

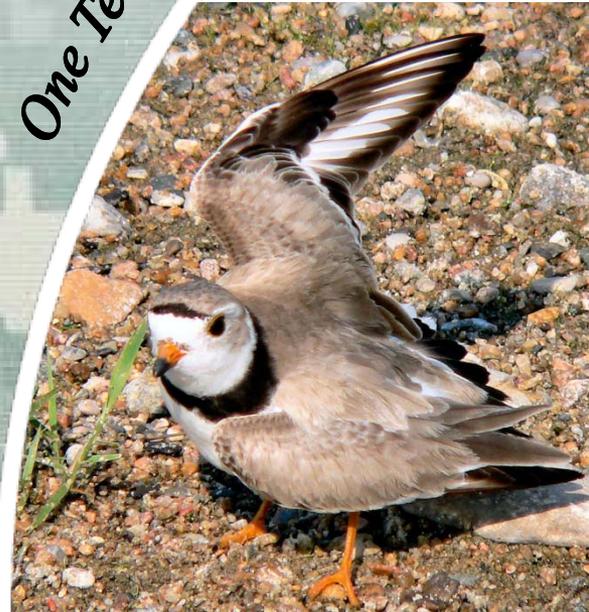
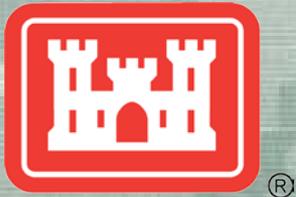
# Missouri River Piping Plovers

**Greg Pavelka**

**Wildlife Biologist**

**U.S. Army Corps of Engineers**

*One Team : One River : One Mission*



# What is measured on the Missouri



Adults



Nests



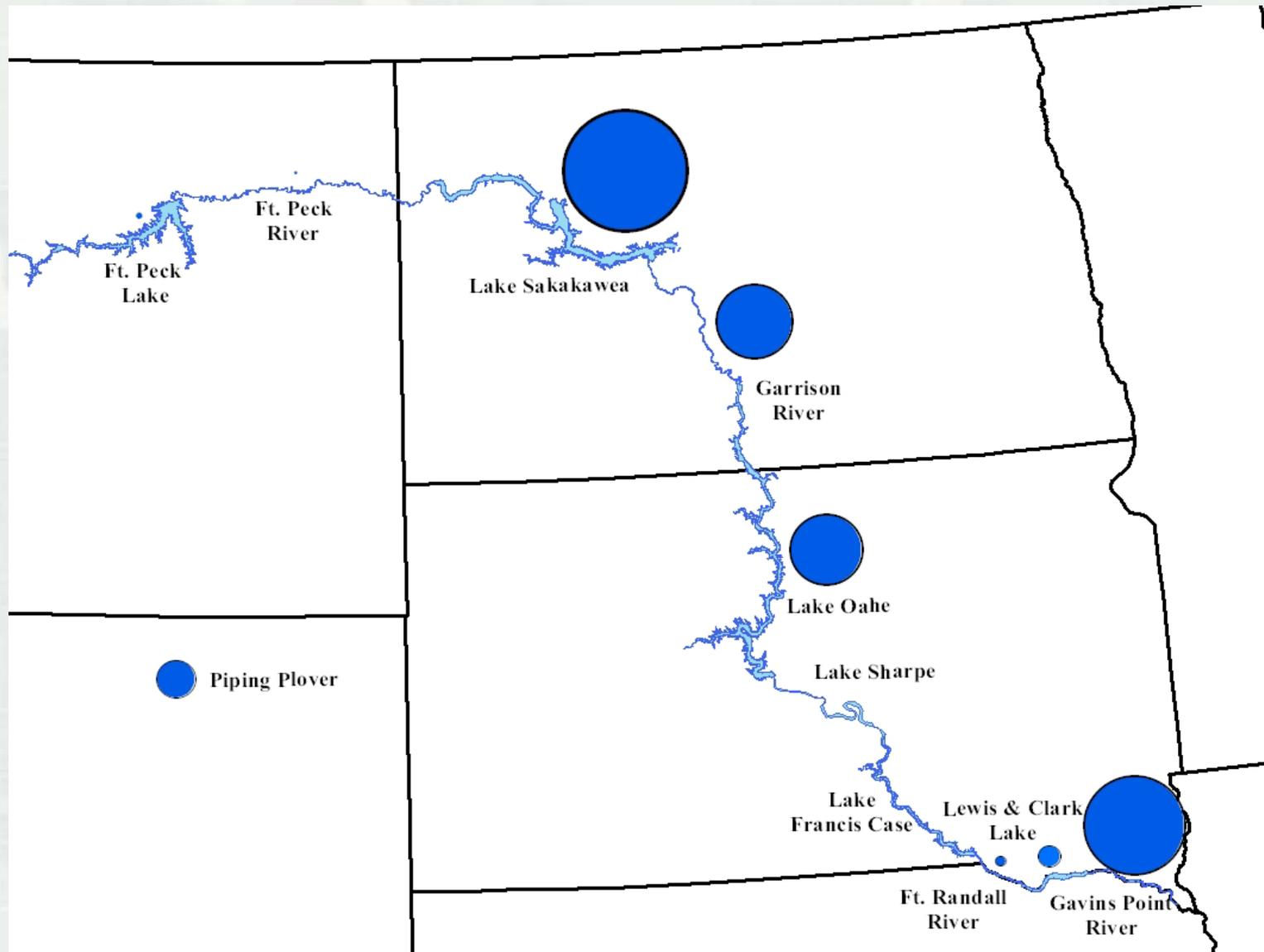
Nest Fate



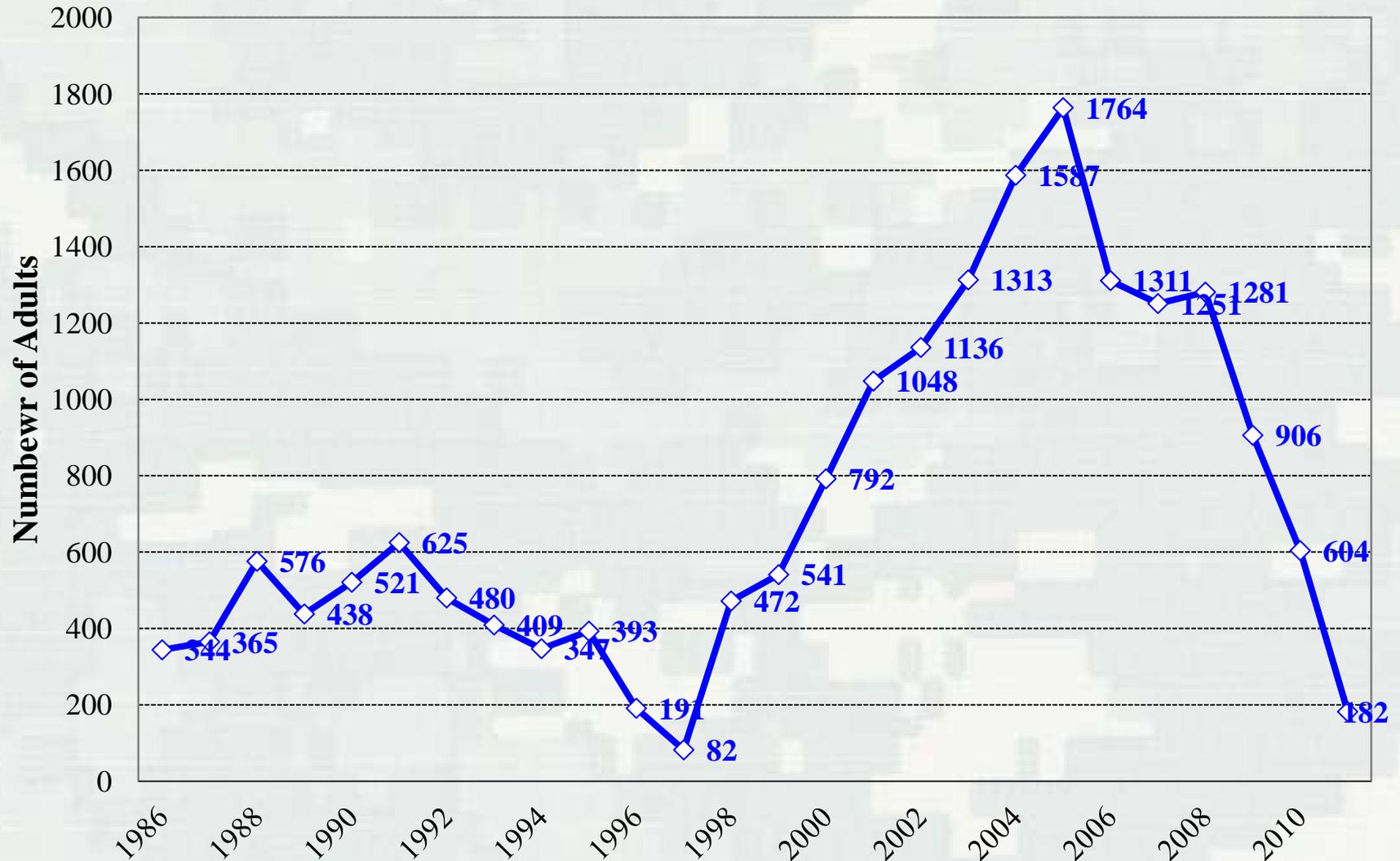
Chick Survival



# Relative Distribution 1986-2011



# Piping Plover Adults 1986-2011

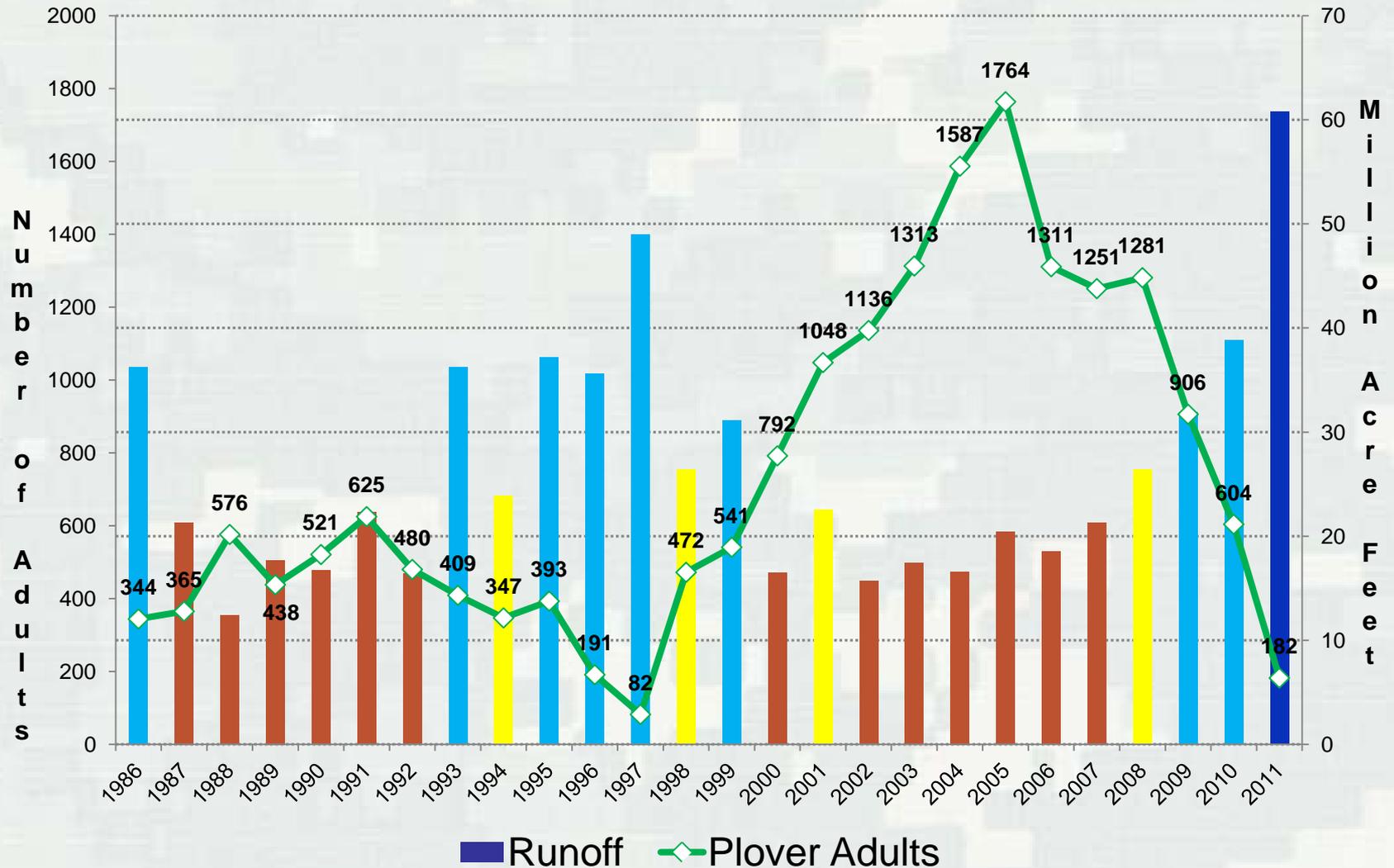


# Key Habitat Feature

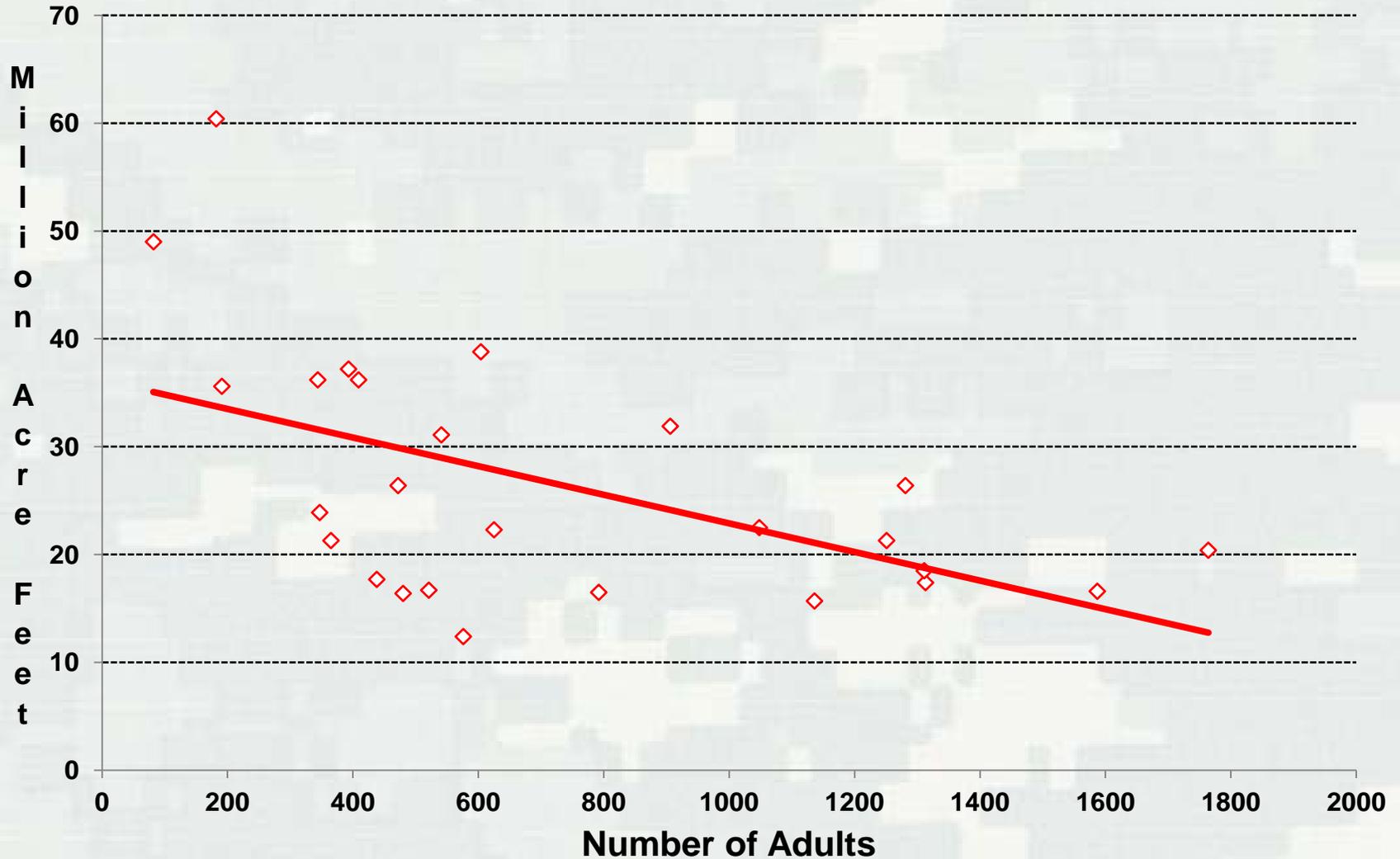


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# Adult Numbers vs. Annual Runoff



# Adult Numbers vs. Annual Runoff





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# Additional Key Information needed for Missouri River Piping Plovers

- Breeding Population
  - ▶ USGS Study
    - Population varies by location, date and year
    - Use Active Nest, Recently Destroyed Nest and Successful Nest as a proxy for Adult Pairs
- Chick Fledging Success
  - ▶ USGS Study
    - Corps cannot accurately track chick fledging success using current methodology
    - Need to band chicks to track chick fledging success



# Most Serious Threat to Missouri River Piping Plovers

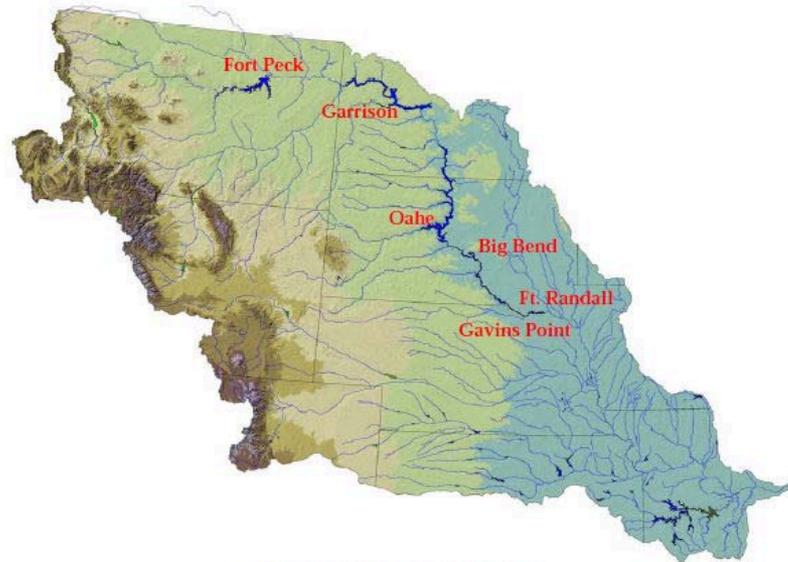


US Army Corps  
of Engineers



Northwestern Division

## Missouri River Mainstem Reservoir System Master Water Control Manual Missouri River Basin

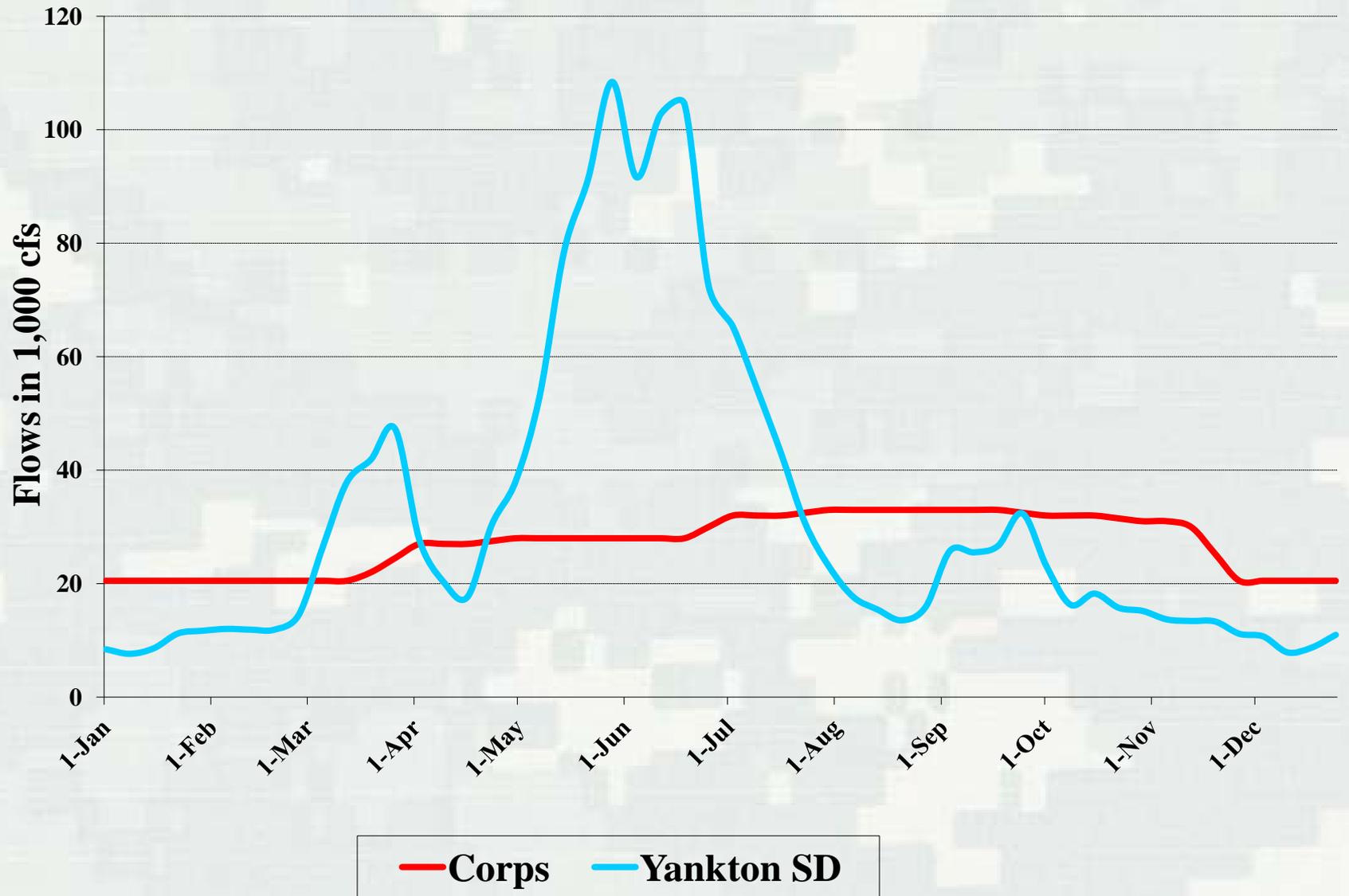


Reservoir Control Center  
U. S. Army Corps of Engineers  
Northwestern Division - Missouri River Basin  
Omaha, Nebraska

Revised March 2006



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- Natural Hydrograph eliminated for flood control and navigation
  - ▶ Flows increased during nesting season
  - ▶ Reservoirs rise during the nesting season
  - ▶ Vegetation grows up on existing sandbars
- Sediment trapped in the reservoirs
  - ▶ Greatly reduces building source for sandbars
- Hydropower peaking during the nesting season
- Large amounts of habitat created only when the system is overwhelmed by high runoff – 1997 & 2011
- Corps must manage for multiple needs
- Cooperation needed for change



# Don't Mess with Plovers!



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