

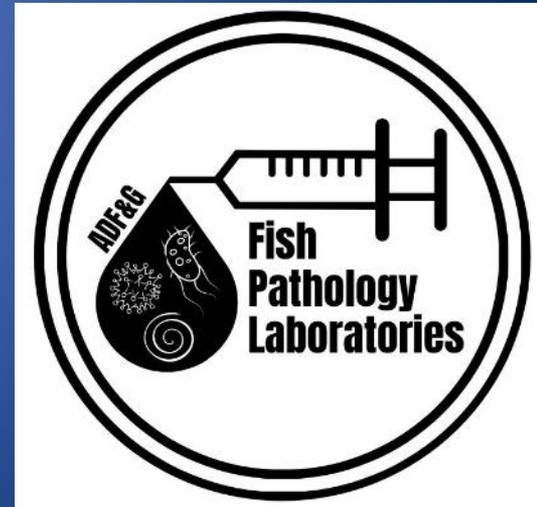
ADF&G's Fish Pathology Program:

Protecting Alaska's Finfish & Shellfish

Resources from Diseases



Jayde (Jay-Dee) Ferguson,
Fish Pathologist, ADF&G



Fish Pathology Regulatory Program:

Mission Statement

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Fish Pathology Laboratory

Mission Statement

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Our Mission

The Fish Pathology Section monitors and controls finfish and shellfish diseases statewide (according to Title 16 of the Alaska Statutes) by conducting diagnostic surveys, developing finfish and shellfish disease policies and by advising the Commissioner of the Alaska Department of Fish and Game and other state and federal authorities on fish disease issues.

ADF&G Fish Health Team

- **Juneau (2 staff)**– Fishery Scientist I (Ph.D.), Microbiologist II



Dr. Ted Meyers



Rich Morris

- **Anchorage (3 staff + 2 Non-perms)**- Fish Pathologist (Ph.D.), Micro II, Micro I
Fishery Biologist I's (6 mo.)



Zoe Munson



Kay Stewart



Dr. Jayde Ferguson



Frank Woitel



Davis Stewart

– **Staff experience/train**– microbiology, fish and shellfish health

– **Certifications**– AFS Fish Health Section held by 2 staff as “Fish Pathologist”

What Do We Do at the Fish Pathology Laboratory?

Products & Services

1. No-cost Diagnostic & Consultation Services

- ❖ Anyone

2. Hatchery Support & Oversight

- ❖ Inspections; permitting

3. Regulatory Authority

- ❖ Permitting; report & control diseases

4. Statewide Fish & Shellfish Disease Policy

- ❖ Reduces disease agent (pathogen) intro & amplify

5. Applied Research

- ❖ Publications

6. Public Education

- ❖ Lab tours, mentorship, manual & field guides

7. Surveillance for disease agents (pathogens)

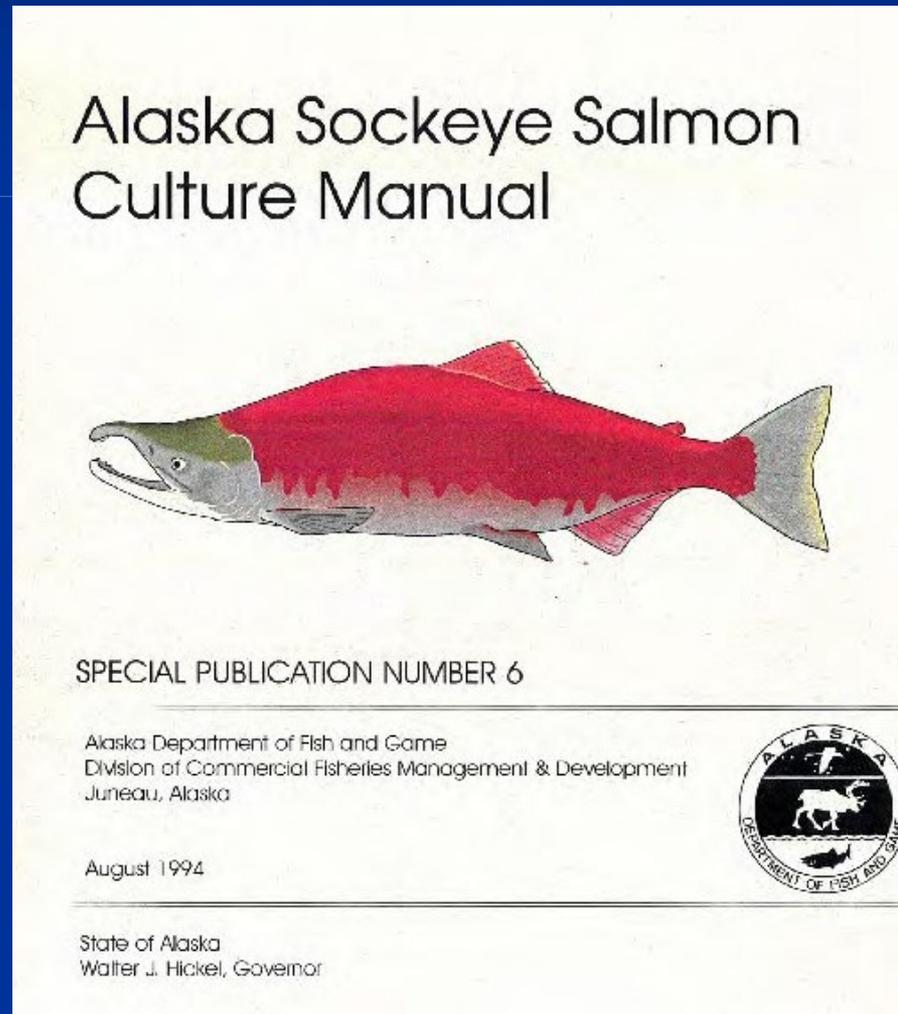
- ❖ Screen broodfish; investigate fish kills





Disease Management

- Develop finfish and shellfish disease policies



Research

- Transmission studies

Wet Lab

- New diseases

- Surveillance

- New diagnostics



Education & Outreach

- Info fish/shell diseases: fisher, manger, researcher

- Lab tours

- Science fairs

- Research

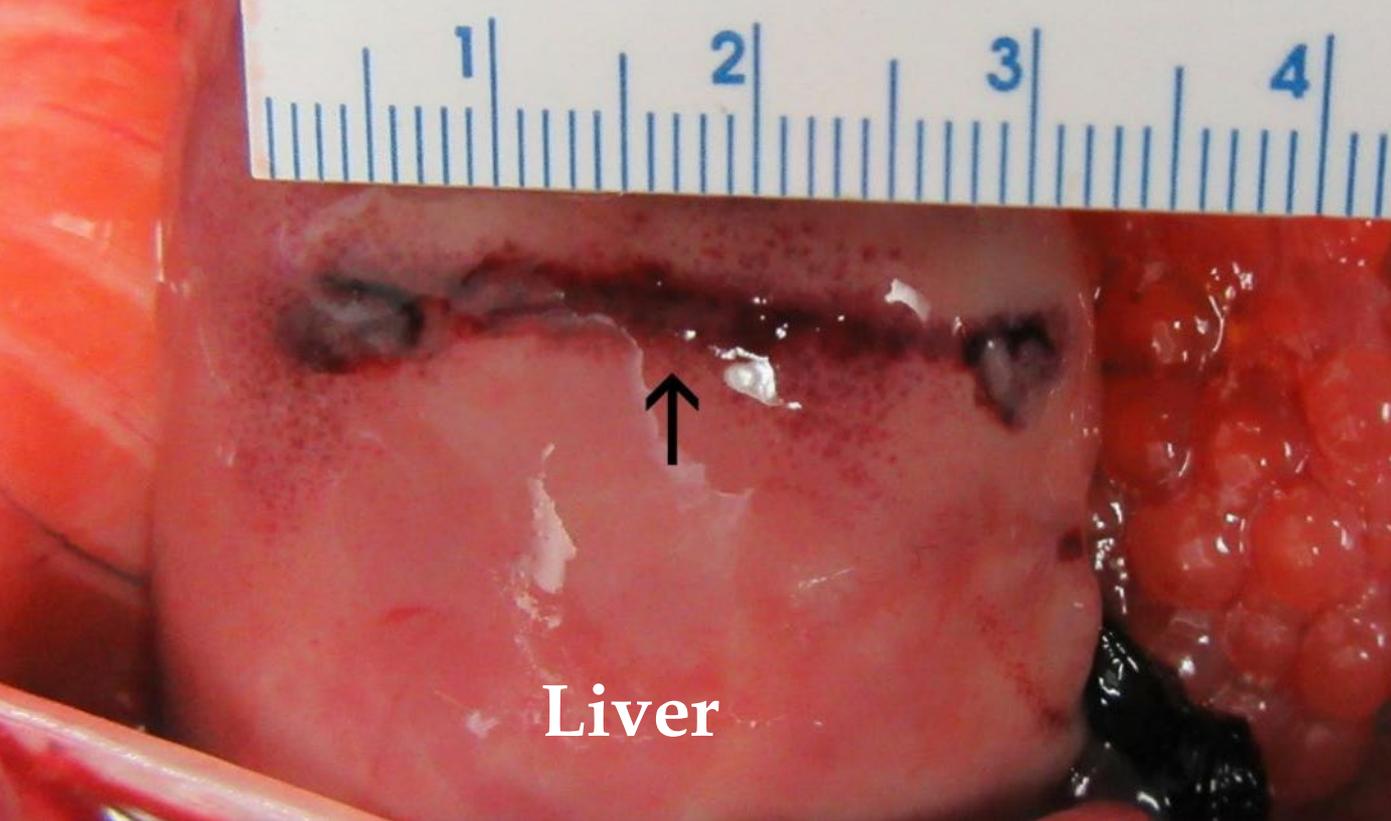


Case Study – Jim Creek Coho 2019 & 2025

1) 2019

- High heat & draught; H₂O 20-21°C (68-70°F)
- 5-10 moribund (sick) fish, 1 wk, weir
 - Popeye (bulged eyes),
 - Hemorrhage (bleeding)





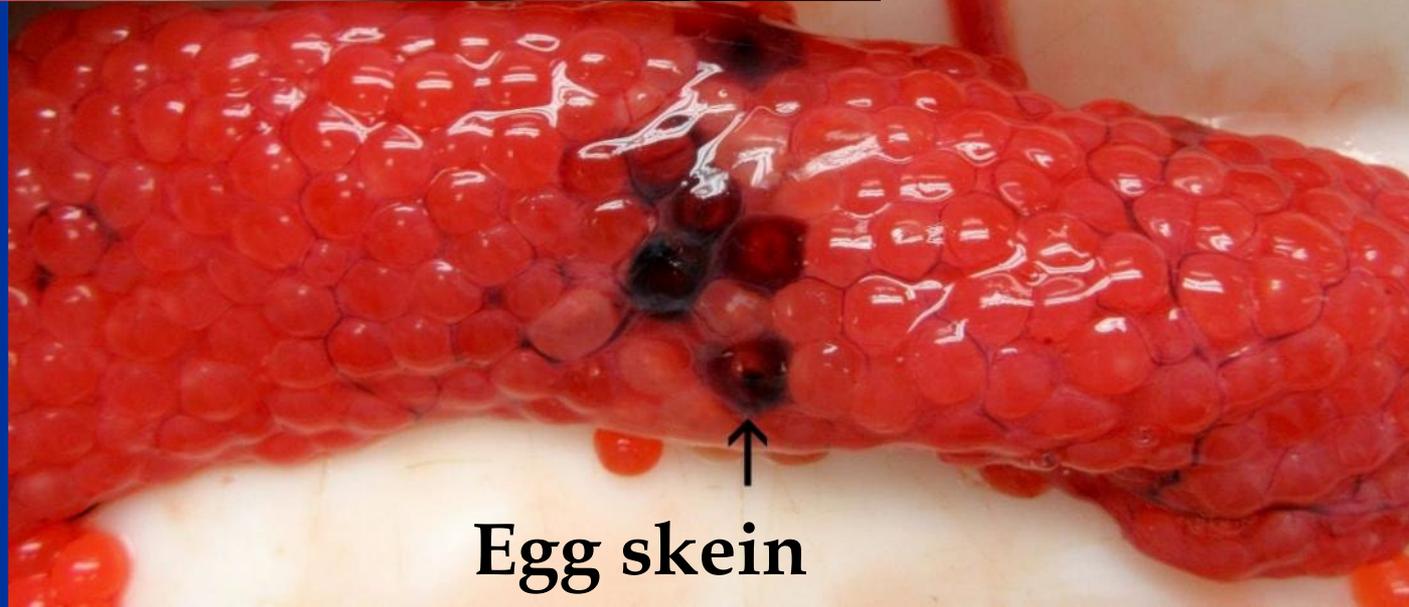
**Hemorrhage
(bleeding)**

Liver

FURNITURE
CHEMICALS

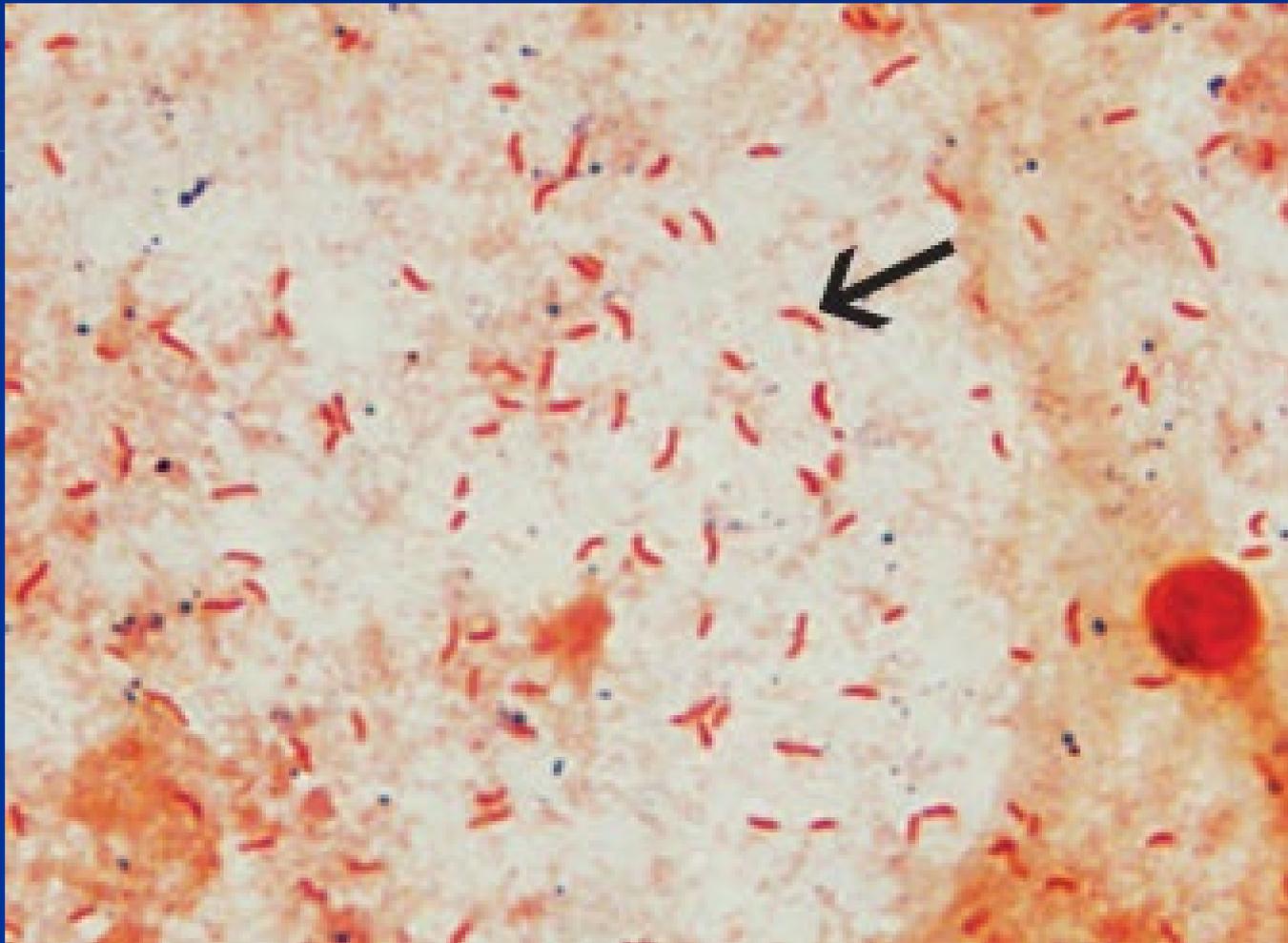
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**Necrosis
(tissue death)**



Egg skein

Spleen squash
Vibrio bacteria
(related to Cholera, fish-specific)
Systemic (throughout body)



Case Study – Jim Creek Coho 2019 & 2025

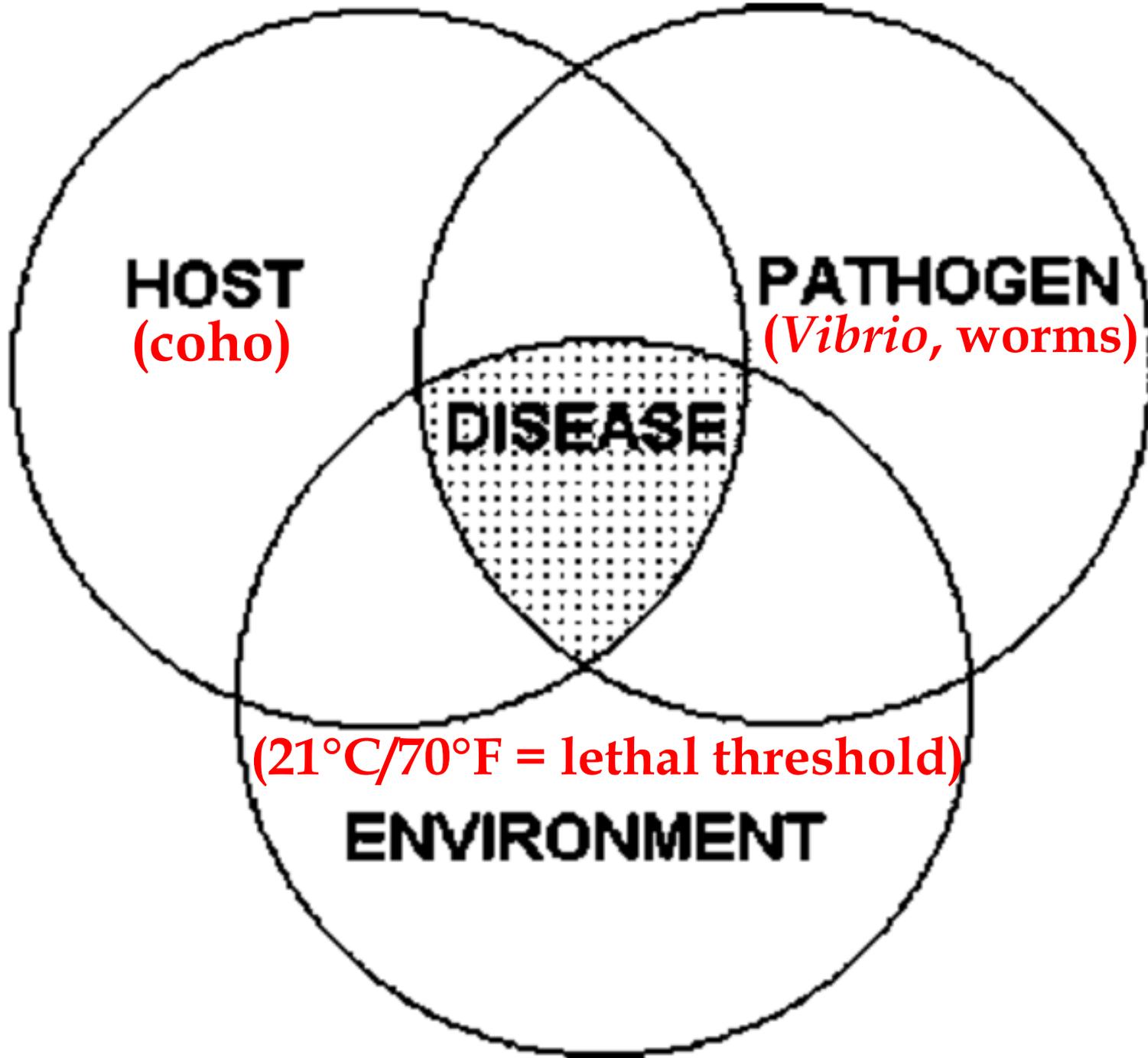
2) 2025 (open case)

- Warm H₂O 18°C avg (64°F); max 21°C (70°F)
- 300 dead fish @ weir
 - Whirling, listing on side, lethargic (sluggish)
- Sockeye also affected & submitted





**Gill hyperplasia (excess growth)
from worm = suffocation
So far . . .**



Pacific Salmon Health Monitoring Initiative

- ~5yr project, focused on wild adults
- Target 10ish stocks across Alaska of concern
 - 2-3/region (SE, SC, Westward, AYK)
 - Input already obtained from Dept. Area Managers & Research Coordinators
 - Will do public meetings for additional input
 - Remote via video conference & in-person
- Testing for 16 pathogens-
 - Endemic (naturally occurring)
 - Exotic (not known to occur)
- General health assessment
 - Goede Health Assessment- organ color, condition fxtr (non-lethal)
 - Thiamine testing, especially Chinook
- Risk assessment for future monitoring

