

American White Pelican Scientific Collection Update: Diet Research

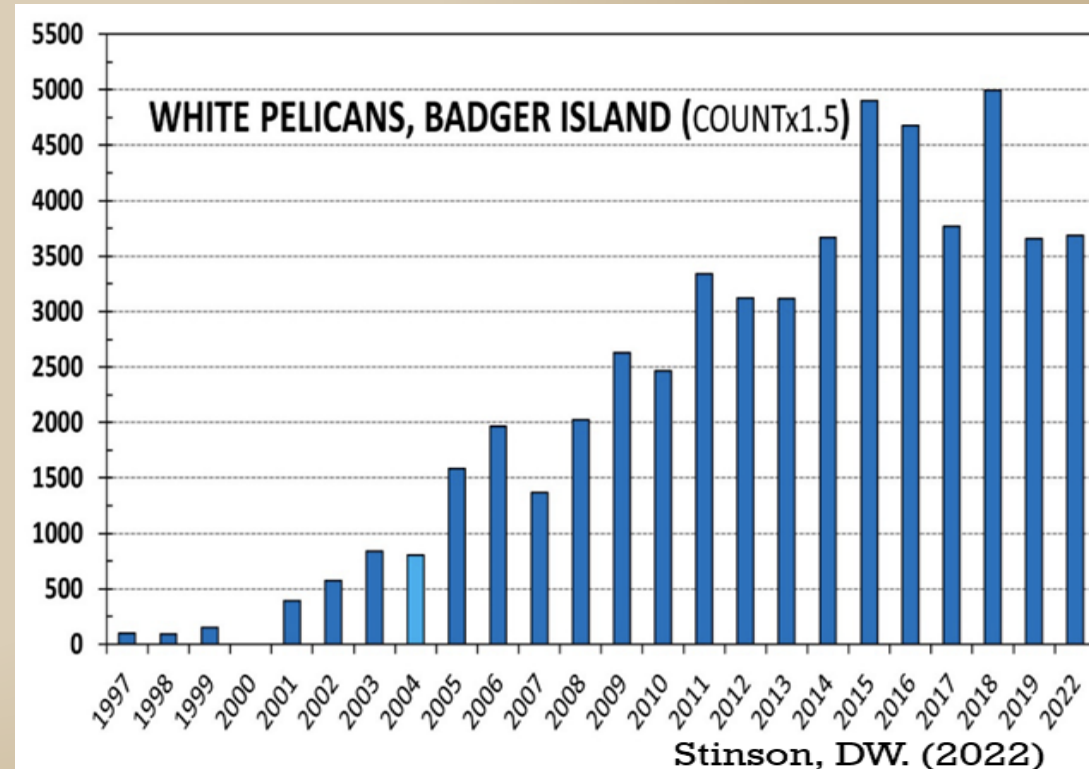
A photograph of a dam with a series of cascades. A line of American White Pelicans is swimming in the water, following the edge of the dam. In the foreground, there is a wooden structure made of logs and planks. The background shows a dry, hilly landscape under a clear blue sky.

Trenton De Boer
Predation Biologist
Yakama Nation Fisheries

Yakima River American White Pelican

Western Pelican Population Summary

- 20+ active colonies, ~40-50k birds & stable
- Washington State Status
- 2022 WDFW Periodic Status Review
 - Badger Island Colony
 - ~3,330 breeding pairs
 - Miller Sands
 - ~1,300 breeding pairs



Yakima River American White Pelican

Obtaining Scientific Collection Permit

- Federal & State Protections
- Disturbance of Badger Island colony
- Lethal vs non lethal collection
- Public perception
- Meetings with USFWS & WDFW

Photo courtesy of Daylen Isaac

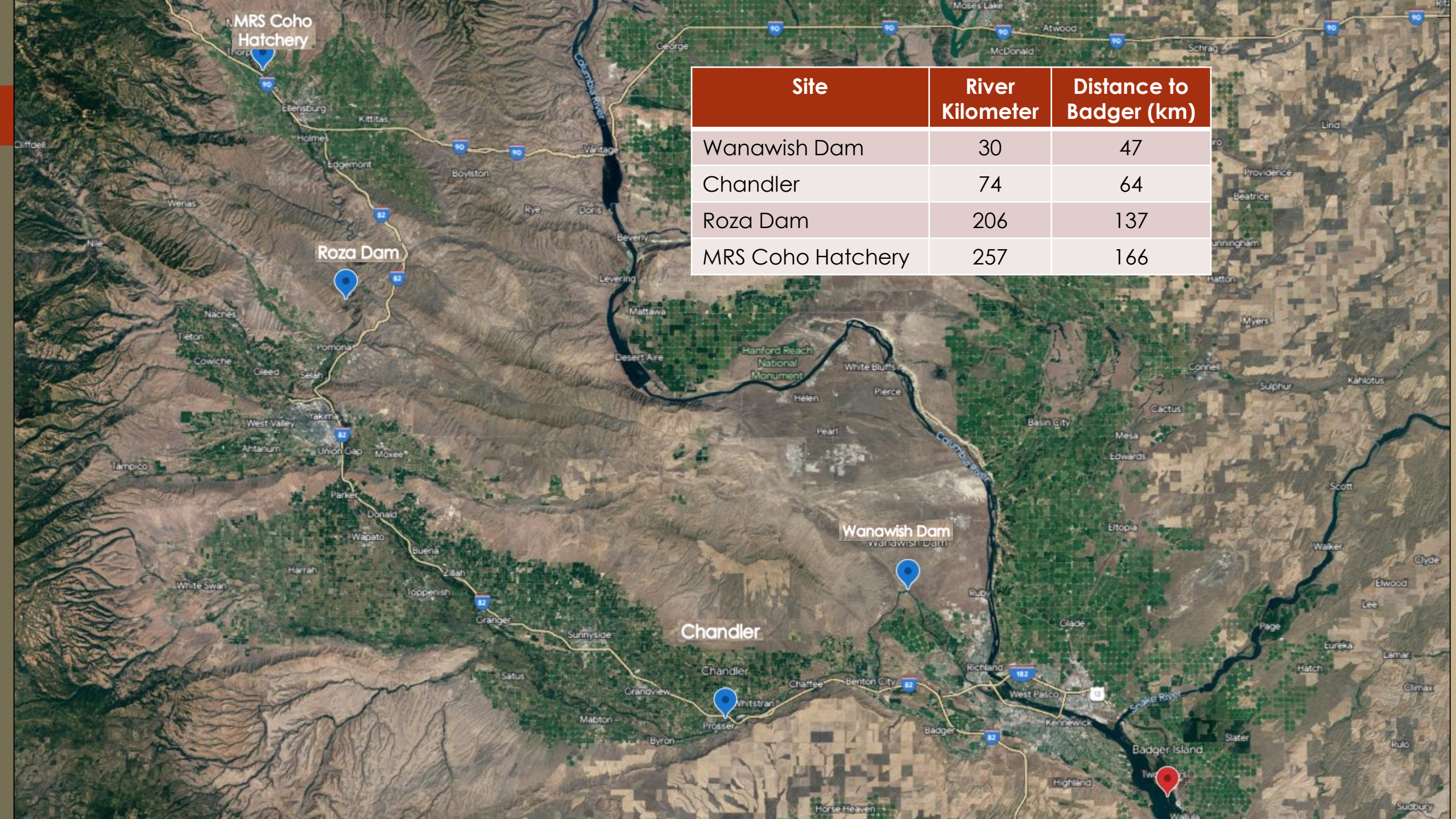


Yakima River American White Pelican

Study Design

- ▶ April – June, 2024
- ▶ Euthanize 156 pelicans
 - ▶ 5 pelicans/week for 10 weeks at three location ($5 \times 3 \times 10 = 150$)
 - ▶ Locations: Wanawish Dam, Chandler Juvenile Outfall, and Roza Dam





Site	River Kilometer	Distance to Badger (km)
Wanawish Dam	30	47
Chandler	74	64
Roza Dam	206	137
MRS Coho Hatchery	257	166

Yakima River American White Pelican

Methods

- Yakama Nation
 - Assess site for pelicans and safety
 - Euthanize pelicans
 - Retrieve pelicans
 - Process pelicans
 - Weekly flights



Yakima River American White Pelican

Methods

- USGS
 - Weekly specimen deliveries
 - GI tract dissection
 - Identify prey species in foregut
 - Identify PIT tags, elastomers...
 - Stable isotope analysis
 - Parasitic research



Yakima River American White Pelican

Preliminary Results

- 134 pelicans taken since April 8
- 71 pelicans processed by USGS
 - Prey Species
 - Stable isotope analysis

- Bluegill
- Bridgelip Sucker
- Brown Bullhead
- Chinook Salmon
- Chinook Salmon-hatchery
- Crayfish
- Coho Salmon
- Largemouth Bass
- Mountain Whitefish
- Northern Pikeminnow
- Perch
- Pumpkinseed
- Rainbow Trout/Steelhead
- Salmonid
- Smallmouth Bass
- Three-Spine Stickleback
- Unidentified
- Unidentified non-Salmonid



Yakima River American White Pelican

Preliminary Results

- Elastomers
- PIT tags
 - Half the pelicans sampled had no PITs
 - Half the pelicans sampled had 104 PITs
 - Roza Dam: 4 PIT tags
 - Chandler: 12 PITs tags & 5 elastomers
 - Wanawish: 16 PITs tags & 2 elastomers



Yakima River American White Pelican

Preliminary Results

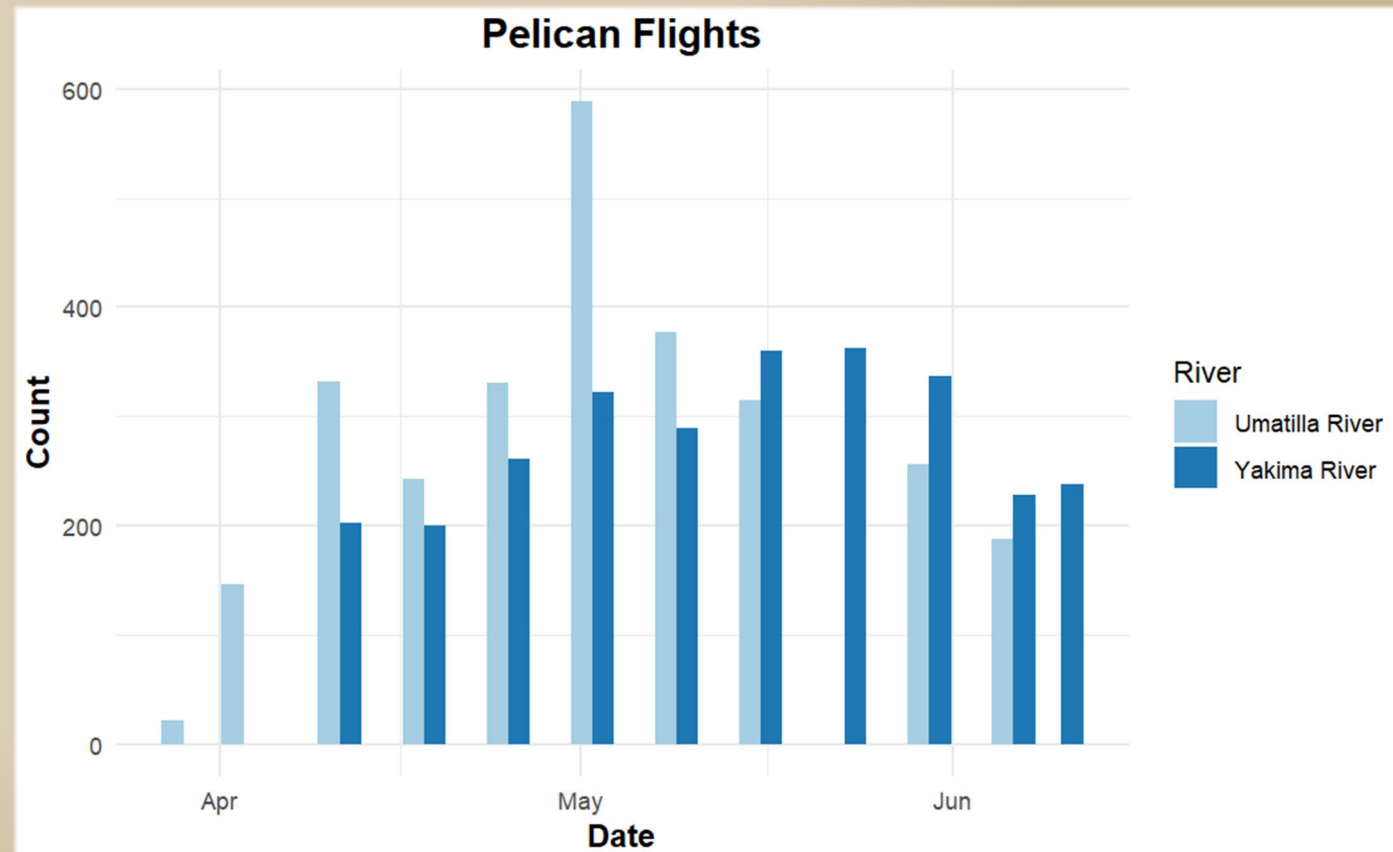
- Sex ratio, weight & culmen length
- Total prey consumed by weight
- Contracaecum nematodes



Yakima River American White Pelican

Preliminary Results

- Flights
 - Yakima River
 - Umatilla River
 - Snake River & others



Yakima River American White Pelican

Future Pelican Plans

- Complete 2024 data collection
- Analyze remaining diet data
- Estimate predation rates on salmonids
- Reapply for USFWS Scientific Collecting Permit

