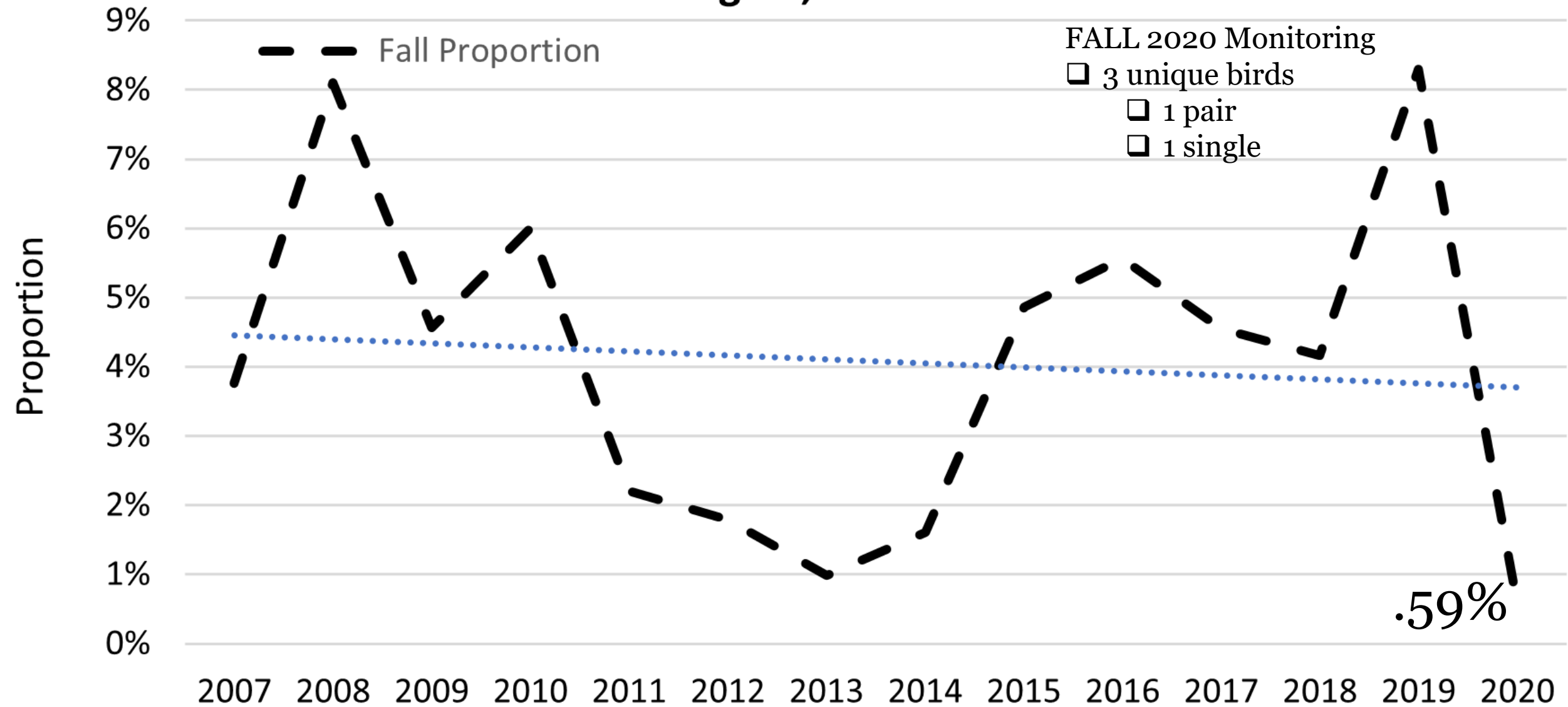


# Trendlines

Proportion of whooping crane population observed during systematic or opportunistic aerial flights,  
2007-2020.

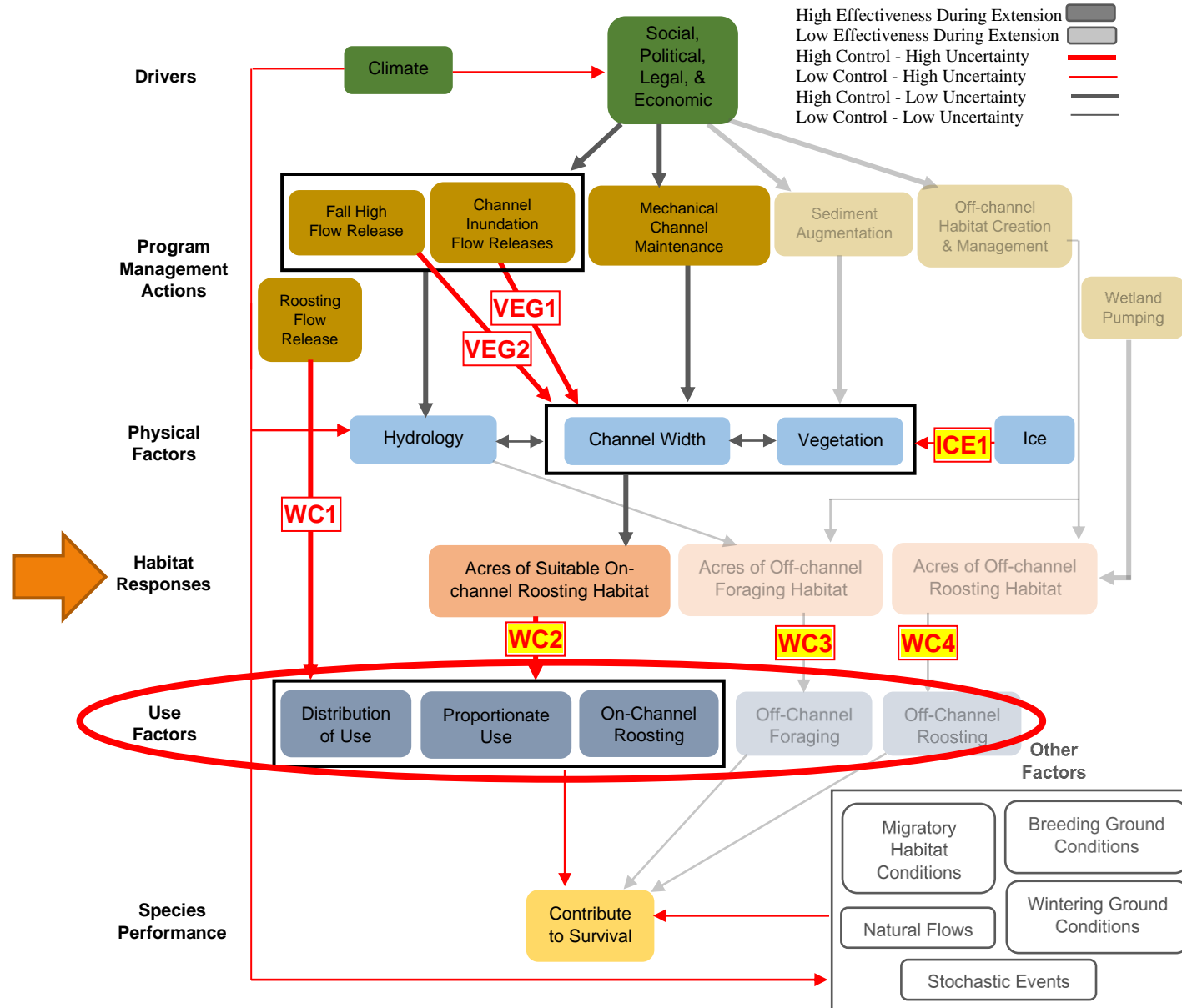


# Proportion of Aransas-Wood Buffalo whooping crane population observed on the Platte river during systematic and opportunistic aerial flights, 2007-2020.





**Figure 2.** Whooping Crane Conceptual Ecological Model



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**Previous Performance Indicators**

**Suggestions?**

**Mentimeter Poll**

# What don't we know about Whooping Cranes that we need to know to contribute to their survival?

This question is outside the purpose of the Program. All the Program can do is provide habitat, which is pretty well defined other than the ongoing debate over the value of wet meadows for whooping cranes.

Whether flows at the time of decision to stop or not impact WC use of Platte. Also need to investigate what base flows are preferential to maintenance of fish guilds.

Why is fall WC use consistently lower than spring. Importance of early spring WC use (younger birds, stay longer periods of time, etc.) WC stay length affected by what factors?

Are the individuals that stop along the Central Platte actually more "fit" than those birds that do not?

Is summer germination suppression possible with the amount of water available to the Program?

Is a mechanical/chemical approach more effective at controlling summer vegetation germination?

Are there certain scenarios where Program water could be added to existing base flows to achieve desired management goals and other scenarios where it is neither efficient or effective to use water to achieve these goals?

How to maximize existing Program water for WC use.

How much does habitat selection preference equate to habitat need? What are the minimum habitat requirements that are adequate to survival/recovery, even if more would be better/preferred?

Identify existing knowledge gaps (Johnson 1994, 1997). Summer flow impacts on seedling germination (>2,500 cfs) and fisheries health (>1,000 cfs). Do hydrological conditions impact WHCR use of wet meadow (seasonal wetland) or rivine habitats, etc.?



**Read through**  
**Check understanding**  
**Rank importance**  
**Discuss in order of importance**

# **Big Questions for Whooping Cranes – What don't we know that we need to know? (Identifying existing knowledge gaps)**



## **HABITAT SELECTION**

- **What are the conditions associated with stopovers vs. flyovers?**
- **Effect of flow on decision to stopover?**
- **Effect of unobstructed channel width (UOCW) on decision to stopover?**
- **Relationship between flow and proportion of population that uses CPR?**
  - **What are the ranges over which WC stopovers are more common? Are there high and low flow cutoffs?**
  - **Does hydrocycling affect WC use of the CPR?**
- **Relationship between flow, UOCW and proportion of population that uses CPR?**
- **Effect of hydrology on WC use of wet meadows and riverine habitats?**

## **MINIMUM HABITAT REQUIREMENTS**

- **What are the minimum habitat requirements necessary for survival/recovery?**

## **USE OF WATER TO CREATE HABITAT**

- **Summer flow impacts on seedling germination (>2500 cfs)?**
- **Availability of flows sufficient to suppress summer germination?**
- **Flow vs. mechanical/chemical germination suppression to maintain UOCW?**

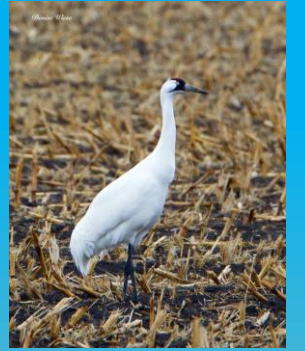
# Big Questions for Whooping Cranes – What don't we know that we need to know?



## SETTING WATER OPERATIONS PRIORITIES

- **How to maximize existing Program water for WC use?**
- **Scenarios when Program water plus base flows meet management objectives vs Scenarios when not effective or efficient to use water?**
- **Base flows for maintenance of fish guilds?**
- **Summer flow impacts on fisheries health (>1000 cfs)?**
- **How much do WC forage while on-channel?**

# Big Questions for Whooping Cranes – What don't we know that we need to know?



- **What is the value of wetland meadows for WC?**
- **Are WC that stop along CPR more fit?**
  - **Do WC that use the CPR have lower migratory mortality than those that do not?**
  - **Are WC that use the CPR more likely to reach their destination?**
  - **Are WC that use the CPR more likely to reproduce successfully upon arrival (following spring migration)?**

# Big Questions for Whooping Cranes – What don't we know that we need to know?



## SEASONAL PATTERNS IN WC USE

- **Why is fall WC use lower than spring?**
- **Importance of early spring WC use?**
- **What factors affect WC stay length?**



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Read through  
**Check understanding**  
**Rank importance**



Discuss in order of importance  
Assign level of impact  
Assign level of uncertainty  
Assign level of control



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## What information would be helpful for further discussion?

# Meeting Review and Wrap-Up

- Agenda suggestions for next meeting
- Action Items
- Meeting Feedback
- Key Insights

