



Rehabilitation of Oiled Wildlife

KRISTEN BISHOP, REHABILITATION MANAGER

Outline

ICS structure

Effects of oil on wildlife

Intake Exam/Stabilization

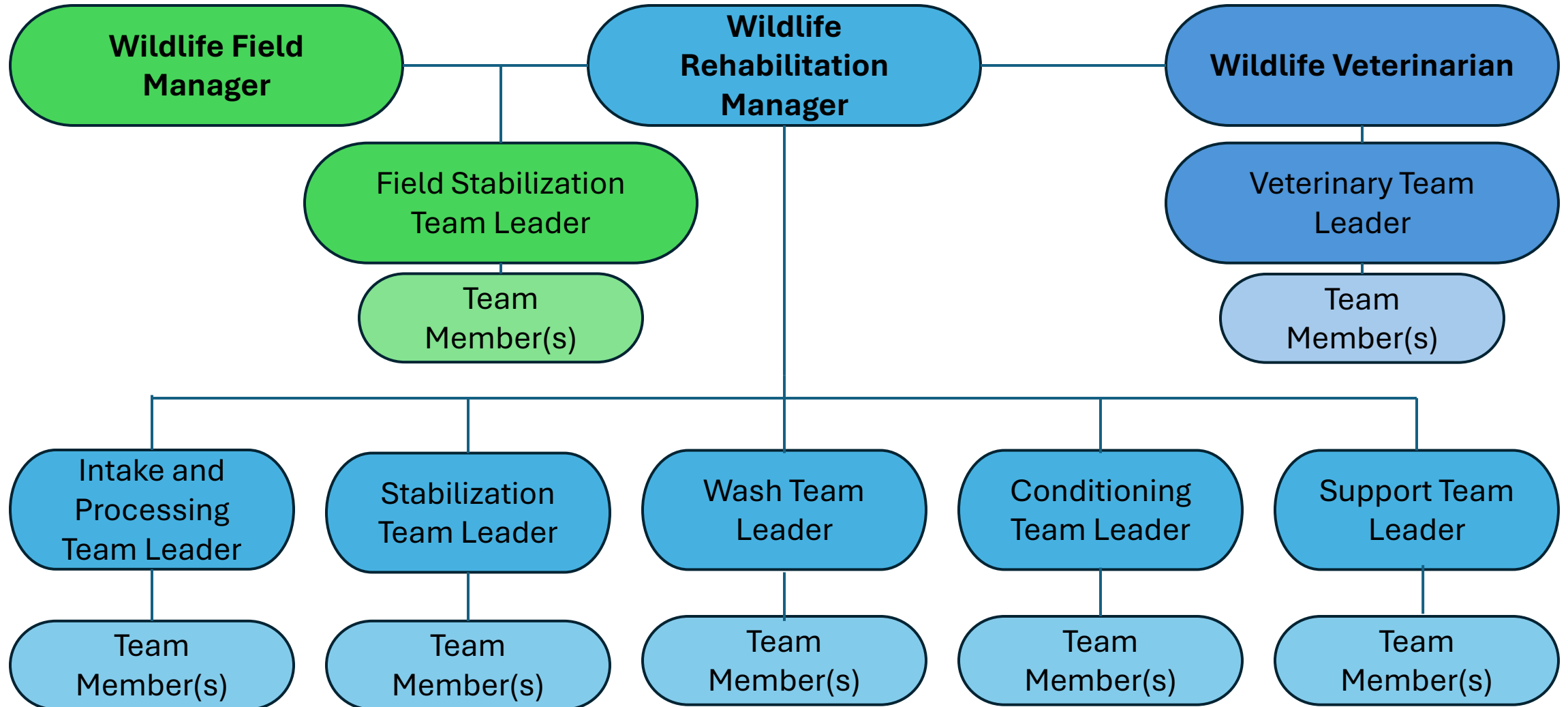
Decontamination

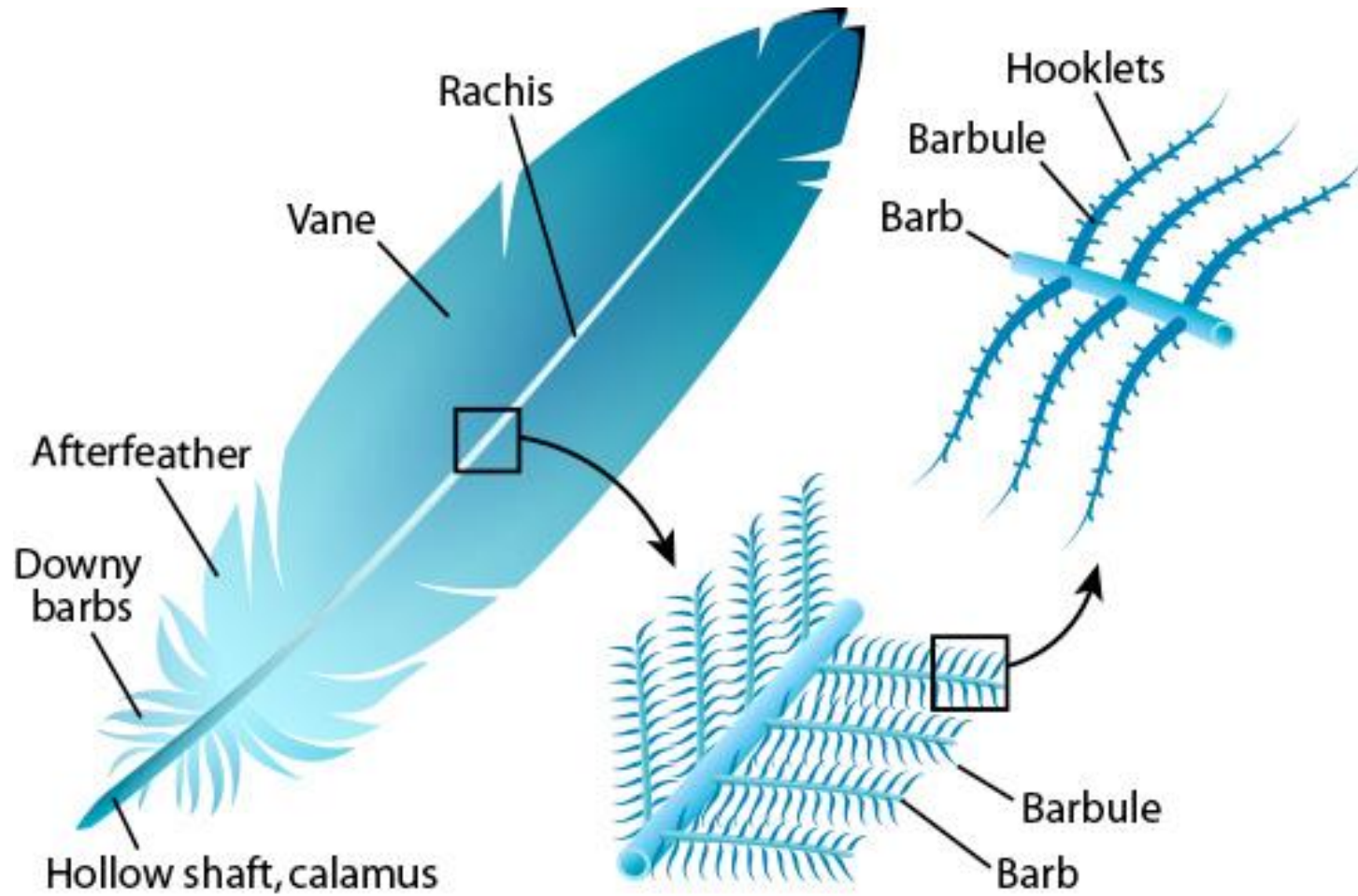
Pre-release conditioning

Release



Wildlife Rehabilitation Operations Team





Feather Structure

Effects of Oil on Wildlife

- Waterproofing
 - The interlocking structure of feathers (barbs and barbules) are essential for waterproofing
 - Contaminant disrupts physical structure
 - Extensive preening and the spread of oils keep feathers in excellent condition



Effects of Oil on Wildlife

- Ingestion
 - Preening/grooming
 - GI irritation
- Temperature regulation
 - Hypothermia
 - Hyperthermia
- Flight and Buoyancy
 - Debilitation -> Emaciation
- Skin and Eye Irritation





Why Not Wash Animals Immediately?

- Stabilize for decontamination procedure
- Time for full medical assessment
- Very stressful for animals
- *Some cases do permit washing after a few hours of stabilization*

Intake Examination

- Remember your PPE!
- Temperature
- Mentation
 - HPAI signs?
- Is patient stable enough for full exam?
 - If not, give supportive care and time to rest
 - Communicate with field team
- Full Physical Examination
- Bloodwork
 - Hydration status
 - Anemic?
- Leg tag/Patient ID



Evidence Collection

- Necessary for legal investigation
- Swabs of legs
- Photos
- Feathers or fur
- Wrap samples in foil and label with appropriate information
 - COC forms



Tri-State Bird Rescue & Research





Stabilization

- Re-hydrate
 - Supplemental fluids and nutrition
- Temperature
- Decompress after capture and transport
- Improve bloodwork
- Pain medications, antibiotics, etc

To Wash or Not to Wash....

- Decontamination process long and stressful
- If not properly stabilized could cause death
- Parameters to clear for decontamination:
 - Bloodwork in normal range
 - Hydration improved
 - Mentation appropriate
 - In care > 24-48 hours
- Exceptions





Decontamination

Steps to Decontamination



FEATHER TEST



WASH TEAM



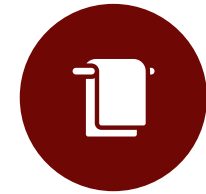
WASH SET-UP



WASH



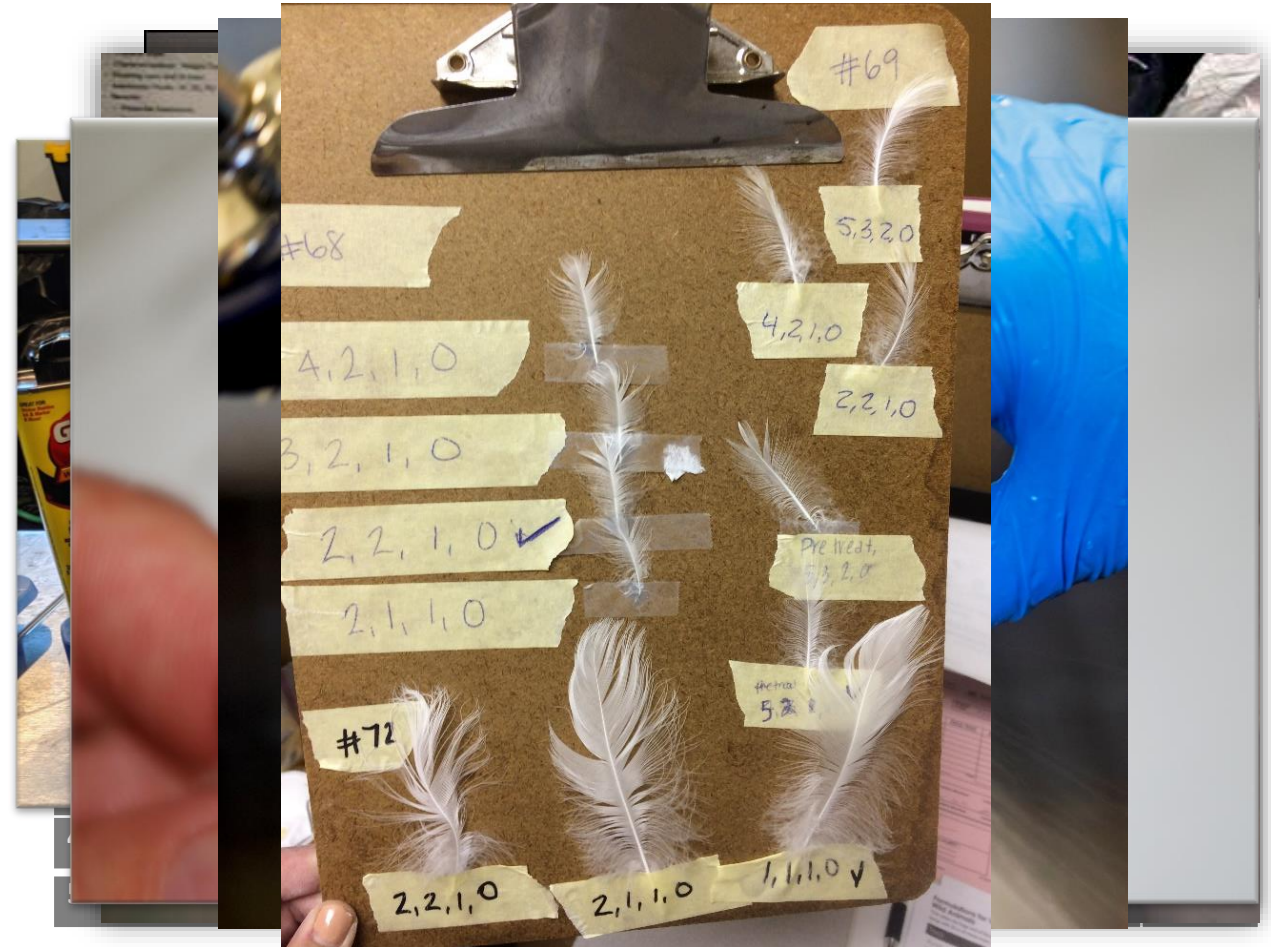
RINSE



DRYING

Feather Test

- Goal: Discover the best combination of pre-treatment, surfactant and wash tubs needed to remove all the contaminant present in **1 wash**
- Utilize feathers taken during admit exams
- Do you need a pretreatment?



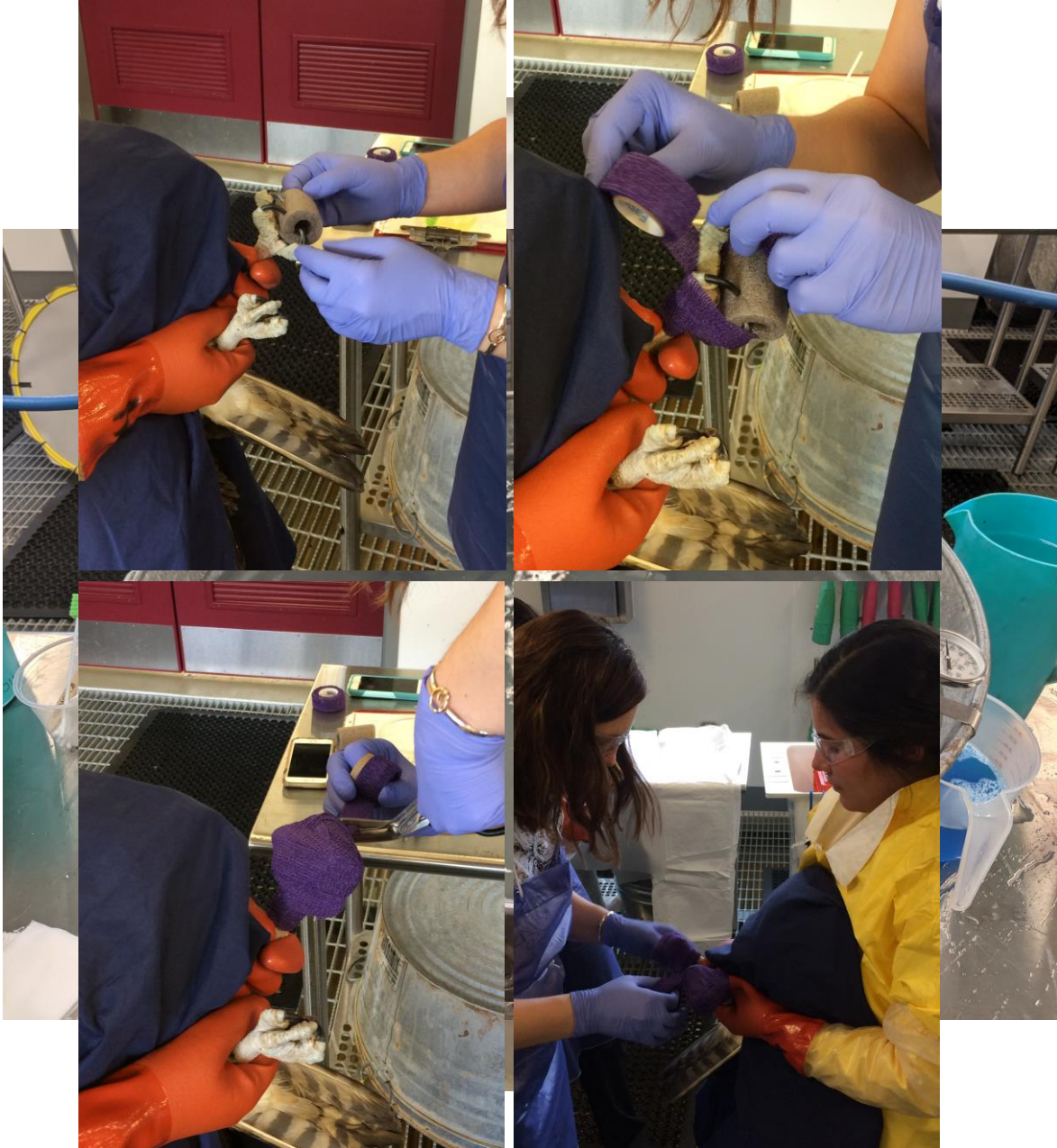
Assemble a Wash Team

- Experienced handlers
- Physically demanding
- HAZWOPER trained
- Three-person wash team:
 - Body holder
 - Body washer
 - Head washer – typically leading
- Runner/scribe



Wash Preparation

- What PPE is required?
- Disposal
- Wash line preparation:
 - Fill tubs and add surfactant
 - Surfactant concentrations based off feather test
 - Collect tools for head washing
- Animal preparation:
 - Remove food/fast for at least 2 hours
 - Sedation
 - Feet wrapping/hoods (raptors)
 - Pre-treatments (if needed)



Wash





Rinse

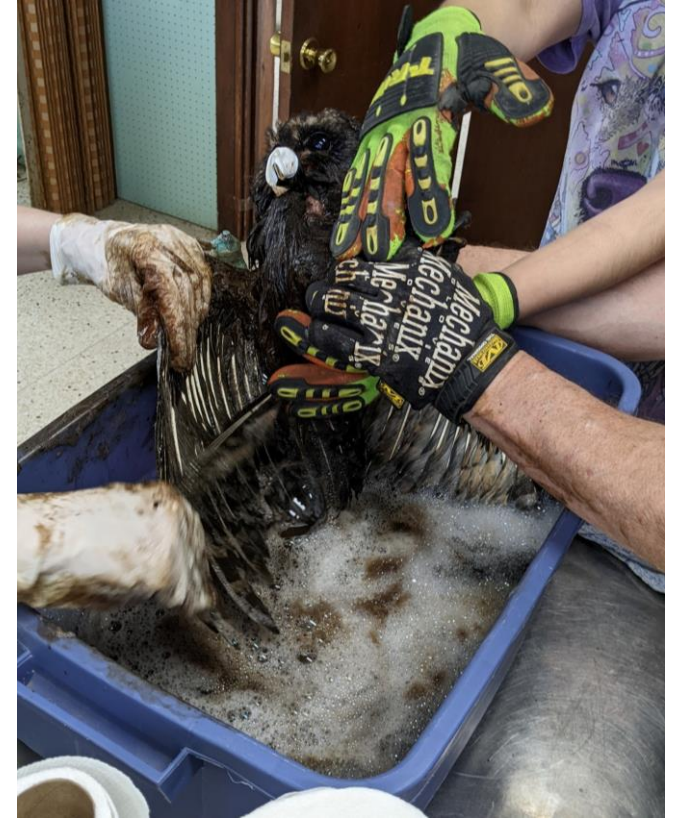


Drying Room

- Experienced monitor
 - Checks temperature
 - Mentation/preening activity
 - Provides supportive care
- Drying Pens (species dependent):
 - Modular
 - Playpen or soft sided carrier
 - Net Bottom
- Grooming blowers vs hanging brooders

The Decontamination Aftermath





What can go wrong?





Conditioning

Concerns During Rehabilitation

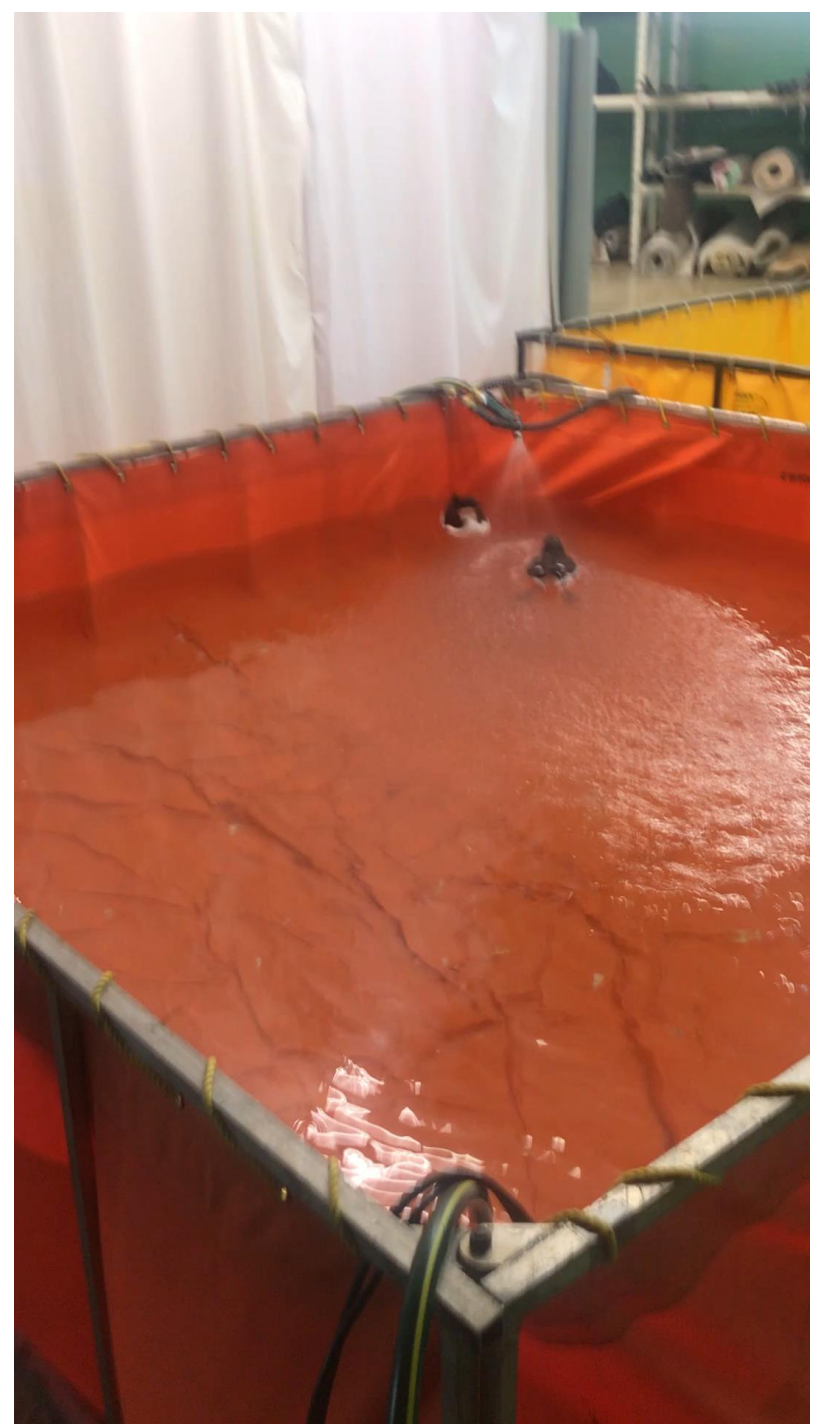
- Keel lesions
- Foot and hock lesions
- Chemical burns/Skin issues
- Nutrition
 - Appropriate food availability
 - Eating during rehabilitation
- Stress from handling and captivity



Promoting Waterproofing

Promote preening through:

- Swimming
 - Closely monitor patient
 - Gradually increase length of swims
 - Gradually decrease water temperature
- Drying pen
- Misting or dousing with hose



Promoting Waterproofing

- *Seabirds and diving species*
 - Net bottom pens
 - Pools with overflow
 - Maintain water parameters
 - Wearing gloves
 - Careful food presentation







Husbandry Related Waterproofing Issues

- Improper housing
- Continuous feather soiling
 - Feces
 - Fish oil
- Insufficient access to water



Pre-Release Exam



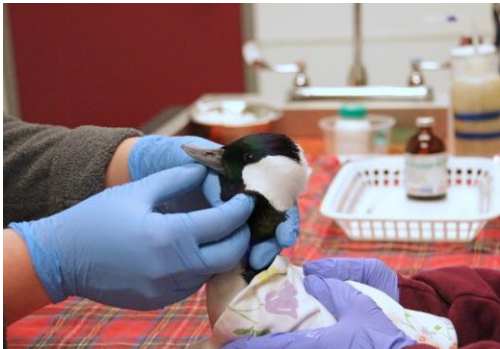
BLOODWORK



WEIGHT



WATERPROOFING



FEET, FEATHERS,
CARPI



ALL MEDICAL
ISSUES CLEARED



BANDING



Release

- Must meet pre-release criteria
 - Criteria is based off species
- Release location appropriate for species
 - Work closely with appropriate agencies to determine release location suitable for species, time of year, etc.







Kristen Bishop, Rehabilitation Manager; Oil Programs

kbishop@tristatebird.org

TRI-STATE
Oiled Wildlife Response