



# Avian Predation Management in the Columbia River Estuary



# Columbia River Estuary

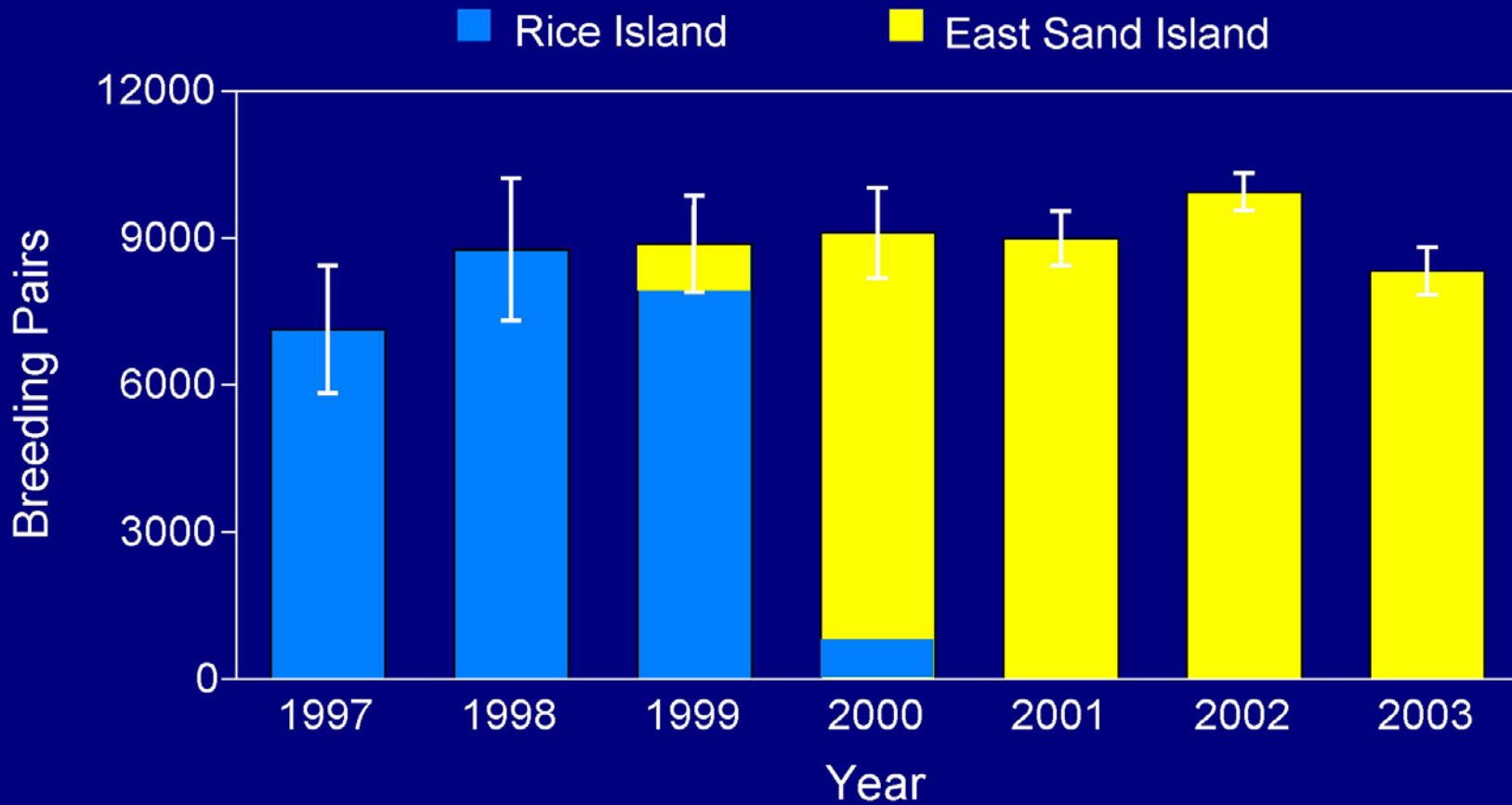


# Caspian Tern Management Columbia River Estuary

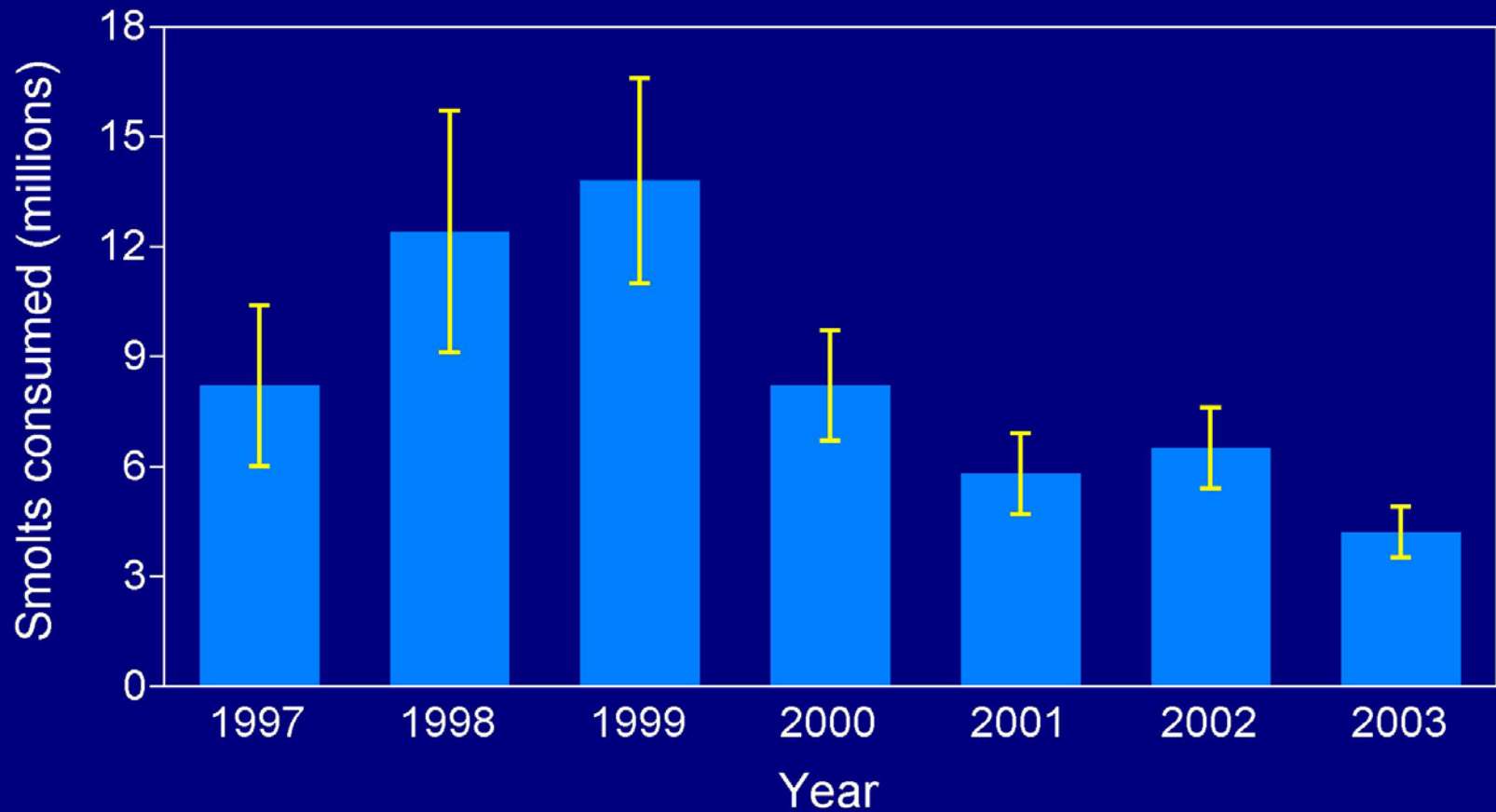
- East Sand Island – annually prepare ~6 acres
  - Supports entire Caspian tern population
- Rice Island – Former colony location at d/s end overgrown with vegetation; No hazing required in 02, 03, 04 and 05.
- Miller Sands Spit – Frequent use for dredged material disposal; hazing required in 03.
- Pillar Rock Island - Frequent use for dredged material disposal; hazing required in 02, 03, 04 and 05.



# Caspian Tern Colony Size in the Columbia River Estuary



## Salmonid Consumption by Caspian Terns in the Columbia River Estuary



## EIS Alternative C – Redistribution of ESI Tern Colony (Preferred Alternative)

- Population objective of 2,500 – 3,125 pairs
- Ramp habitat acreage down gradually
- Maintain 1-1.5 acres of habitat on ESI
- Redistribute tern population through nesting habitat (~8 ac) development/social facilitation at 6 locations in OR (3) and CA (3)

# Caspian Tern Draft EIS Provisions Columbia River Estuary

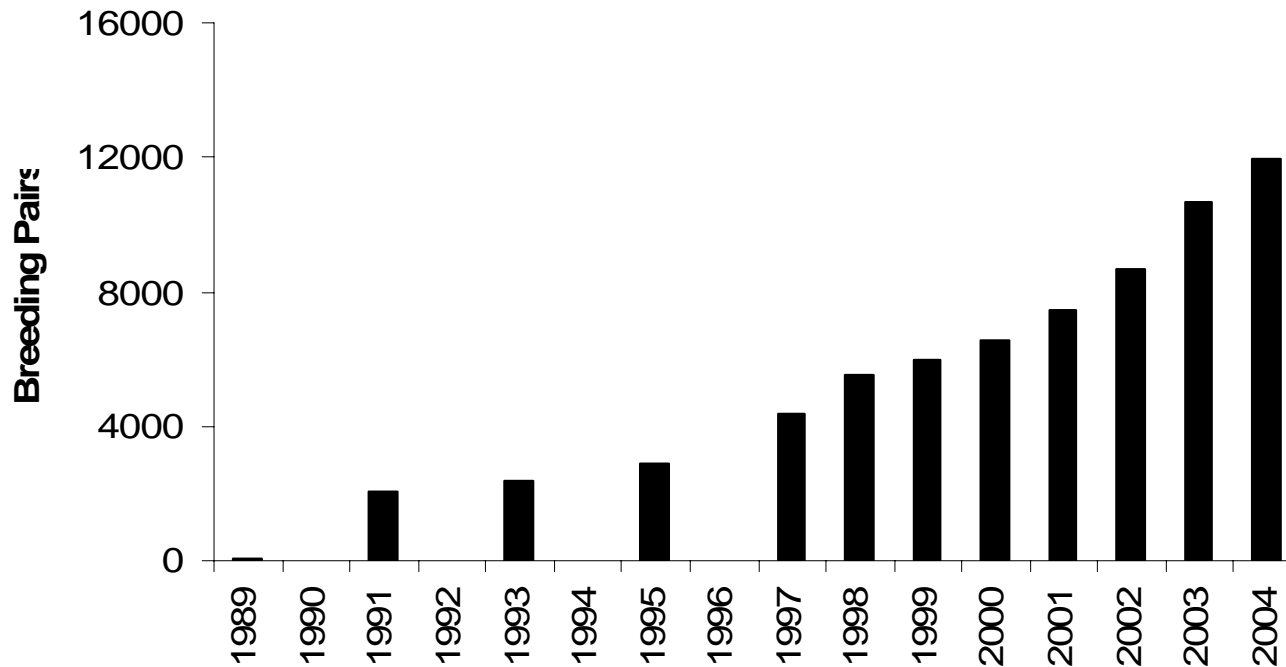
- Corps will continue to prevent Caspian tern nesting in the upper estuary (Rice, Pillar Rock, Miller Sands Spit)
- USFWS will permit egg take if initial hazing activities fail
- Corps can resume dredged material disposal on d/s end (former colony location) of Rice Island.



# Double-crested Cormorants



# Background: Cormorants







# www.ColumbiaBirdResearch.org

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## Columbia Bird Research


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Seasonal trends  
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## Columbia Bird Research

Provided here are in-season weekly reports and background information on a study investigating the impacts of piscivorous waterbirds (i.e., terns, cormorants, and gulls) on the survival of juvenile salmonids in the lower Columbia River. These data were collected by researchers working with Oregon State University, Washington Department of Fish and Wildlife, Columbia River Inter-Tribal Fish Commission, and Real Time Research.



Weekly reports on managed Caspian terns are provided to monitor and evaluate the 2001 Caspian Tern Management Plan (Click [here](#) to see map of study area). Other data on unmanaged bird populations (i.e., double-crested cormorants and glaucous-winged/western gulls) are being collected by the researchers, but are not provided in detail here.



**Wanted**  
**Banded Terns**

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